



**US Army Corps  
of Engineers**  
New England District

**FINAL  
SEDIMENT MONITORING SUMMARY REPORT  
2012 REMEDIAL DREDGING  
NEW BEDFORD HARBOR SUPERFUND SITE, OU #1**

**Contract No. W912WJ-09-D-0001-0010-07**



**Prepared For:**  
United States Army Corps of Engineers  
New England District  
696 Virginia Road  
Concord, MA 01742

**Prepared By:**  
Woods Hole Group, Inc.  
81 Technology Park Drive  
East Falmouth, MA 02536

**May 2013**

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OPERATIONAL UNIT #1  
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## ACRONYMS

AAL	Alpha Analytical Laboratory
ASTM	American Society for Testing and Materials
CDF	Confined Disposal Facility
CSO	Combined Sewer Overflow
DF	Dilution Factor
DMU	Dredge Management Unit
EDD	Electronic Data Deliverable
EMIS	New Bedford Environmental Management Information System
EPA	US Environmental Protection Agency
ESI	EnviroSystems, Inc.
FSP	Field Sampling Plan
JE	Jacobs Engineering
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method Detection Limit
MS	Matrix Spike sample
MSD	Matrix Spike Duplicate sample
NEH	New Environmental Horizons, Inc.
NOAA	National Oceanic and Atmospheric Administration
PAL	Project Action Limit
PCB	Polychlorinated Biphenyls
PQL	Project Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
SES	Sevenson Environmental Services, Inc.
SOP	Standard Operating Procedure
USACE NAE	US Army Corps of Engineers, New England District
WHG	Woods Hole Group, Inc.

### ASTM Sediment Codes

GW-GM	Poorly-sorted gravel with silt/sand
ML	Silt
ML-SM	Mix of Silt and Silty Sand
OL	Organic soil/sediment
PT	Peat
SP	Well-sorted sand
SW-SM	Poorly-sorted sand with silt



## **EXECUTIVE SUMMARY**

Sediment sampling was conducted to monitor the progress and final results of the remediation dredging operation at the New Bedford Harbor Superfund Site during the 2012 field season. As part of this effort, 75 sediment cores were collected from 68 locations at the Site to characterize the extent of the polychlorinated biphenyl (PCB) contamination in harbor sediments. Sediment sampling occurred in two phases: 1) pre-dredge, and 2) post-dredge. Sediment sampling was conducted in March and October 2012. All analytical sediment data were validated and posted to the New Bedford Environmental Management Information System (EMIS).

Pre-dredge cores were collected in March 2012 at 42 locations (39 stations, 3 field replicates). The objective of the pre-dredge sediment sampling was to characterize the sediments at each location with respect to the presence and thickness of the highly contaminated organic sediment layer (OL). Pre-dredge cores were internally described and sampled for chemical analysis. These data were used by the USACE and its contractors to confirm the target remediation dredge elevation estimates and to assist with the development of the 2012 remediation dredge plan. The thickness of the OL layer varied by location between 0.1 – 3.7 feet thick, with an average of 1.5 feet. The underlying sediments were generally comprised of silt (ML), sand (SP) or peat (PT).

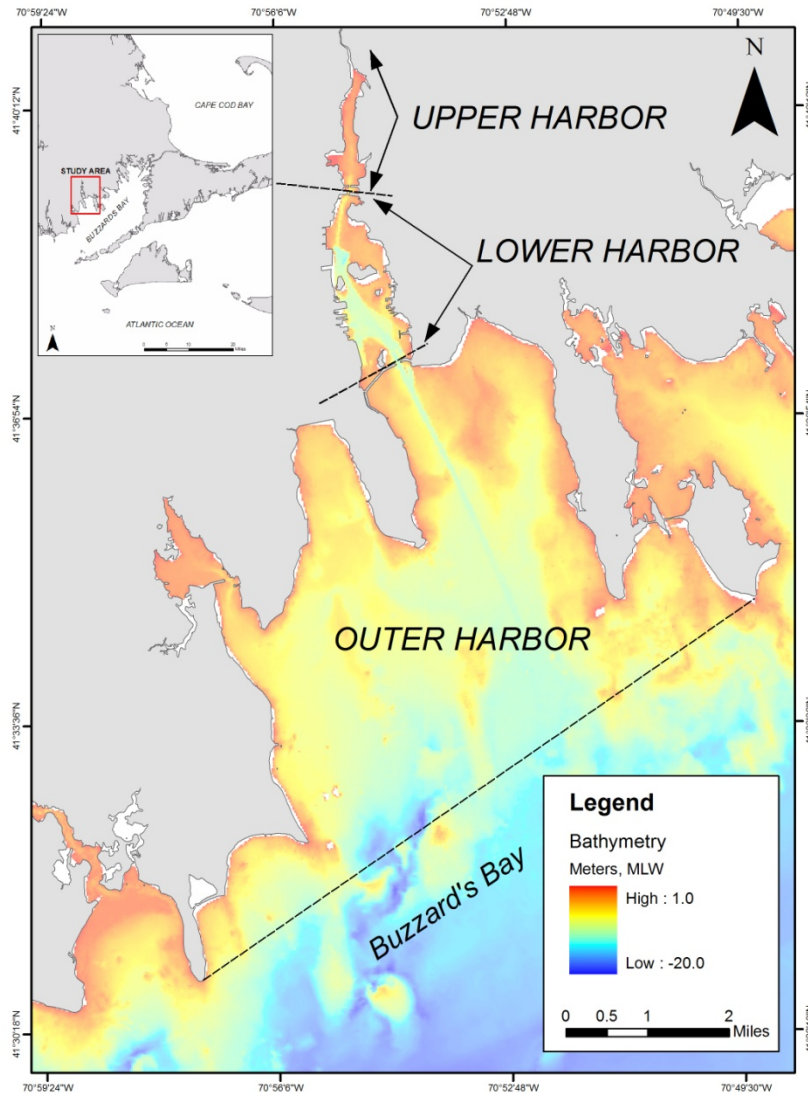
Post-dredge sediment sampling was performed with two objectives: 1) to assess the sediment condition following dredging operations, relative to the target dredge elevation set for the area of interest; and 2) to confirm whether remedial dredging completed removal of PCB contaminated sediments to concentrations at or below the 10 ppm remediation criterion. Post-dredge sampling occurred in October 2012, recovering 37 cores from 33 locations (33 stations, 4 field replicates) within remedial Dredge Areas L and P. Sediment cores were split open for internal sediment characterization and analytical sub-sample collection. The internal sediment characterization was performed to confirm the presence of the OL layer, defined as ‘organic silt, organic clay’ which historical analytical data confirms is the layer that contains the highest concentrations of PCB contaminants (Morris et al., 2011). Additionally, internal descriptions were used to determine the elevation of the transition between the OL and underlying sediment strata. The thickness of the OL layer varied by location due to natural geologic features and influence of remediation dredging but was measured between 0.0 – 1.4 feet thick with an average of 0.5 feet. The underlying sediments were generally comprised of silt (ML) with small amounts of fine sand. Analytical results reveal that the OL surface layer contained total PCB concentrations up to 2190 J mg/kg.

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## 1.0 INTRODUCTION

### 1.1 SITE LOCATION AND DESCRIPTION

The New Bedford Harbor Superfund Site (Site), located in Bristol County, Massachusetts, extends from the shallow northern reaches of the Acushnet River estuary south through the commercial harbors of New Bedford and Fairhaven and into 17,000 adjacent acres of Buzzards Bay (Figure 1). The City of New Bedford, located along the western shore of the Site, is approximately 55 miles south of Boston. New Bedford is currently home port to a large offshore fishing fleet and is a densely populated manufacturing and commercial center. By comparison, the eastern shore of New Bedford Harbor is predominantly residential, light commercial or salt marsh.



**Figure 1. Basemap of New Bedford Harbor Superfund Site in Southeastern, MA**

The Acushnet River's 16.5 square mile drainage basin discharges to New Bedford Harbor in the northern reaches of the Site, contributing relatively minor volumes of fresh water to the tidally influenced harbor. Numerous storm drains, combined sewer overflows (CSOs), industrial discharges, as well as smaller brooks and creeks also discharge directly to the Site. The upper and lower harbors are believed to be areas of net groundwater discharge. The estuary can be characterized as a shallow, well-mixed system.

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Industrial and urban development surrounding the harbor has resulted in sediments becoming contaminated with high concentrations of many pollutants, notably polychlorinated biphenyls (PCBs) and heavy metals. Contaminant gradients within harbor sediments decrease from north to south. The source of the contamination has been attributed to two electrical capacitor manufacturing facilities that used PCBs between the 1940s and the 1970s. One facility, Aerovox Corporation, was located near the northern boundary of the Site, and the other, Cornell-Dubilier Electronics, Inc. is located just south of the New Bedford Harbor hurricane barrier. The two facilities are known to have discharged PCB-laden wastes either directly into the harbor or indirectly via discharges to the City's sewerage system.

Based on human health concerns and ecological risk assessments, the United States Environmental Protection Agency (USEPA) added New Bedford Harbor to the National Priorities List in 1983 as a designated Superfund Site. Through an Interagency Agreement between the USEPA and the United States Army Corps of Engineers, New England District (USACE NAE), the USACE is responsible for carrying out the design and implementation of remedial measures at the Site.

The Site has been divided into three geographic areas: the Upper, Lower and Outer Harbors, consistent with geographic features, basin morphology (Figure 1) and gradients of contamination. The Site is also defined by three state-sanctioned fishing closure areas extending approximately 6.8 miles north to south and encompassing approximately 18,000 acres in total. The Upper harbor comprises approximately 187 acres, with current sediment PCB levels ranging from below detection to approximately 4,000 parts per million (ppm). Prior to removing the most contaminated hot spot sediments in 1994 and 1995, as part of EPA's first cleanup phase (OU #2), sediment PCB levels were reported higher than 100,000 ppm in the Upper harbor. The boundary between the Upper and Lower harbor is the Coggeshall Street Bridge; at this point the harbor is constricted to a width of approximately 100 feet. The Lower harbor comprises approximately 750 acres, with current sediment PCB levels ranging from below detection to over 100 ppm. The boundary between the Lower and Outer harbor is the 150 foot wide opening of the New

Bedford hurricane barrier. The hurricane barrier was constructed in the mid-1960s. Sediment PCB levels in the Outer Harbor are generally low, with only localized areas of PCBs in the 50 – 100 ppm range near the Cornell-Dubilier plant and the New Bedford sewage treatment plant's outfall pipes (the most contaminated sediments in the outer harbor were capped in 2005). The southern extent of the Outer Harbor is a line mapped from Rock Point (the southern tip of West Island in Fairhaven), southwesterly to Negro Ledge, and then southwesterly to Mishaum Point in Dartmouth (Figure 1). The Upper Harbor and the Lower Harbor as defined above comprise OU #1 while the Outer Harbor comprises OU #3.

## **1.2 PROJECT OBJECTIVES AND SCOPE**

The remediation of the Site involves the excavation and dredging of approximately 900,000 cubic yards of PCB-contaminated sediment. The majority of the contaminated material is being removed by a hydraulic dredge that pumps a spoils-slurry to the project's Sawyer Street facility where it is mechanically processed to remove all sand, gravel, and debris. The remaining silt and clay slurry is then pumped to the Area D Dewatering Facility, located on Herman Melville Boulevard, where it is mechanically dewatered and transported off-site for disposal.

The Site is divided into a series of Dredge Management Units (DMU) based primarily on contamination levels, contamination sources, and topography. In 2012, remediation activities at the Site included hydraulic dredging and excavation in two areas: L and P (Figure 2). Both dredge Areas were adjacent to the Manomet Street CSO. Hydraulic dredging removed 19,502 cubic yards of contaminated sediment from the harbor in 2012.

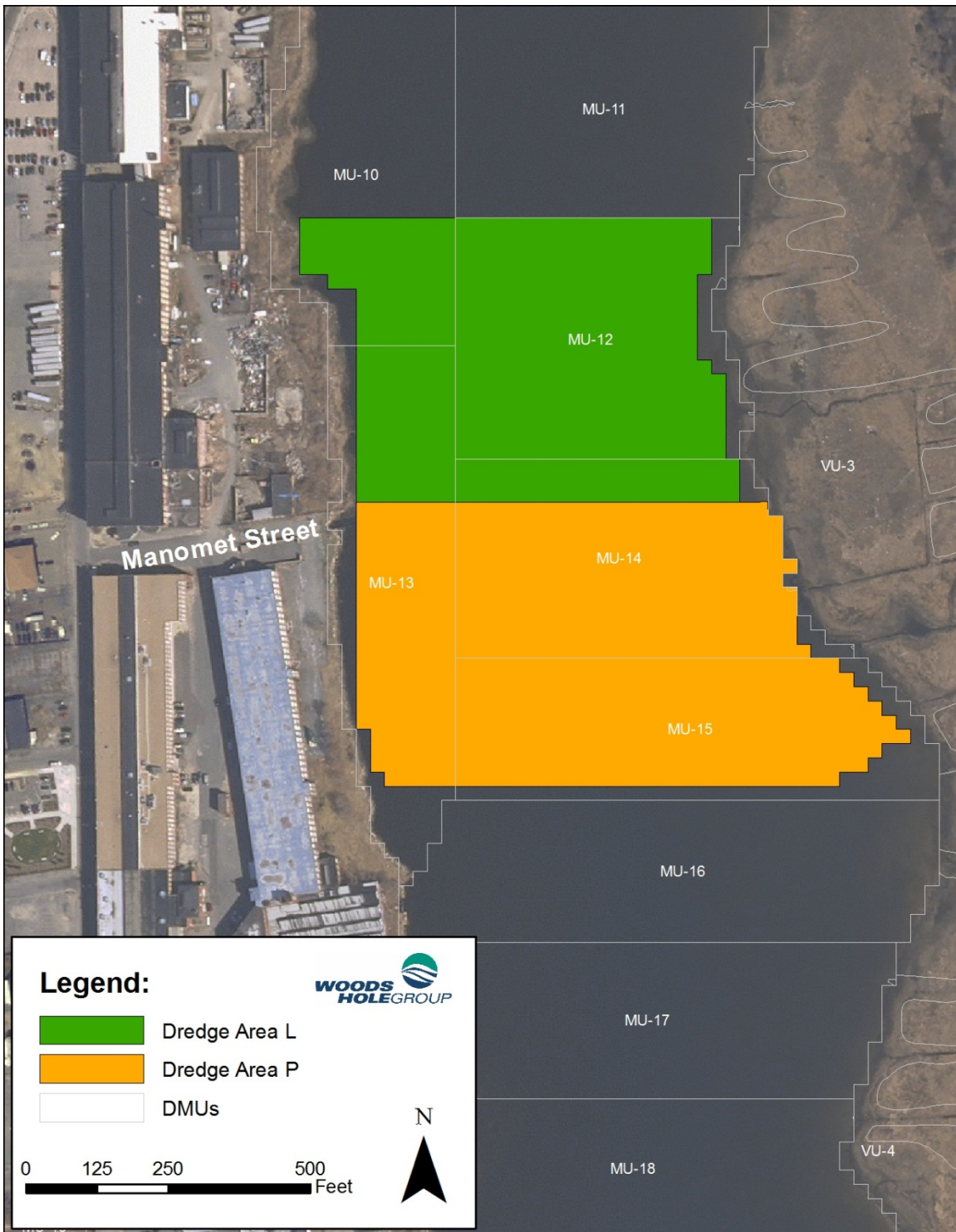


Figure 2. Basemap of 2012 Active Remediation Dredging Areas

The objectives of the 2012 sediment monitoring program were to collect sediment samples and perform sediment characterizations and analytical testing for PCBs in support of the remedial dredging activities in Operational Unit #1 (OU1). Sediment monitoring of the OU1 area in 2012 required visual characterization of split whole sediment cores to determine the thickness of the surficial “OL” sediment layer, as well as the elevation, relative to a vertical datum control, of the transition between the OL layer and the underlying strata. The OL layer is defined as ‘organic silt, organic clay.’ Historical analytical data confirms that the OL layer contains the highest concentrations of PCB contaminants (Morris et al., 2011). Therefore, identification of the spatial extent of the OL layer is important in developing a dredge plan, monitoring dredging performance and assessing the overall performance of the dredging operation. Analysis of PCB contaminants in sediment samples within the OL layer, and in others layers, further strengthens the correlation between PCB concentrations and the OL sediments. The entire upper harbor, including the DMUs and 2012 Dredge Areas, has been parceled into discrete 25-foot by 25 foot ‘z-blocks’. During remedial design, a geostatistical model was used to predict a target elevation for dredging each z-block, termed the z\* elevation. This target dredge elevation represents the elevation below which PCB concentrations are predicted to be less than the 10 mg/kg (ppm) remediation criterion. Using target dredge elevations in combination with bathymetric data, a preliminary dredge plan was developed that estimated the required depth of dredging and the thickness of the overlying sediment to be removed.

The successful completion of this sediment monitoring plan by the Woods Hole Group required close coordination and cooperation with the USACE and the dredging contractor.

#### *1.2.1 Pre-dredge Sediment Sampling*

Pre-Dredge sampling was performed at 33 locations in March 2012 in preparation for pending remedial dredging events and to confirm the target dredge elevation estimates from the z-blocks, and to adjust elevations as needed. Coring locations were placed onto the z-block map to achieve sufficient spatial coverage for the evaluation of the target dredge elevations. Visual characterizations from the pre-dredge cores were used by the USACE and JE to prepare the final dredge plan for 2012 and subsequent dredging seasons. Cores were subsampled for analytical testing of PCB concentrations in the sediment.

#### *1.2.2 Post-dredge Sediment Sampling*

Post-dredge sediment sampling was conducted at 33 locations to assess the sediment condition following dredging operations, confirming whether the remedial dredging completed the removal of contaminated sediments to concentrations at or below 10 ppm. Post-dredge sampling was completed in October 2012 and cores were visually characterized to determine the thickness and elevation of OL material remaining. Cores were subsampled for analytical testing of PCB concentrations in the sediment.

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## **2.0 METHODS**

Methods used to collect and analyze sediment samples are summarized below and described in detail in the project Field Sampling Plan (Woods Hole Group, 2012a) and Quality Assurance Project Plan (Woods Hole Group, 2012b).

### **2.1 CORE LOCATIONS**

All locations for the collection of sediment samples were approved by the USACE and USEPA, and provided electronically to Woods Hole Group by the dredging contractor.

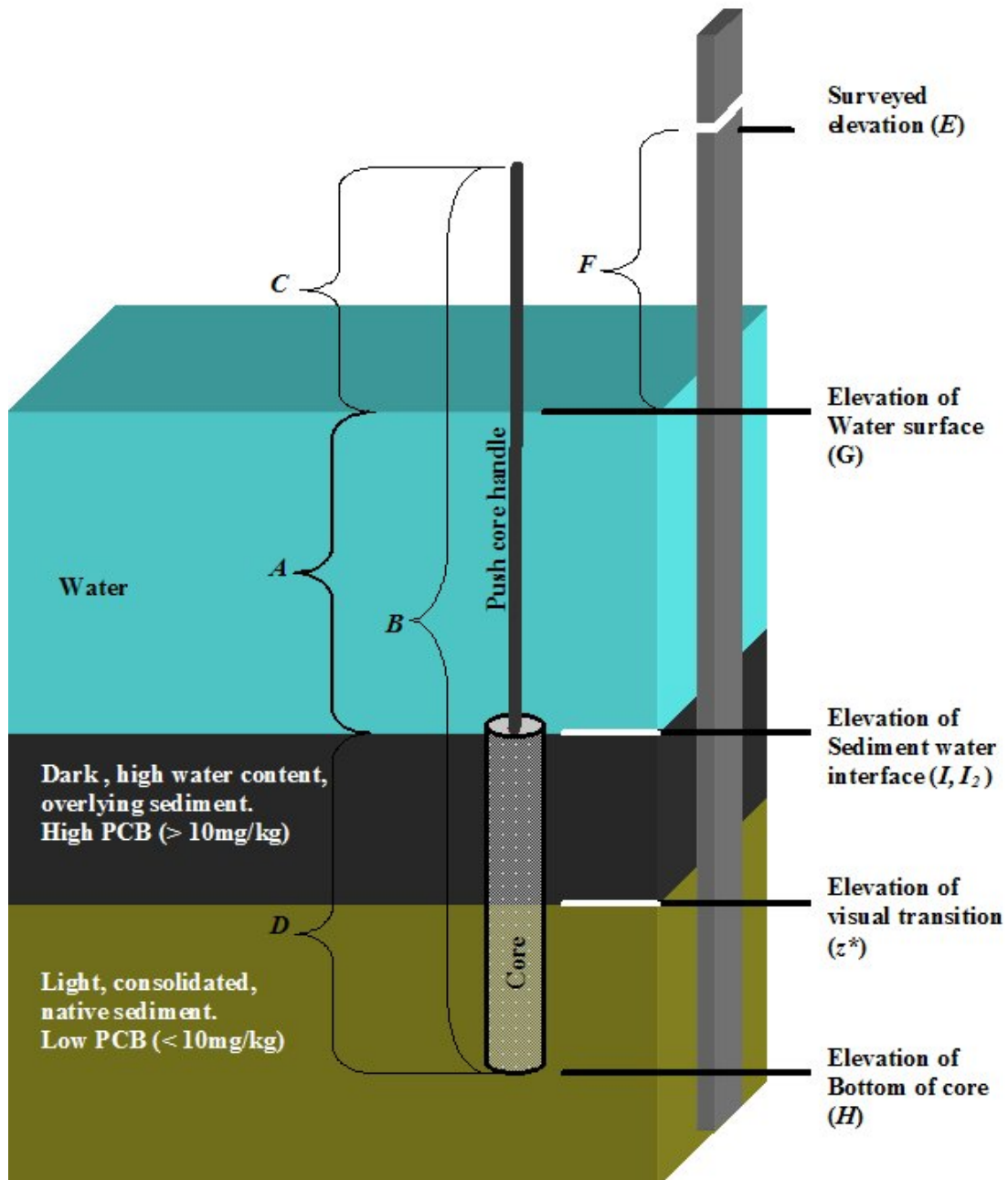
### **2.2 CORE COLLECTION**

Sediment cores were collected with a push-core sampling device equipped with a 2-5/8 inch inner diameter clear polycarbonate core barrel. The length of core needed for collection was determined either directly by the dredging contractor or by the target dredge elevation relative to the bottom elevation at each core location. To ensure that the target elevation was sampled, a core barrel was pushed into the sediment past the target elevation horizon. A piston assembly inside the core barrel was used to create suction, thereby preventing excessive compaction during core barrel penetration, and loss of sediment from the bottom of the barrel during recovery.

Before core collection at each sampling location, a water depth measurement was recorded and the water surface elevation was surveyed. Water surface elevation was surveyed relative to the vertical datum NGVD29 using tide boards previously secured to a steel sheet pile and aligned with surveyed elevation markings. After the push-core device was assembled, the total length of the device was measured, and the piston was positioned just inside the lower edge of the core barrel. The coring assembly was lowered in the water until the leading edge of the barrel was at the sediment-water interface. At this point the piston attachment line was secured to the boat, fixing the elevation of the piston, creating a suction point at the sediment-water interface. The push-core was then driven into the sediment to the predetermined depth, and the distance between the top of the push-core assembly and the water surface was measured. During core barrel retrieval the piston line was held tight to maintain suction in the barrel and to overcome the suction holding the penetrated core barrel in place. Upon core recovery the bottom end of the barrel was capped, the barrel was removed from the push-core device, and the core was stored in a vertical position.

### **2.3 CORE CALCULATIONS**

Quality Assurance and Quality Control (QA/QC) calculations were performed following core recovery. These calculations used the measurements of certain parameters recorded during the coring process to determine whether the core was acceptable. The required measurements and calculations are described in detail below and illustrated in Figure 3. All measurements were recorded in units of  $\pm 0.1$  feet.



**Figure 3. Graphical Representation of Sediment Core Measurements**

Descriptions of coring parameters described in Figure 3:

**A = Water depth.** The water depth was recorded using a stadia rod.

**B = Length of push-core assembly.** Prior to deployment, the full length of the push-core assembly from the top of the handle to the bottom edge of the core liner was recorded.

**C = Water surface to top of core assembly handle.** Once the core assembly was fully penetrated, the length of the assembly remaining above the water surface was recorded.

**D = Core Length.** The core length retained in the core barrel, from bottom to top, was measured and recorded.

**E = Surveyed elevation.** Prior to operations, the dredge contractor installed a gauged tide board fixed to the sheet pile with markings indicating a survey elevation (NGVD 29). This elevation was recorded and served as the reference point for elevation calculations.

**F = Water surface from surveyed elevation.** After sample collection, the survey vessel navigated to the fixed gauged tide board and the distance from the water surface to the surveyed elevation was recorded.

From these measurements a number of calculations were made to determine true elevations:

$E - F$  = Elevation of water surface (G).

$G - (B - C)$  = Elevation of bottom of core (H).

The H elevation (bottom of core) was used to determine the elevation of all visual transitions, including apparent target dredge elevation, i.e.:

$H + (\text{distance to visual transition from the bottom of the core})$  = **Elevation of visual transition** (target dredge elevation)

$H + D$  = Elevation of sediment-water interface (I).

The elevation of the sediment-water interface was also calculated from:

$G - A$  = Elevation of sediment-water interface ( $I_2$ ).

If I and  $I_2$  varied by more than 1.0 foot, the core was discarded and a new sample collected. Differences between I and  $I_2$  can be caused by 1) too much water at the top of the core, 2) compaction of the core sediment, 3) sediment loss from the bottom of the core, 4) erroneous measurements. Any one, or combination, of these factors can result in an unacceptable core sample.

## **2.4 INTERNAL SEDIMENT CORE EXAMINATION**

All pre- and post-dredge sediment cores were split open, described and subsampled for PCB congeners. A split core enables the scientist to provide an accurate physical description and measurement of thickness of the in-situ sediment strata, and allows for the collection of discrete sediment subsamples for laboratory analysis.

Each core barrel was placed into a clean 4-inch gutter and split by cutting along the entire length of the polycarbonate barrel using power shears. Cuts were made on opposite sides of the core barrel. A new piece of stainless steel wire (18 gauge) was used to slice

through the middle of each core barrel, using the two cuts in the barrel as guidelines. Care was used to prevent the wire from pulling obstructions (shells, rocks) through the core barrel and potentially mixing sediment layers. When the wire was prevented from being pulled smoothly through the core, a clean plastic knife was used instead. After splitting, the core halves were rolled 90 degrees and separated. Following separation, the lithology of the core was described and photographed by a trained sedimentologist. Textural descriptions were performed according to ASTM standards. Color descriptions followed the Munsell color classification standards.

Sediment from defined sections of each split core was spooned into 8 ounce glass jars for PCB analysis using a new, clean plastic spoon or a decontaminated stainless steel spoon. Subsamples were collected in 0.5 foot increments. If the core had a clear transition from the OL to another sediment layer, a one-half foot (0.5 foot) interval of sediment above the transition was sampled for PCB analysis. Another sample was collected 0.5 feet below the transition and a sample from 1 foot below the transition was archived. For example, if a core had a transition from OL to ML at 0.7 feet, three samples would be collected: 0.2-0.7 feet, 0.7-1.2 feet, and 1.2-1.7 feet (archived). Additional samples were collected for laboratory-based quality control analysis. All sediment samples were sent to AAL for PCB congener (NOAA-18) analysis.

## **2.5 POLYCHLORINATED BIPHENYL ANALYSIS (NOAA-18 CONGENERS)**

The methods used by the laboratory summarized below are detailed in Alpha Analytical Laboratories SOP O-012 and the USEPA's SOP EIA-FLDPCB2 in the Quality Assurance Project Plan (Woods Hole Group, 2012b).

Upon sample preparation, an aliquot of a well-mixed, homogeneous sediment sample is accurately measured for sample preparation. Generally, 50 grams of sediment is extracted. The New Bedford Harbor QAPP requires 30 g of sediment for extraction by Method 3540C Soxhlet Extraction, which is air dried to a minimum of >50% solids and generally >90% solids. The sample is spiked with surrogate compounds and then extracted using methylene chloride or a methylene chloride/acetone mixture. The extract is dried and exchanged to hexane during sample concentration. After extraction, clean-up techniques are applied as necessary. The extract may be treated with Aminopropyl, Carbon Column, Florisil (3620B) or GPC (3640A) for hydrocarbon and lipid removal, and copper (3660B) for sulfur removal. The extract is exchanged into hexane and concentrated to the appropriate volume, generally 10mL, and transferred for analysis. Prior to analysis, the extract is cleaned with sulfuric acid (3665A). Alternatively, this method can be employed for lower detection limits by decreasing the final volume to 1-5mL.

After clean-up and re-concentration, the extracts are analyzed on a gas chromatograph (GC) fitted with two capillary columns of differing polarities each employing separate detectors. This process follows USEPA Method 8082 (Woods Hole Group, 2012b). The extracts of PCB Congeners are spiked with internal standards (IS) prior to analysis. The target analytes are resolved on each column and detected using an electron capture detector (ECD). Analytes are introduced into the GC/ECD by injecting a known volume of the calibration standards, quality control samples, and sample extracts into the GC,

which is temperature- and flow-programmed to separate the analytes. Identification of the target analytes is accomplished by confirming a target hit on two dissimilar columns using Retention Time (RT). Concentrations are calculated from the ECD response using internal standard techniques. Sample results were reported in micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) for the individual congeners.

For each batch of 20 or fewer samples, a laboratory method blank, LCS/LCSD, MS and MSD was processed and analyzed with the field samples.

## **2.6 CALCULATION OF TOTAL PCBs FROM NOAA-18 CONGENERS RESULTS**

Although the sediment monitoring program analyzed and reported the individual concentrations for each of the NOAA-18 congeners, this report also provides values for the NOAA-18 congeners and for the total PCBs. The value for “total PCBs” presented in this report is calculated and is meant to provide a representative value for the total of all 209 PCB congeners or PCB homologs. In this report, Total PCBs is defined as the product of the sum the NOAA-18 congeners and the site-specific linear regression factor of 2.6 (Equation 1). PCB homolog and aroclor results do not undergo this calculation.

$$\text{Total PCBs} = \sum \text{NOAA-18 Congeners} \times 2.6$$

### **Equation 1. Calculation for Total PCBs from NOAA-18 Congeners**

Data validation was completed by New Environmental Horizons, Inc. (NEH). Detected and estimated (J) values were used during the summation of the NOAA-18 congeners; a value of zero was used for a non-detect (U) and a non-detect estimate (UJ) (Woods Hole Group, 2012b).

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### **3.0 RESULTS**

Results from the 2012 sediment monitoring activities are described below. Complete field data collection, core description logs, and digital photographs of the split and whole sediment cores are provided in Appendix A. Digital photographs of the split post-dredge cores have also been uploaded to the New Bedford EMIS. In the New Bedford EMIS, the core photographs are linked to the field collection information and associated analytical results.

A typical sediment core in the upper harbor consisted of a surficial OL layer with varied underlying strata. The OL layer consists of unconsolidated to loosely consolidated fine-grained black organic sediment which typically had a strong petroleum or hydrogen sulfide odor and occasionally had a light sheen the sediment surface. The OL often has fine to coarse sand in it as well. The underlying strata are generally composed of moderate- to well-consolidated fine-grained grey or sediments, typically silt (ML) with low percentages of sand and often a hydrogen sulfide odor associated with decayed organic matter. Often the transition from OL to underlying sediment was abrupt in terms of color, texture and/or consistency. Some cores contained a mixed layer of OL/ML, which could be mixing caused by mechanical excavation or other dredging activities. Previous years of monitoring data have shown the OL layer contains the highest concentrations of PCB contaminants. For this reason, and for the purpose of remediation, it is important to determine the thickness of the OL layer and identify the transition from the OL layer to the underlying strata. The boundary between OL and the underlying sediment can be identified visually, but the extent of PCB contamination cannot be identified by physical description alone. Therefore, analytical testing provides essential information when identifying the magnitude of PCB contamination.

#### **3.1 PRE-DREDGE CORE SAMPLING**

Pre-Dredge cores were collected on March 30 – April 11, 2012. 42 cores (39 field cores, 3 field replicates) were collected from proposed dredge Areas L and P and former dredge Area B, which is now partially within Area K (Figures 4 – 6). After collection, sediment cores were internally described and sampled for chemical analysis. If present, one sample was collected above the transition from OL to underlying sediment, and two samples (one analytical, one archive) were collected below the transition. The bottom-most samples were archived at AAL in dedicated freezers. Results are summarized in Tables 1 – 5.

3.1.1 Area L

The pre-dredge thickness of the OL layer in dredge Area L ranged from 0.1 – 3.7 feet with an average of 1.1 feet (Table 1, Figure 4). The underlying strata generally consisted of ML (silt), SW-SM (poorly-sorted sand with silt) or PT (peat). Samples closest to the eastern shoreline had the highest sand content. The total PCB concentration from samples within the OL ranged from 5.03 to 625 mg/kg, with a mean of 134 mg/kg (Table 3). Samples collected from beneath the OL ranged from 0.21 to 147 mg/kg with an average concentration of 22.5 mg/kg. See Figure 4 for sample locations and total PCB concentrations. Core LBB07 was described as having a dark, sandy SP (well-sorted sand) layer with sheen and petroleum odor at the core top (0-0.6 ft), and the sample from this layer had a total PCB concentration of 147 mg/kg. Therefore, this material should be thought of as OL/sediment to be removed for project purposes.

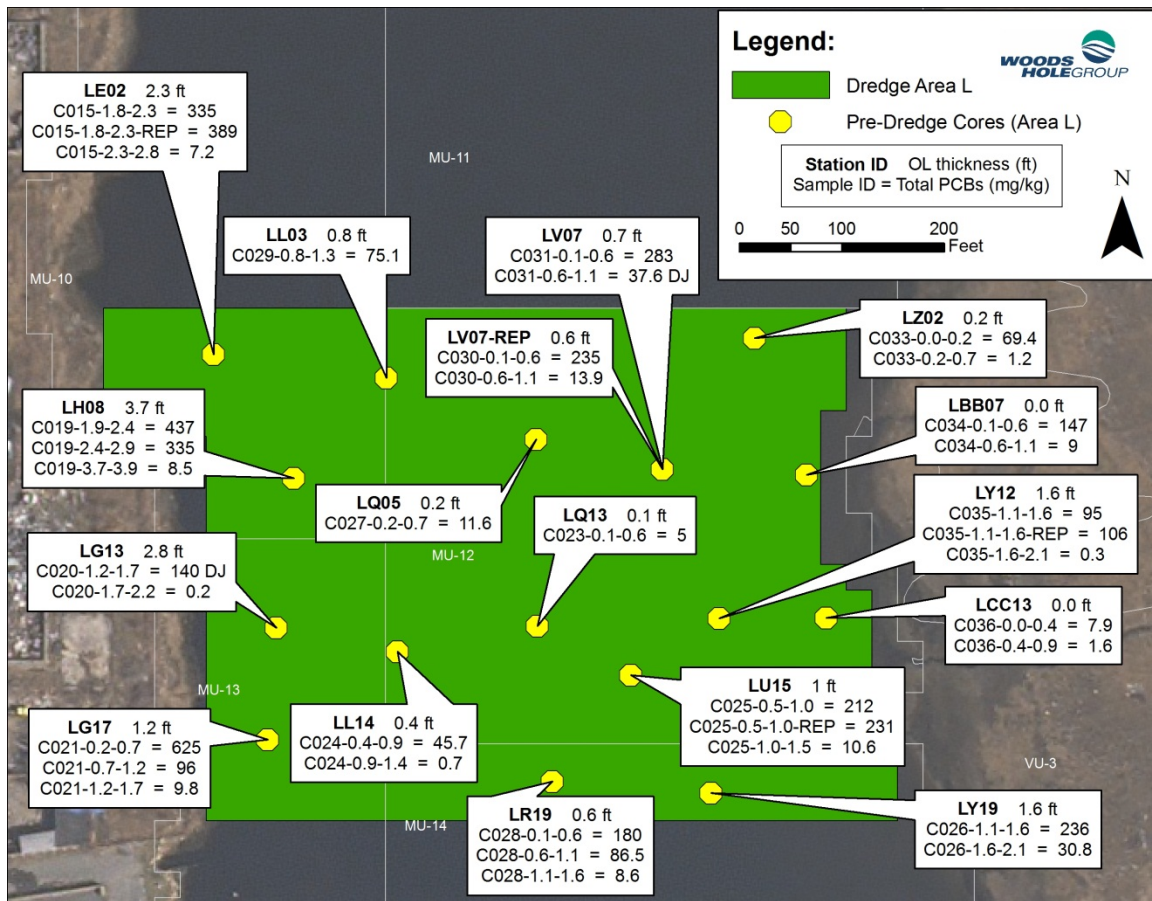


Figure 4. Area L Total PCB Concentrations for 2012 Pre-Dredge Cores.



3.1.2 Area P

The pre-dredge thickness of the OL layer in dredge Area P ranged from 0.2 – 2.9 feet (Table 2, Figure 5). The underlying strata consisted of ML sediment that transitioned to GW-GM (poorly-sorted gravel with silt/sand) or PT (peat) at depth. The total PCB concentration from samples within the OL ranged from 0.8J to 1520J mg/kg, with a mean of 624 mg/kg (Table 4). Samples collected from beneath the OL ranged from 0.1J to 54.5 mg/kg with an average concentration of 10.6 mg/kg. Note the large difference in total PCB concentration between PB8 and PB8-REP. The upper samples from both stations were sampled within the OL, yet PB8-REP had a much larger concentration. This was an uncommon example of where the identifying features of the OL layer were not indicative of high PCB concentrations. These samples also highlight the spatial heterogeneity of PCB concentration that can exist between co-located cores.

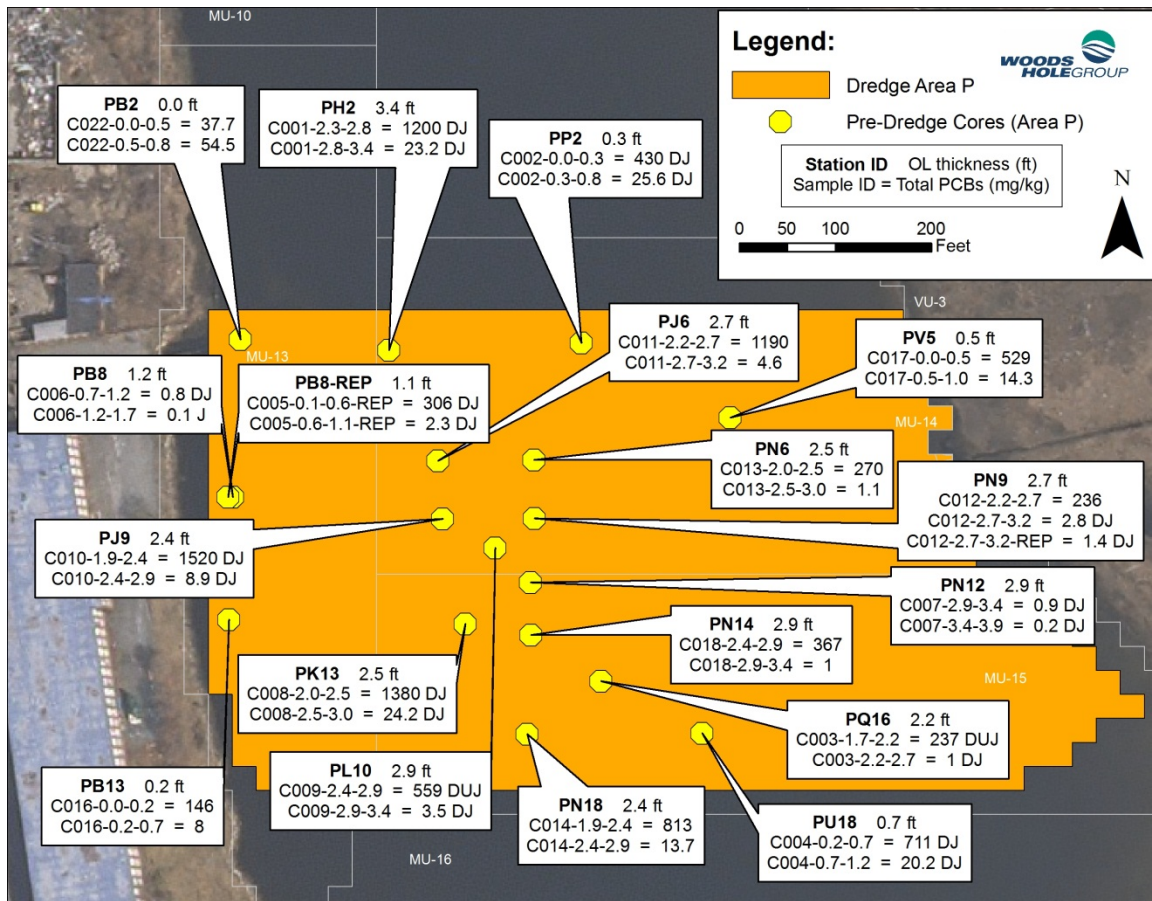
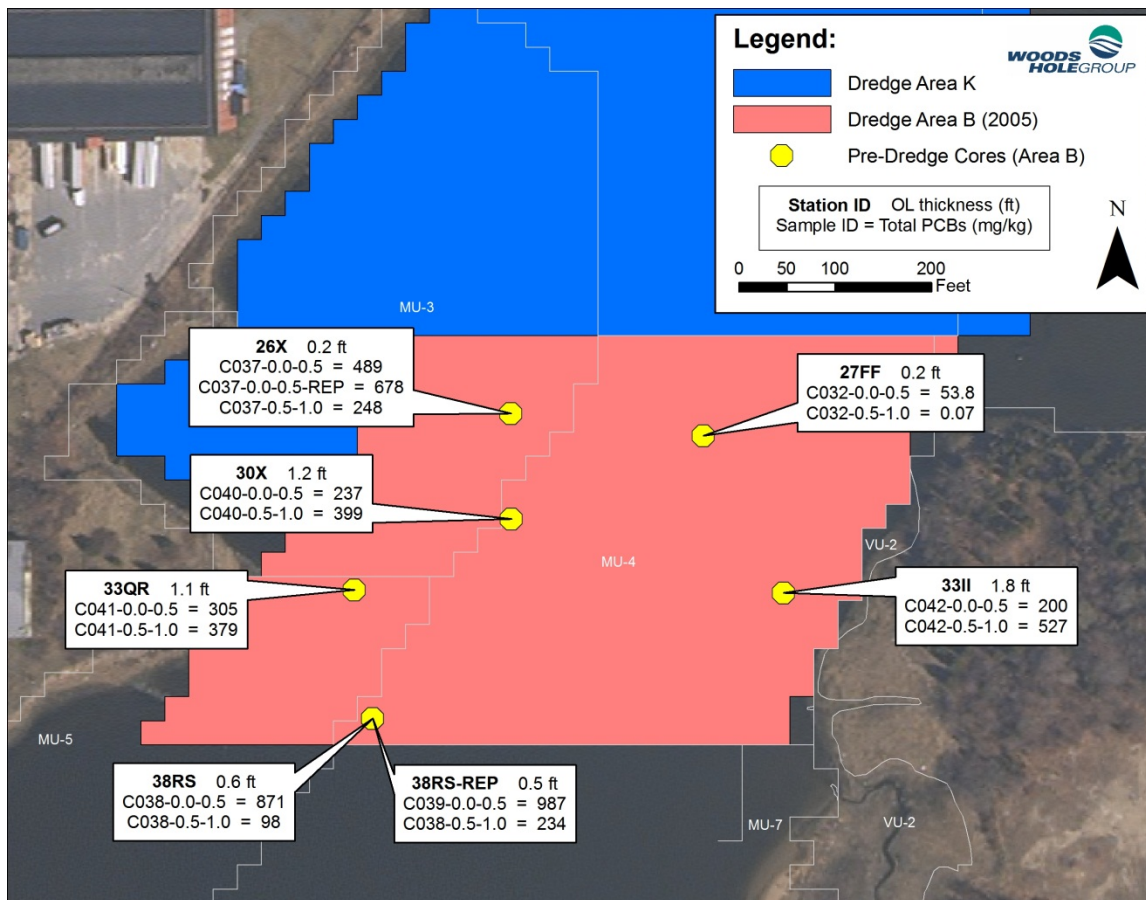


Figure 5. Area P Total PCB Concentrations for 2012 Pre-Dredge Cores.

### 3.1.3 Area B

Six cores and one REP were collected from former dredge Area B, which is partially within the bounds of dredge Area K (Figure 6). This area had been remediated previously, and the analytical results from these cores were not used for pre-dredge decision-making. Cores were 1.9 - 3.7 feet in length, and samples were collected from 0.0-0.5 feet and 0.5-1.0 feet, regardless of where the transition between OL and underlying sediment was located. Total PCB aroclor samples from Area B ranged from 0.07 to 987 mg/kg with an average of 337 mg/kg. The thickness of OL ranged from 0.2 to 1.8 feet, with an average of 0.8 feet. Results are tabulated in Table 5.



**Figure 6. Area B Total PCB Concentrations for 2012 Pre-Dredge Cores.**

Figures 7 – 8 are plots of total PCBs from the top two samples from pre-dredge cores in Areas L and P. The overlying sediment, which was often (but not always) within the OL, is the black column and the underlying sediment is the gray column (often, but not always ML). Only the total PCB concentrations from the two top-most samples are plotted. The 1998 EPA Record of Decision cleanup criterion of 10 mg/kg for river sediments is included on Figures 7 – 8. Analytical results from Area B samples are not plotted in this report.

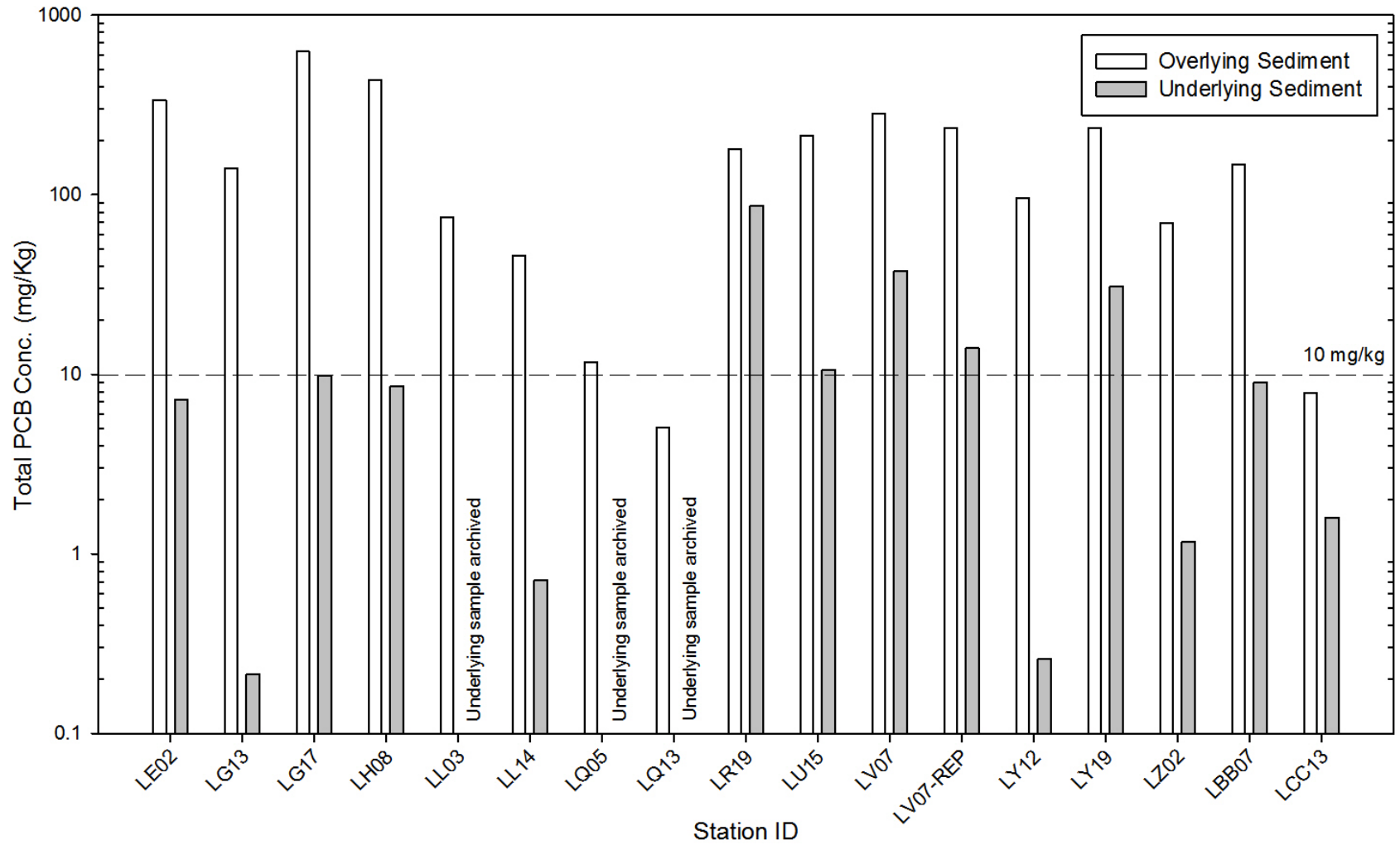


Figure 7. Total PCB Concentration in Area L Pre-Dredge Cores.

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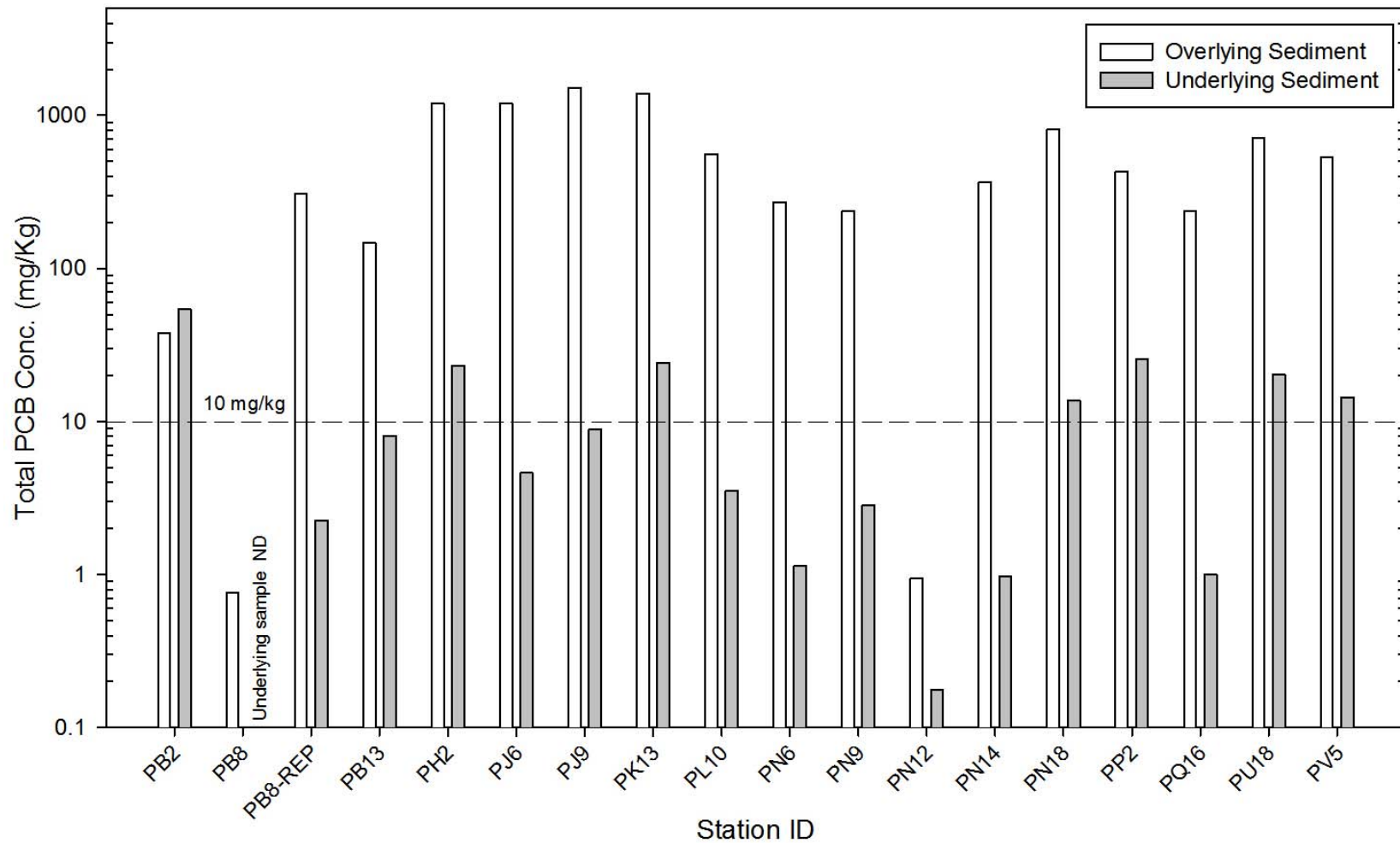


Figure 8. Total PCB Concentration in Area P Pre-Dredge Cores.

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**Table 1. Elevation Data from Area L Pre-Dredge Cores**

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)			Measured Sediment Thickness of OL Layer (ft)	Actual vs. Predicted Transition Elevation (ft) <sup>b</sup>
			Measured Elevation of Sediment Surface	Measured Elevation of Transition Between OL and Underlying Strata	Target Dredge Elevation <sup>a</sup>		
LE02	2704342.66	815020.08	-8.6	-10.9	-10.9	2.3	0
LG13	2704075.85	815081.11	-7.2	-10	-8.9	2.8	-1.1
LG17	2703966.47	815072.74	-6.3	-7.5	-9	1.2	1.5
LH08	2704221.73	815098.33	-8.1	-11.8	-11.4	3.7	-0.4
LL03	2704319.52	815188.74	-7.4	-8.2	-8.5	0.8	0.3
LL14	2704052.36	815199.67	-9.5	-9.9	-10.5	0.4	0.6
LQ05	2704259.78	815334.88	-6.7	-6.9	-7	0.2	0.1
LQ13	2704077.59	815336.12	-6.1	-6.2	-7	0.1	0.8
LR19	2703925.85	815350.82	-5.9	-6.5	-7.6	0.6	1.1
LU15	2704029.62	815427.53	-2.3	-3.3	-6.3	1	3
LV07	2704230.25	815458.04	-6.2	-6.9	-6.8	0.7	-0.1
LV07-REP	2704230.25	815458.04	-5.7	-6.3	-6.8	0.6	0.5
LY12	2704084.87	815513.68	-3.6	-5.2	-4.7	1.6	-0.5
LY19	2703914.76	815505.73	-6.6	-8.2	-4.8	1.6	-3.4
LZ02	2704358.41	815548.24	-3.1	-3.3	-3.5	0.2	0.2
LBB07	2704225.15	815599.25	-1.6	-1.6	-2.2	0	0.6
LCC13	2704085.59	815618.42	-1.2	-1.2	-1.7	0	0.5

<sup>a</sup> Source: Jacobs 2012 Dredge Plan

<sup>b</sup> Actual vs. Predicted = Measured Elevation of Visual Transition (ft.) – Target Dredge Elevation (ft.).

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**Table 2. Elevation Data from Area P Pre-Dredge Cores**

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)			Measured Sediment Thickness of OL Layer (ft)	Actual vs. Predicted Transition Elevation (ft) <sup>b</sup>
			Measured Elevation of Sediment Surface	Measured Elevation of Transition Between OL and Underlying Strata	Target Dredge Elevation <sup>a</sup>		
PB2	2703856.97	815046.17	-2.4	-2.4	-3.6	0	1.2
PB8	2703692.93	815038.18	-3.4	-4.6	-4.1	1.2	-0.5
PB8-REP	2703692.90	815033.62	-3.7	-4.8	-4.1	1.1	-0.7
PB13	2703565.36	815034.49	-3.9	-4.1	-4.1	0.2	0
PH2	2703845.88	815201.08	-6.6	-10	-10	3.4	0
PJ6	2703730.83	815251.96	-6.7	-9.4	-9.5	2.7	0.1
PJ9	2703670.13	815256.93	-6.3	-8.7	-8.7	2.4	0
PK13	2703560.97	815280.44	-6.2	-8.7	-9.1	2.5	0.4
PL10	2703640.14	815311.78	-7.2	-10.1	-10.1	2.9	0
PN6	2703731.51	815352.15	-8.4	-10.9	-10.5	2.5	-0.4
PN9	2703670.78	815352.56	-8.2	-10.9	-10.9	2.7	0
PN12	2703603.95	815348.46	-7.9	-10.8	-10.8	2.9	0
PN14	2703549.29	815348.84	-7	-9.9	-10	2.9	0.1
PN18	2703446.01	815344.99	-6.7	-9.1	-9.1	2.4	0
PP2	2703853.32	815401.41	-5.9	-6.2	-6.7	0.3	0.5
PQ16	2703501.20	815422.03	-8.8	-11	-11	2.2	0
PU18	2703447.26	815527.15	-5.9	-6.6	-6.6	0.7	0
PV5	2703775.43	815556.78	-4.8	-5.3	-5.3	0.5	0

<sup>a</sup> Source: Jacobs 2012 Dredge Plan

<sup>b</sup> Actual vs. Predicted = Measured Elevation of Visual Transition (ft.) – Target Dredge Elevation (ft.).

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**Table 3. PCB Concentrations of Area L Pre-Dredge Cores**

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/kg)	Total PCB Concentration (mg/kg)
LE02	S-12M-C015-1.8-2.3-REP*	1.8-2.3	150	389
	S-12M-C015-2.3-2.8	2.3-2.8	2.8	7.2
LG13	S-12M-C020-1.2-1.7	1.2-1.7	54 J <sup>†</sup>	140 J <sup>†</sup>
	S-12M-C020-1.7-2.2	1.7-2.2	0.1	0.2
LG17	S-12M-C021-0.2-0.7	0.2-0.7	241	625
	S-12M-C021-0.7-1.2	0.7-1.2	36.9	96
	S-12M-C021-1.2-1.7	1.2-1.7	3.8	9.8
LH08	S-12M-C019-1.9-2.4	1.9-2.4	168	437
	S-12M-C019-2.4-2.9	2.4-2.9	129	335
	S-12M-C019-3.7-3.9	3.7-3.9	3.3	8.5
LL03	S-12M-C029-0.8-1.3	0.8-1.3	28.9	75.1
LL14	S-12M-C024-0.4-0.9	0.4-0.9	17.6	45.7
	S-12M-C024-0.9-1.4	0.9-1.4	0.3	0.7
LQ05	S-12M-C027-0.2-0.7	0.2-0.7	4.5	11.6
LQ13	S-12M-C023-0.1-0.6	0.1-0.6	1.9	5
LR19	S-12M-C028-0.1-0.6	0.1-0.6	69.1	180
	S-12M-C028-0.6-1.1	0.6-1.1	33.3	86.5
	S-12M-C028-1.1-1.6	1.1-1.6	3.3	8.6
LU15	S-12M-C025-0.5-1.0	0.5-1.0	81.6	212
	S-12M-C025-0.5-1.0-REP*	0.5-1.0	88.9	231
	S-12M-C025-1.0-1.5	1.0-1.5	4.1	10.6
LV07	S-12M-C031-0.1-0.6	0.1-0.6	109	283
	S-12M-C031-0.6-1.1	0.6-1.1	14.5 J	37.6 J
LV07-REP	S-12M-C030-0.1-0.6	0.1-0.6	90.4	235
	S-12M-C030-0.6-1.1	0.6-1.1	5.4	13.9
LY12	S-12M-C035-1.1-1.6	1.1-1.6	36.5	95
	S-12M-C035-1.1-1.6-REP*	1.1-1.6	40.7	106
	S-12M-C035-1.6-2.1	1.6-2.1	0.1	0.3
LY19	S-12M-C026-1.1-1.6	1.1-1.6	90.9	236
	S-12M-C026-1.6-2.1	1.6-2.1	11.9	30.8
LZ02	S-12M-C033-0.0-0.2	0.0-0.2	26.7	69.4
	S-12M-C033-0.2-0.7	0.2-0.7	0.4	1.2
LBB07	S-12M-C034-0.1-0.6	0.1-0.6	56.6	147
	S-12M-C034-0.6-1.1	0.6-1.1	3.5	9
LCC13	S-12M-C036-0.0-0.4	0.0-0.4	3	7.9
	S-12M-C036-0.4-0.9	0.4-0.9	0.6	1.6

\* Not a true field replicate. See section 3.3 for details

† Three congener results were rejected. See section 3.2.1 for details

**Table 4. PCB Concentrations of Area P Pre-Dredge Cores**

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/kg)	Total PCB Concentration (mg/kg)
PB2	S-12M-C022-0.5-0.8	0.5-0.8	21	54.5
PB8	S-12M-C006-0.7-1.2	0.7-1.2	0.3 J	0.8 J
	S-12M-C006-1.2-1.7	1.2-1.7	0 J	0.1 J
PB8-REP	S-12M-C005-0.1-0.6-REP	0.1-0.6	118 J	306 J
	S-12M-C005-0.6-1.1-REP	0.6-1.1	0.9 J	2.3 J
PB13	S-12M-C016-0.0-0.2	0.0-0.2	56.3	146
	S-12M-C016-0.2-0.7	0.2-0.7	3.1	8
PH2	S-12M-C001-2.3-2.8	2.3-2.8	460 J	1200 J
	S-12M-C001-2.8-3.4	2.8-3.4	8.9 J	23.2 J
PJ6	S-12M-C011-2.2-2.7	2.2-2.7	459	1190
	S-12M-C011-2.7-3.2	2.7-3.2	1.8	4.6
PJ9	S-12M-C010-1.9-2.4	1.9-2.4	584 J	1520 J
	S-12M-C010-2.4-2.9	2.4-2.9	3.4 J	8.9 J
PK13	S-12M-C008-2.0-2.5	2.0-2.5	532 J	1380 J
	S-12M-C008-2.5-3.0	2.5-3.0	9.3 J	24.2 J
PL10	S-12M-C009-2.4-2.9	2.4-2.9	215 UJ	559 UJ
	S-12M-C009-2.9-3.4	2.9-3.4	1.4 J	3.5 J
PN6	S-12M-C013-2.0-2.5	2.0-2.5	104	270
	S-12M-C013-2.5-3.0	2.5-3.0	0.4	1.1
PN9	S-12M-C012-2.2-2.7	2.2-2.7	90.7	236
	S-12M-C012-2.7-3.2	2.7-3.2	1.1 J	2.8 J
	S-12M-C012-2.7-3.2-REP*	2.7-3.2	0.5 J	1.4 J
PN12	S-12M-C007-2.9-3.4	2.9-3.4	0.4 J	0.9 J
	S-12M-C007-3.4-3.9	3.4-3.9	0.1 J	0.2 J
PN14	S-12M-C018-2.4-2.9	2.4-2.9	141	367
	S-12M-C018-2.9-3.4	2.9-3.4	0.4	1
PN18	S-12M-C014-1.9-2.4	1.9-2.4	313	813
	S-12M-C014-2.4-2.9	2.4-2.9	5.3	13.7
PP2	S-12M-C002-0.0-0.3	0.0-0.3	165 J	430 J
	S-12M-C002-0.3-0.8	0.3-0.8	9.9 J	25.6 J
PQ16	S-12M-C003-1.7-2.2	1.7-2.2	91.2 UJ	237 UJ
	S-12M-C003-2.2-2.7	2.2-2.7	0.4 J	1 J
PU18	S-12M-C004-0.2-0.7	0.2-0.7	274 J	711 J
	S-12M-C004-0.7-1.2	0.7-1.2	7.8 J	20.2 J
PV5	S-12M-C017-0.0-0.5	0.0-0.5	204	529
	S-12M-C017-0.5-1.0	0.5-1.0	5.5	14.3

\* Not a true field replicate. See section 3.3 for details

**Table 5. PCB Aroclor Concentrations of Area B Pre-Dredge Cores**

Station ID	Core ID	Sample Interval (ft)	Sum of PCB Aroclors <sup>+</sup> (mg/kg)
26X	S-12M-C037-0.0-0.5	0.0-0.5	489 J
	S-12M-C037-0.0-0.5-REP*	0.0-0.5	678 J
	S-12M-C037-0.5-1.0	0.5-1.0	248
27FF	S-12M-C032-0.0-0.5	0.0-0.5	53.8
	S-12M-C032-0.5-1.0	0.5-1.0	0.1
30X	S-12M-C040-0.0-0.5	0.0-0.5	237
	S-12M-C040-0.5-1.0	0.5-1.0	399
33II	S-12M-C042-0.0-0.5	0.0-0.5	200
	S-12M-C042-0.5-1.0	0.5-1.0	527
33QR	S-12M-C041-0.0-0.5	0.0-0.5	305
	S-12M-C041-0.5-1.0	0.5-1.0	379
38RS	S-12M-C038-0.0-0.5	0.0-0.5	871
	S-12M-C038-0.5-1.0	0.5-1.0	98
38RS-REP	S-12M-C039-0.0-0.5	0.0-0.5	987
	S-12M-C039-0.5-1.0	0.5-1.0	234

\* Not a true field replicate. See section 3.3 for details

+ Aroclors are not multiplied by the site-specific PCB correlation factor of 2.6; the sum of aroclors is equal to the total PCB concentration.

### 3.2 POST-DREDGE CORE SAMPLING

Post-dredge cores were collected in October 2012. 37 cores (33 field cores, 4 field replicates) were collected in dredge Areas L and P (Figures 9 and 10). Figures 9 and 10 were provided by the dredging contractor and include the core locations, total PCB concentrations in mg/kg, and post-dredge OL thicknesses plotted over the post-dredge surveyed bathymetry. During the October collection event, sediment cores were split open for internal sediment characterization and analytical sample collection. The internal sediment characterization was performed to confirm the presence of the OL layer and to determine the elevation of the transition between the OL and underlying strata. At least two samples were collected from every core but most cores had three samples: 0.5 feet above the transition from OL to underlying sediment (analytical), 0.5 feet below the transition (analytical), and 1 foot below the transition (archived). Samples from within the OL or nearest to the core top were analyzed while deeper samples were archived at AAL in dedicated freezers.

#### 3.2.1 Area L

The post-dredge thickness of the OL layer in dredge Area L ranged from 0.0 – 1.4 feet (Table 6 & 8, Figures 11 – 12). The underlying strata generally consisted of ML with varying amounts of medium to coarse sand. Total PCB concentrations from samples within the OL ranged from 27.8 to 657 mg/kg, with an average of 259 mg/kg (Table 8). Sediment below the OL had total PCB concentrations between 0 and 363 mg/kg, with an

average of 37.0 mg/kg. The PCB concentrations from beneath the OL were skewed by samples S-12O-C026-0.5-1.0 (LI02, 363 mg/kg) and S-12O-C029-0.0-0.5 (LP05, 95.1 mg/kg). Core LP05 did not have any OL, yet PCB concentration was nearly 100 mg/kg. If these two results are removed as outliers, the below-OL PCB concentration for Area L post-dredge is reduced to 18.7 mg/kg.

### *3.2.2 Area P*

The post-dredge thickness of the OL layer in dredge Area P varied from 0.0 – 1.4 feet (Table 7 & 9, Figure 13). The underlying strata consisted of ML sediment with varying amounts of fine to coarse sand. Total PCB concentrations of samples within the OL ranged from 34.5 to 2190 J mg/kg, with an average of 326 mg/kg (Table 9). This average is heavily influenced by sample S-12O-C014-0.9-1.4 (PH02, 2190 J mg/kg), and the average is reduced to 139 mg/kg if it is removed as an outlier. There were eleven samples from within the OL in Area P, eight had total PCB concentrations below 150 mg/kg.

Total PCB concentrations from samples beneath the OL in Area P ranged from 0 to 32.7 J mg/kg. Thirteen of the fifteen samples beneath the OL had concentrations less than 10 mg/kg.

Post-dredge analytical results from both dredge Areas are presented in Tables 6 – 9 and Figures 9 – 13. The overlying sediment, which was often (but not always) within the OL, is the black column in Figure 11 – 12 and the underlying sediment is the gray column (often, but not always ML). Only the total PCB concentrations from the two top-most samples are plotted. The 1998 EPA Record of Decision cleanup criterion of 10 mg/kg for river sediments is included on Figures 11 – 13.

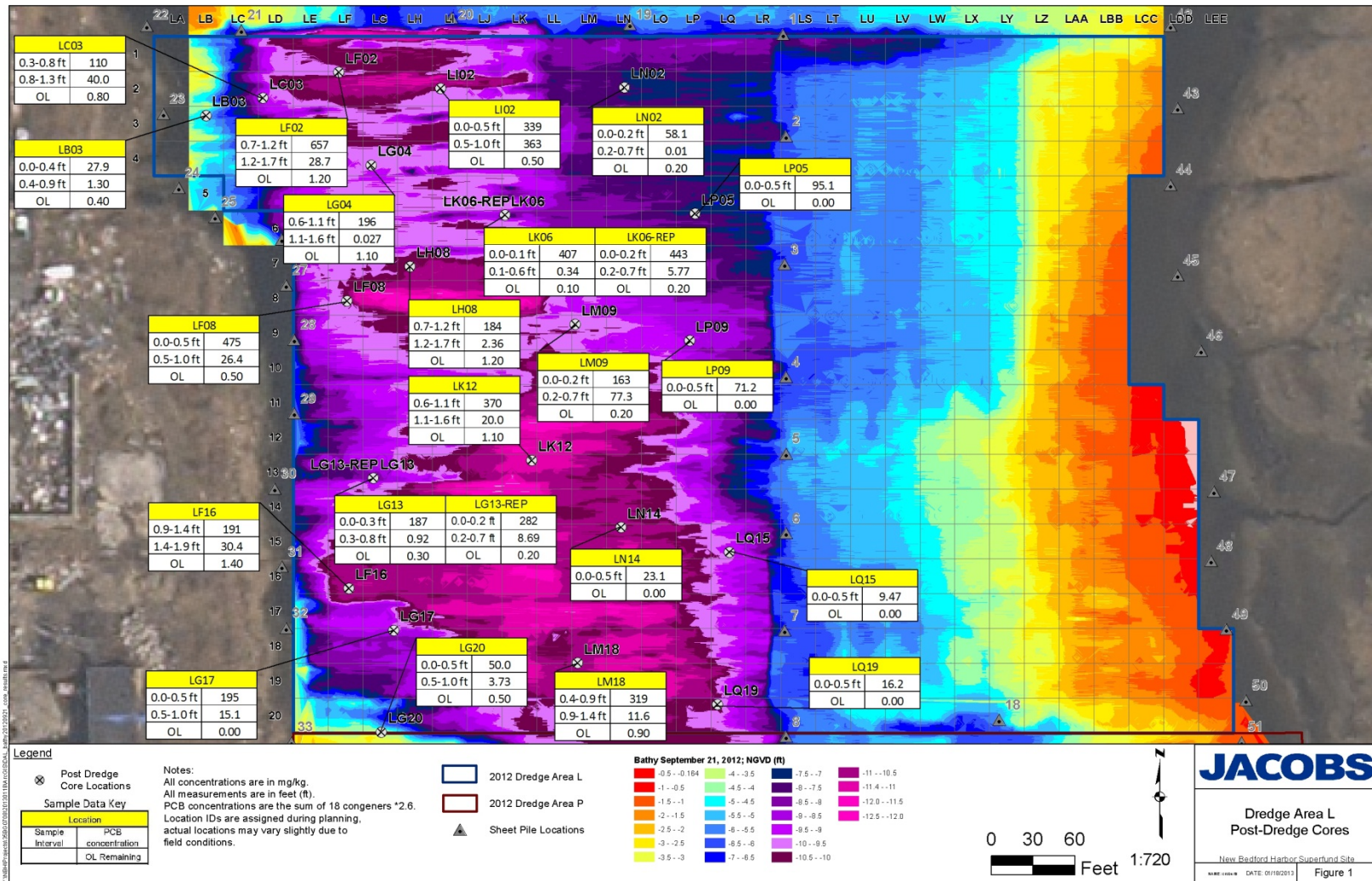


Figure 9. Area L Total PCB Concentrations and OL Thickness for 2012 Post-Dredge Cores

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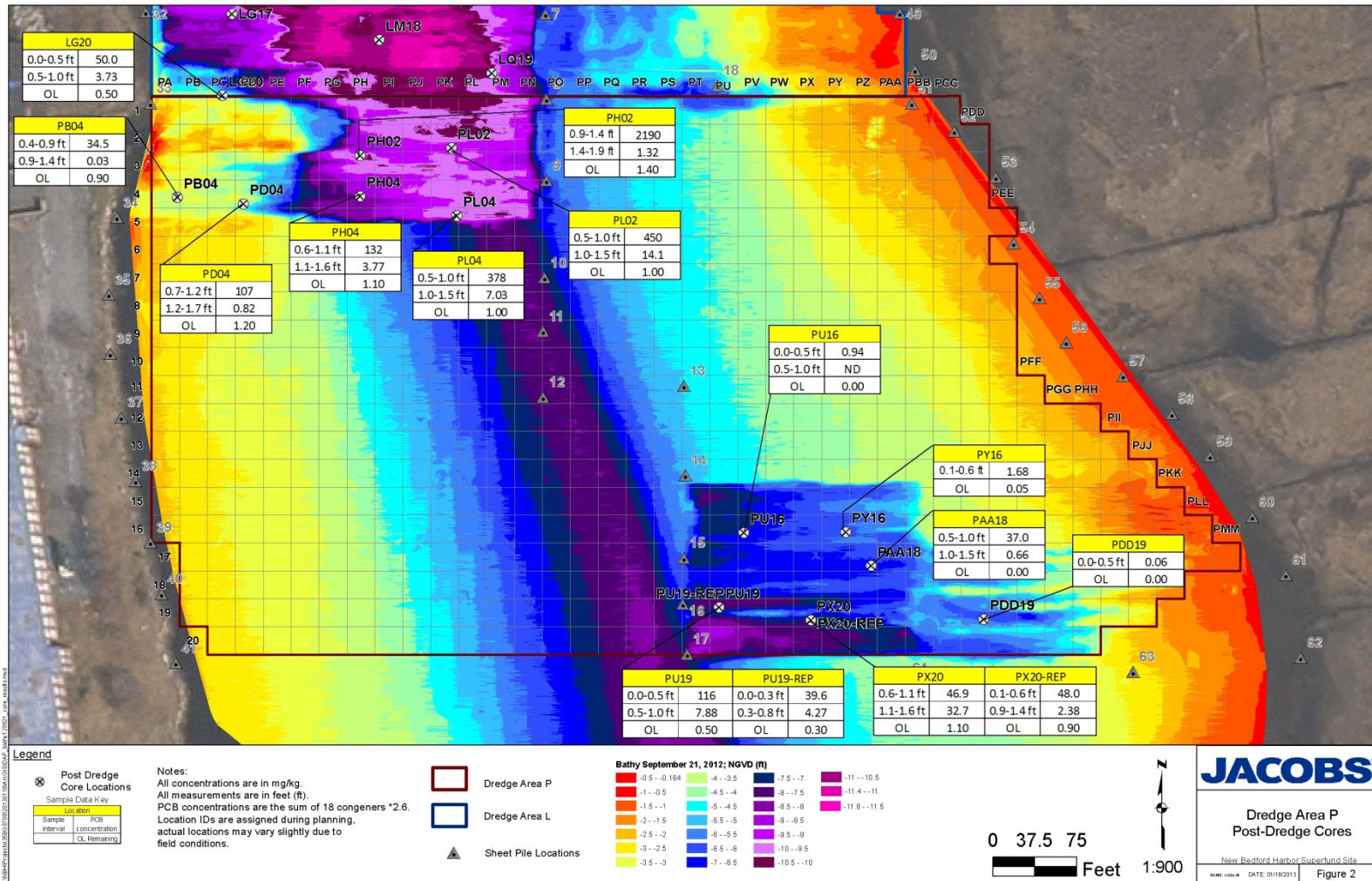


Figure 10. Area P Total PCB Concentrations and OL Thickness for 2012 Post-Dredge Cores

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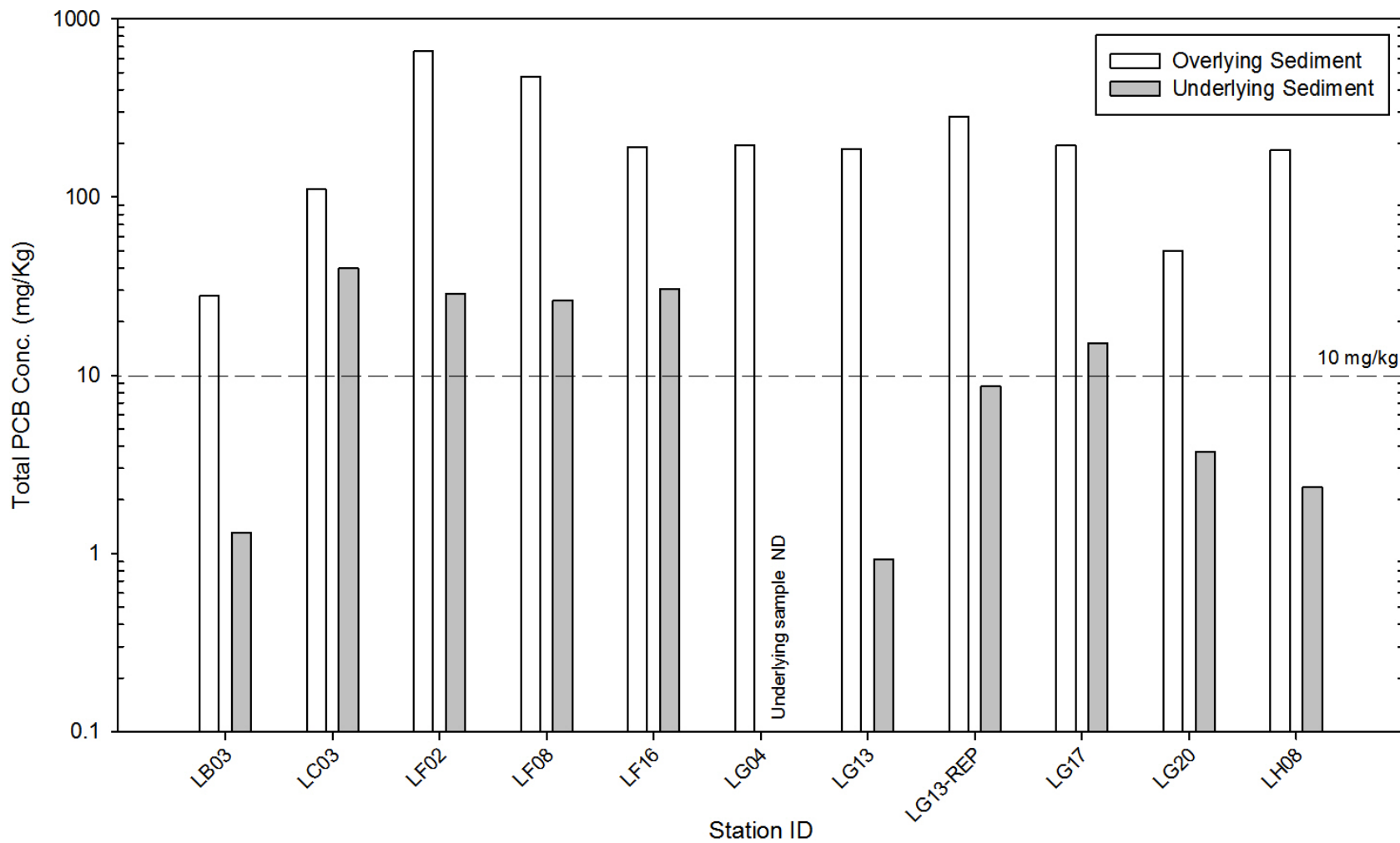


Figure 11. Total PCB Concentration in Area L Post-Dredge Cores

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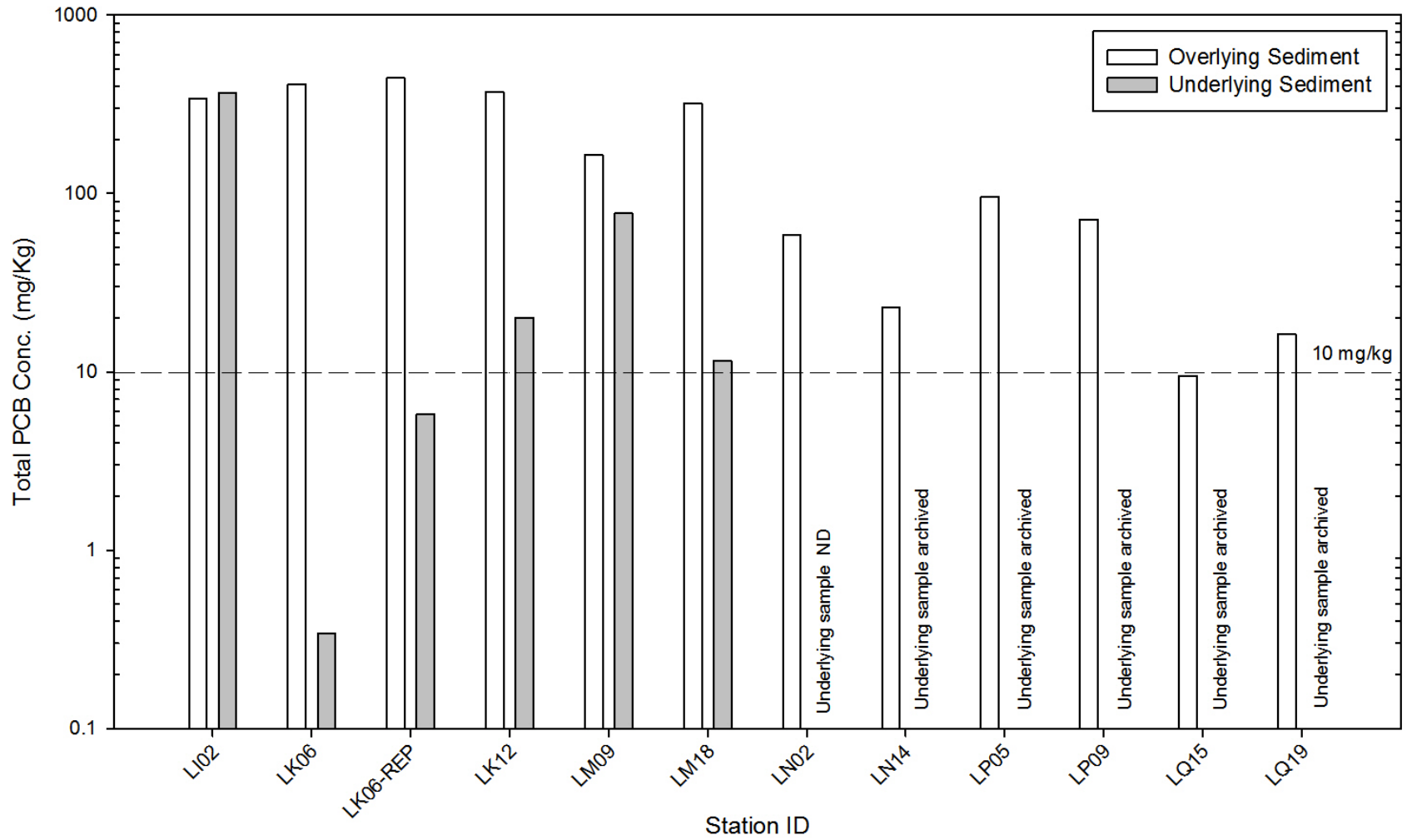


Figure 12. Total PCB Concentration in Area L Post-Dredge Cores

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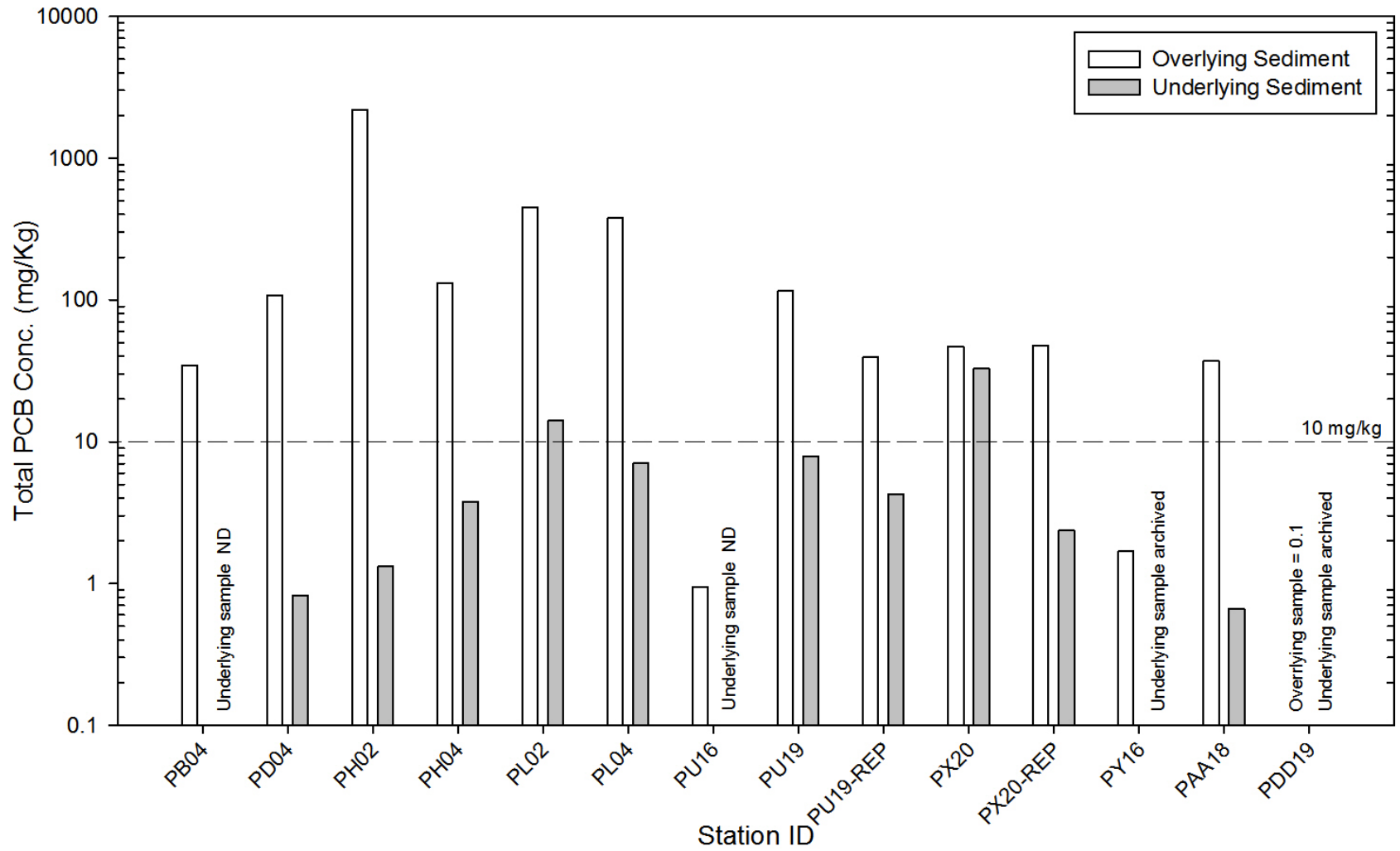


Figure 13. Total PCB Concentration in Area P Post-Dredge Cores

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**Table 6. Elevation Data from Area L Post-Dredge Cores**

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)			Measured Sediment Thickness of OL Layer (ft)	Actual vs. Predicted Transition Elevation (ft) <sup>b</sup>
			Measured Elevation of Sediment Surface	Measured Elevation of Transition Between OL and Underlying Strata	Target Dredge Elevation <sup>a</sup>		
LB03	2704330.71	814950.19	-6.3	-6.7	-6.9	0.4	0.2
LC03	2704343.14	814991.09	-9.7	-10.5	-8.9	0.8	-1.6
LF02	2704361.73	815045.61	-11.3	-12.5	-12.8	1.2	0.3
LG04	2704295.08	815068.84	-9.7	-10.8	-10.9	1.1	0.1
LI02	2704350.08	815118.55	-10.8	-11.3	-10.4	0.5	-0.9
LN02	2704350.98	815250.61	-8.2	-8.4	-7.4	0.2	-1
LP05	2704260.23	815301.33	-8.1	-8.1	-7.6	0	-0.5
LK06	2704259.29	815164.71	-9.7	-9.8	-9.1	0.1	-0.7
LK06-REP	2704259.29	815164.71	-10	-10.2	-9.1	0.2	-1.1
LH08	2704222.39	815096.66	-11	-12.2	-11.1	1.2	-1.1
LF08	2704197.79	815051.28	-10.7	-11.2	-10.6	0.5	-0.6
LM09	2704180.69	815215.34	-10.4	-10.6	-10	0.2	-0.6
LP09	2704169.10	815297.40	-8.9	-8.9	-8	0	-0.9
LK12	2704083.30	815184.13	-11.4	-12.5	-11.4	1.1	-1.1
LG13	2704070.38	815070.37	-10.8	-11.1	-8.9	0.3	-2.2
LG13-REP	2704070.38	815070.37	-10.9	-11.1	-8.9	0.2	-2.2
LN14	2704035.15	815248.22	-10.8	-10.8	-10.8	0	0
LQ15	2704017.46	815325.76	-9.6	-9.6	-8	0	-1.6
LF16	2703991.30	815052.69	-12.1	-13.5	-11.6	1.4	-1.9
LG17	2703961.15	815084.77	-9	-9	-8.5	0	-0.5
LG20	2703888.21	815076.16	-6.4	-6.9	-6.5	0.5	-0.4
LM18	2703937.76	815217.00	-10.7	-11.6	-11.2	0.9	-0.4
LQ19	2703908.08	815317.39	-10.1	-10.1	-8.5	0	-1.6

<sup>a</sup> Source: Jacobs 2012 Dredge Plan

<sup>b</sup> Actual vs. Predicted = Measured Elevation of Visual Transition (ft.) – Target Dredge Elevation (ft.).

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**Table 7. Elevation Data from Area P Post-Dredge Cores**

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)			Measured Sediment Thickness of OL Layer (ft)	Actual vs. Predicted Transition Elevation (ft) <sup>b</sup>
			Measured Elevation of Sediment Surface	Measured Elevation of Transition Between OL and Underlying Strata	Target Dredge Elevation <sup>a</sup>		
PB04	815035.80	2703796.84	-4.5	-5.4	-3.5	0.9	-1.9
PD04	815095.04	2703791.17	-3.7	-4.9	-4	1.2	-0.9
PH02	815199.49	2703834.40	-10.6	-12	-9.7	1.4	-2.3
PH04	815199.74	2703797.96	-9.1	-10.2	-9.1	1.1	-1.1
PL02	815281.42	2703841.03	-7.1	-8.1	-10.1	1	2
PL04	815286.39	2703780.33	-10.3	-11.3	-10.1	1	-1.2
PU16	815543.36	2703496.63	-8.1	-8.1	-6.9	0	-1.2
PU19	815521.04	2703429.68	-9.1	-9.6	-7.6	0.5	-2
PU19-REP	815521.04	2703429.68	-8.9	-9.2	-7.6	0.3	-1.6
PY16	815634.44	2703497.26	-7	-7	-5.7	0	-1.3
PX20	815603.10	2703418.09	-9	-10.1	-7.2	1.1	-2.9
PX20-REP	815603.10	2703418.09	-9.1	-9.7	-7.2	0.6	-2.5
PAA18	815657.41	2703467.05	-7.1	-7.1	-6.1	0	-1
PDD19	815757.93	2703419.15	-7.2	-7.2	-5.3	0	-1.9

<sup>a</sup> Source: Jacobs 2012 Dredge Plan

<sup>b</sup> Actual vs. Predicted = Measured Elevation of Visual Transition (ft.) – Target Dredge Elevation (ft.).

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**Table 8. PCB Concentrations of Area L Post-Dredge Cores**

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/Kg)	Total PCB Concentration (mg/Kg)
LB03	S-120-C005-0.0-0.4	0.0-0.4	10.7	27.8
	S-120-C005-0.4-0.9	0.4-0.9	0.5	1.3
LC03	S-120-C002-0.3-0.8	0.3-0.8	42.4	110
	S-120-C002-0.8-1.3	0.8-1.3	15.4	40
LF02	S-120-C031-0.7-1.2	0.7-1.2	253	657
	S-120-C031-1.2-1.7	1.2-1.7	11	28.7
LF08	S-120-C030-0.0-0.5	0.0-0.5	183	475
	S-120-C030-0.5-1.0	0.5-1.0	10.2 J	26.4 J
LF16	S-120-C009-0.9-1.4	0.9-1.4	73.3	191
	S-120-C009-1.4-1.9	1.4-1.9	11.7	30.4
LG04	S-120-C032-0.6-1.1	0.6-1.1	0	196
	S-120-C032-1.1-1.6	1.1-1.6	0	0
LG13	S-120-C012-0.0-0.3	0.0-0.3	71.8 J	187
	S-120-C012-0.3-0.8	0.3-0.8	0.4	0.9
LG13-REP	S-120-C012-0.0-0.2 REP	0.0-0.2	109 J	282 J
	S-120-C012-0.2-0.7 REP	0.2-0.7	3.3 J	8.7 J
LG17	S-120-C015-0.0-0.5	0.0-0.5	74.9 J	195 J
	S-120-C015-0.5-1.0	0.5-1.0	5.8 J	15.1 J
LG20	S-120-C010-0.0-0.5	0.0-0.5	19.2	50
	S-120-C010-0.5-1.0	0.5-1.0	1.4	3.7
LH08	S-120-C028-0.7-1.2	0.7-1.2	70.8	184
	S-120-C028-1.2-1.7	1.2-1.7	0.9	2.4
LI02	S-120-C026-0.0-0.5	0.0-0.5	130	339
	S-120-C026-0.5-1.0	0.5-1.0	140	363
LK06	S-120-C033-0.0-0.1	0.0-0.1	157	407
	S-120-C033-0.1-0.6	0.1-0.6	0.1 J	0.3 J
LK06-REP	S-120-C033-0.0-0.2 REP	0.0-0.2	170	443
	S-120-C033-0.2-0.7 REP	0.2-0.7	2.2 J	5.8 J
LK12	S-120-C016-0.6-1.1	0.6-1.1	142 J	370 J
	S-120-C016-1.1-1.6	1.1-1.6	7.7 J	20 J
LM09	S-120-C024-0.0-0.2	0.0-0.2	62.9	164
	S-120-C024-0.2-0.7	0.2-0.7	29.7	77.3
LM18	S-120-C017-0.4-0.9	0.4-0.9	123 J	319 J
	S-120-C017-0.9-1.4	0.9-1.4	4.4 J	11.6 J
LN02	S-120-C027-0.0-0.2	0.0-0.2	22.4	58.1
	S-120-C027-0.2-0.7	0.2-0.7	0	0
LN14	S-120-C013-0.0-0.5	0.0-0.5	8.9	23.1
LP05	S-120-C029-0.0-0.5	0.0-0.5	36.6	95.1
LP09	S-120-C025-0.0-0.5	0.0-0.5	27.4	71.2
LQ15	S-120-C023-0.0-0.5	0.0-0.5	3.6 J	9.5 J
LQ19	S-120-C022-0.0-0.5	0.0-0.5	6.2 J	16.2 J

<sup>a</sup> Total PCB = Sum NOAA-18 congeners \* 2.6

**Table 9. PCB Concentrations of Area P Post-Dredge Cores**

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/Kg)	Total PCB Concentration (mg/Kg)
PB04	S-120-C011-0.4-0.9	0.4-0.9	13.3	34.5
	S-120-C011-0.9-1.4	0.9-1.4	0	0
PD04	S-120-C008-0.7-1.2	0.7-1.2	41.3	107
	S-120-C008-1.2-1.7	1.2-1.7	0.3 J	0.8 J
PH02	S-120-C014-0.9-1.4	0.9-1.4	844 J	2190 J
	S-120-C014-1.4-1.9	1.4-1.9	0.5 J	1.3 J
PH04	S-120-C020-0.6-1.1	0.6-1.1	50.6 J	132 J
	S-120-C020-1.1-1.6	1.1-1.6	1.4 J	3.8 J
PL02	S-120-C021-0.5-1.0	0.5-1.0	173 J	450 J
	S-120-C021-1.0-1.5	1.0-1.5	5.4 J	14.1 J
PL04	S-120-C019-0.5-1.0	0.5-1.0	145 J	378 J
	S-120-C019-1.0-1.5	1.0-1.5	2.7 J	7 J
PU16	S-120-C004-0.0-0.5	0.0-0.5	0.4	0.9
	S-120-C004-0.5-1.0	0.5-1.0	0	0
PU19	S-120-C018-0.0-0.5	0.0-0.5	44.6 J	116 J
	S-120-C018-0.5-1.0	0.5-1.0	3 J	7.9 J
PU19-REP	S-120-C018-0.0-0.3 REP	0.0-0.3	15.2 J	39.6 J
	S-120-C018-0.3-0.8 REP	0.3-0.8	1.6 J	4.3 J
PX20	S-120-C001-0.6-1.1	0.6-1.1	18	46.9
	S-120-C001-1.1-1.6	1.1-1.6	12.6 J	32.7 J
PX20-REP	S-120-C001-0.1-0.6-REP	0.1-0.6	18.4	48
	S-120-C001-0.9-1.4-REP	0.9-1.4	0.9 J	2.4 J
PY16	S-120-C006-0.1-0.6	0.1-0.6	0.6	1.7
PAA18	S-120-C003-0.5-1.0	0.5-1.0	14.2	37
	S-120-C003-1.0-1.5	1.0-1.5	0.3	0.7
PDD19	S-120-C007-0.0-0.5	0.0-0.5	0	0.1

<sup>a</sup>Total PCB = Sum NOAA-18 congeners \* 2.6

PCB homolog samples were collected during post-dredge sampling efforts. There is moderate parity in two of the four pairs when comparing PCB congener and homolog results from the same core (Table 10). The relative percent difference (RPD) between congener and homolog results from core LI02 was 30.5% and for PAA18 it was just 5.3%. The RPDs for cores LB03 and PD04 were not as low: for LB03 it was 50.1% and for PD04 it was 60.0%. A common RPD acceptance criterion is 50%, e.g. precision is unacceptable if RPD > 50%.

**Table 10. PCB Homologs vs. Congeners Comparison, Post-Dredge Cores.**

Station ID	Core ID	Sample Interval (ft)	Total PCB Concentration - Homologs (mg/Kg)	Total PCB Concentration - NOAA-18 Congeners (mg/Kg)
LB03	S-12O-C005-0.0-0.4	0.0-0.4	46.3	27.8
LI02	S-12O-C026-0.0-0.5	0.0-0.5	248.8	339
PD04	S-12O-C008-0.7-1.2	0.7-1.2	57.4	107
PAA18	S-12O-C003-0.5-1.0	0.5-1.0	34.9	37

### 3.3 DATA VALIDATION

Based on Tier I+ validation of 18 NOAA PCB congeners, individual congener results for 2,2',3,3',4,4',5,6-Octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl, and DecaCB – Homologue (all from sample S-12M-C020-1.2-1.7) were rejected and were not usable for project decisions; see section 3.2.1 for details. All other results were considered usable for project decisions based on a comparison to the NBH OUI QAPP Addendum 2012 requirements and with the understanding of the potential uncertainty (bias) in the qualified results. The majority of samples have elevated detection limits due to the dilution factors (DF) required by the elevated concentrations of target compounds in the samples. Dilution factors ranged between 1 and 10,000. As in previous years, data were reported with “D” qualifiers but this qualifier was not included in figures and tables. For all samples, the reporting limits (RL) were increased as a consequence of the dilutions (RLs were 1 – 4,100 times higher than 5 µg/kg PQL given in QAPP Worksheet #15). However, the sum of all detected congener results in these diluted samples exceeded the Project Action Limit (PAL) for Total PCBs; therefore, sensitivity was considered acceptable.

#### 3.3.1 Pre-dredge samples

The COC identified Field Duplicate (FD) samples as S-12M-C005-0.1-0.6-REP and S-12M-C005-0.6-1.1-REP. WHG was contacted to find out what the original core samples were for these FDs and they were identified as: S-12M-C005-0.1-0.6-REP as the co-located core for S-12M-C006-0.7-1.2 and S-12M-C005-0.6-1.1-REP as the co-located core for S-12M-C006-1.2-1.7. New Environmental Horizons (NEH) contacted WHG to discuss why the FD samples were taken from different depth horizons in each of the paired co-located cores. It was explained that the co-located cores at these locations appeared heterogeneous from each other and that the visually contaminated (darker) horizon was at different depths in each of the paired cores. Therefore, the field sampler collected the FD sample in the "REP" core at a different depth than in the original core. Based on this information, NEH concluded that these paired samples cannot be considered "field duplicates" since the field sampler used visual information to collect the samples differently in each of the co-located samples. Therefore, these 4 samples were considered discrete (separate) samples and FD precision was not evaluated.

MS/MSD was performed on sample S-12M-C009-2.9-3.4. Recoveries were acceptable for all NOAA congeners except 2,2',5-Trichlorobiphenyl (BZ#18), 2,4,4'-

Trichlorobiphenyl (BZ#28), and 2,2',5,5'-Tetrachlorobiphenyl (BZ#52), which reported high MSD recoveries. The results for these three congeners were estimated (J) in sample S-12M-C009-2.9-3.4. LCS/LCSD precision was unacceptable for 2,4'-Dichlorobiphenyl (BZ#8). All 2,4'-Dichlorobiphenyl (BZ#8) results were estimated (J or UJ) with indeterminate bias. These results indicate variable laboratory precision for the method of analysis in the absence of the site matrix. Precision in the MS/MSD analysis of sample S-12M-C009-2.9-3.4 was unacceptable for 2,2',5-Trichlorobiphenyl (BZ#18), 2,4,4'-Trichlorobiphenyl (BZ#28), 2,2',5,5'-Tetrachlorobiphenyl (BZ#52), and 2,2',3,5'-Tetrachlorobiphenyl (BZ#44). The results for these four congeners were estimated (J) with indeterminate bias. These results indicate variable precision and representativeness for PCB congeners in the site matrix likely due to sample heterogeneity.

MS/MSD was performed on sample S-12M-C013-2.5-3.0. Recoveries were acceptable for all NOAA congeners. These results indicate acceptable accuracy for the method of analysis in the site matrix. LCS/LCSD and MS/MSD precision were acceptable for all 18 NOAA congeners. These results indicate acceptable laboratory precision for the method of analysis. Two Field Duplicates were S-12M-C012-2.7-3.2 / S-12M-C012-2.7-3.2-REP and S-12M-C015-1.8-2.3 / S-12M-C015-1.8-2.3-REP. FD precision was acceptable for all congeners in the FD pair of S-12M-C015-1.8-2.3 / S-12M-C015-1.8-2.3-REP indicating acceptable representativeness of these samples for congener analysis at this site location. FD precision was not acceptable for nine of the 18 NOAA in the FD pair of S-12M-C012-2.7-3.2 / S-12M-C012-2.7-3.2-REP. Nine congeners were estimated (J) with indeterminate bias in these two samples. The results for this FD pair indicate variable precision and representativeness of these samples at this site location for congener analysis.

MS/MSD analyses were performed on samples S-12M-C031-0.6-1.1 and S-12M-C020-1.2-1.7. In the MS/MSD analyses of S-12M-C031-0.6-1.1, recoveries were acceptable for all NOAA congeners except 2,4'-Dichlorobiphenyl, which recovered slightly low compared to criteria in the MS and 2,2',5-Trichlorobiphenyl, which recovered low, but above 10%, in both the MS and MSD. Professional judgment was used to take no action based on the slightly low MS recovery for 2,4'-Dichlorobiphenyl since the MSD recovery and MS/MSD precision were both acceptable. The result for 2,2',5-Trichlorobiphenyl was estimated (J) with possible low bias in sample S-12M-C031-0.6-1.1 due to low MS/MSD recoveries. These results indicate variable accuracy for the method of analysis in this site matrix. In the MS/MSD analyses of pre-dredge sample S-12M-C020-1.2-1.7, recoveries were unacceptable for all but three of the NOAA-18 congeners. 2',3,3',4,4',5,6-Octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl, and Decachlorobiphenyl (called DecaCB – Homologue in database file) were non-detect; however, 0% recoveries for these in the MS/MSD were reported. These results suggest that these non-detects may be false negatives; therefore, the non-detects for these three congeners were rejected (R) and are not usable for project decisions. These results indicate variable accuracy for the method of analysis in this site matrix. Despite this, the sum of the remaining 15 NOAA congeners for this sample was unchanged (140J), since the three rejected values were non-detects and were assigned a value of zero (0).



MS/MSD analyses were performed on sample S-12M-C034-0.6-1.1. MS/MSD recoveries were acceptable for all 18 NOAA congeners indicating acceptable accuracy for the method of analysis in this site matrix. The Field Duplicate (FD) pair was S-12M-C035-1.1-1.6 and S-12M-C035-1.1-1.6-REP. FD precision was acceptable for all congeners in this FD pair indicating acceptable precision and representativeness of these samples from sample collection through analysis at this site location for congener analysis.

MS/MSD was performed on sample S-12M-C038-0.5-1.0. Recoveries were high outside of acceptance limits for Aroclor 1016 and Aroclor 1260 in the MS and MSD, possibly due to positive interference from other Aroclors detected in sample S-12M-C038-0.5-1.0. Since Aroclor 1016 and 1260 were non-detect in sample S-12M-C038-0.5-1.0, no action was required. LCS/LCSD precision was acceptable for Aroclor 1016 and 1260 indicating acceptable laboratory precision for the method of analysis in the absence of the site matrix. Precision in the MS/MSD analysis of sample S-12M-C038-0.5-1.0 was acceptable for both Aroclors 1016 and 1260 indicating acceptable precision and representativeness for the method of analysis in the site matrix. Field Duplicate precision was unacceptable between S-12M-C037-0.0-0.5 / S-12M-C037-0.0-0.5-REP for one of the seven PCB Aroclors. The results for Aroclor 1254 in samples S-12M-C037-0.0-0.5 and S-12M-C037-0.0-0.5-REP were estimated (J) with indeterminate bias due to the observed FD imprecision. These FD results are an indication of variable precision and representativeness of PCB Aroclor data due to possible sample heterogeneity in the pre-dredge core samples.

MS/MSD analyses were performed on sample S-12M-C019-3.7-3.9. MS/MSD recoveries were acceptable for all 18 NOAA congeners indicating acceptable accuracy for the method of analysis in this site matrix.

### *3.3.2 Post-dredge samples*

Field duplicate (FD) precision was acceptable for all 18 NOAA congeners in the FD pair S-12O-C001-0.6-1.1 & S-12O-C001-0.1-0.6-REP. FD precision was unacceptable for 10 of the 18 NOAA congeners in the FD pair S-12O-C001-1.1-1.6 / S-12O-C001-0.9-1.4-REP. These 10 congener results were estimated (J) with indeterminate bias due to FD imprecision in both samples of the FD pair.

Samples S-12O-C012-0.0-0.3 and S-12O-C012-0.3-0.8 were reported in SDG L1219169 whereas samples S-12O-C012-0.0-0.2-REP and S-12O-C012-0.2-0.7-REP were reported in SDG L1219170. FD precision was acceptable for all 18 NOAA congeners in the FD pair S-12O-C012-0.0-0.3 / S-12O-C012-0.0-0.2-REP except 2,2',5-Trichlorobiphenyl, which reported unacceptable FD precision. Results for this congener were estimated (J) with indeterminate bias due to FD imprecision in sample S-12O-C012-0.0-0.3. FD precision was unacceptable for nine of the 18 NOAA congeners in the FD pair S-12O-C012-0.3-0.8 / S-12O-C012-0.2-0.7-REP. These nine congener results were estimated (J) with indeterminate bias due to FD imprecision in sample S-12O-C012-0.3-0.8. These FD results are an indication of generally acceptable precision at the core surface horizon but unacceptable precision and evidence of sample matrix heterogeneity at the sub-surface horizon at this site location, which may impact representativeness of the 18 NOAA PCB congeners in these post-dredge core samples.

LCS/LCSD precision was acceptable for all 18 NOAA congeners except 2,4,4'-Trichlorobiphenyl and 2,2',5,5'-Tetrachlorobiphenyl. The results for these two congeners were estimated (J) in all samples with indeterminate bias. The following actions were taken for FD imprecision:

- S-12O-C012-0.0-0.3 / S-12O-C012-0.0-0.2-REP: 2,2',5-Trichlorobiphenyl results were estimated (J) with indeterminate bias.
- S-12O-C012-0.3-0.8 / S-12O-C012-0.2-0.7-REP: nine congener results were estimated (J or UJ) with indeterminate bias.
- S-12O-C018-0.0-0.5 / S-12O-C018-0.0-0.3-REP: ten congener results were estimated (J) with indeterminate bias.
- S-12O-C018-0.5-1.0 / S-12O-C018-0.3-0.8-REP: seven congener results were estimated (J) with indeterminate bias.

These FD results are an indication of generally unacceptable precision and evidence of sample matrix heterogeneity at the site locations, which may impact representativeness of the 18 NOAA PCB congeners in these post-dredge core samples.

MS/MSD analyses were performed on the samples S-12O-C022-0.0-0.5, S-12O-C023-0.0-0.5, and S-12O-C030-0.5-1.0. Accuracy was acceptable for all 18 NOAA congeners in all three sets of MS/MSD analyses except 2,2',5-Trichlorobiphenyl, 2,4,4'-Trichlorobiphenyl, 2,2',5,5'-Tetrachlorobiphenyl, 2,3',4,4'-Tetrachlorobiphenyl, and 2,3',4,4',5-Pentachlorobiphenyl recovered high compared to criteria in the MS and/or MSD in the analysis performed on sample S-12O-C030-0.5-1.0. The results for these five congeners were estimated (J) with possible high bias in S-12O-C030-0.5-1.0. MS/MSD precision was acceptable for the analyses performed on sample S-12O-C030-0.5-1.0 but unacceptable for 13 out of 18 NOAA congeners in the MS/MSD analyses performed on sample S-12O-C022-0.0-0.5 and all 18 NOAA congeners performed on sample S-12O-C023-0.0-0.5. The 31 affected congeners in these two samples were estimated (J or UJ) with indeterminate bias. There were two Field Duplicate pairs reported: S-12O-C033-0.0-0.1 / S-12O-C033-0.0-0.2-REP and S-12O-C033-0.1-0.6 / S-12O-C033-0.2-0.7-REP. FD precision was acceptable for all 18 NOAA congeners in the FD pair S-12O-C033-0.0-0.1 / S-12O-C033-0.0-0.2-REP. FD precision was unacceptable (relative percent difference RPD > 50%) for eight of the 18 NOAA congeners in the FD pair S-12O-C033-0.1-0.6 / S-12O-C033-0.2-0.7-REP. These eight congener results were estimated (J) with indeterminate bias due to FD imprecision.

The Method Blank from the PCB homolog analysis detected results for three homologs. A comparison between the levels reported in the Method Blank with the levels reported in the samples, lead to the following actions: total Octachlorobiphenyls (reported as Total OctaCB) were negated (U) at the level found in samples S-12O-C003-0.5-1.0 and S-12O-C008-0.7-1.2; total Nonachlorobiphenyls (reported as Total NonaCB) were negated (U) at the level found in samples S-12O-C003-0.5-1.0, S-12O-C005-0.0-0.4, and S-12O-C026-0.0-0.5. During data validation, the data originally reported for 18 NOAA congeners and PCB homolog results were compared for each sample to evaluate reasonableness of the two sets of results. Based on professional judgment, the 18 NOAA PCB congener results and the PCB homolog results are considered reasonably

comparable (e.g., Total TriCB was higher than the sum of the two Trichlorobiphenyl isomers reported as part of the 18 NOAA congeners, as would be expected).

### 3.4 PROTOCOL DEVIATIONS

There were three protocol deviations during processing of pre-dredge cores.

- 1) Samples from pre-dredge core S-12M-C007 (PN12) were collected at depths inconsistent with project objectives. This core contained OL but samples were collected below the OL only. OL extended to 2.9 feet, but the first sample was collected from 2.9 – 3.4 feet.
- 2) The second deviation involves the sampling nomenclature for field replicates (REP). A field replicate is an entirely separate core that is collected to be used for inter-sample comparison and for gauging the reproducibility of field sampling techniques. The standard method for naming a field replicate is to retain the sample name of the original field sample but append “-REP” to the end of the name. For example, if sample S-12M-C012-0.0-0.5 had a field REP, it would be named S-12M-C012-0.0-0.5-REP. This is done to identify the field replicates with their regular field samples in the New Bedford EMIS. During pre-dredge activities, the three field REP cores and their co-located cores were not labeled according to protocol: instead of appending “REP” to the end of the sample name, the REP cores were numbered in sequence like independent field sample cores. Cores S-12M-C005-REP and S-12M-C006 are co-located, where S-12M-C005-REP is the field replicate of S-12M-C006. The core description logs clearly describe which cores are field REPs of which stations. This information is included in the “COMMENT” field for each affected sample in the New Bedford New Bedford EMIS. Table 11 summarizes the nomenclature inconsistencies of co-located pairs.

**Table 11. Nomenclature inconsistencies of co-located pre-dredge cores.**

Co-located Core #1	Co-located Core #2	Grid Location
S-12M-C006	S-12M-C005-REP	PB8
S-12M-C030	S-12M-C031	LV07
S-12M-C038	S-12M-C039	38RS (Area B)

- 3) The following pre-dredge samples are not field replicates, despite having “-REP” appended to the sample name: S-12M-C012-2.7-3.2-REP (core PN9), S-12M-C015-1.8-2.3-REP (core LE02), S-12M-C025-0.5-1.0-REP (core LU15), S-12M-C035-1.1-1.6-REP (core LY12), and S-12M-C037-0.0-0.5-REP (core 26X). These samples were collected from the one half of the split core after the analytical samples were collected from the opposite half. Therefore, these samples are “splits” and not true replicates of field techniques.

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## 4.0 DISCUSSION

This section discusses results of the sediment sample analyses, and addresses trends in PCB concentrations, where they exist. These data have been provided to the USACE and their contractors to assist with the evaluation of remediation efficiency, establish target dredge elevations, and plan for upcoming remediation events.

The average thickness of OL from pre-dredge sediment cores was 1.5 feet with a maximum of 3.7 feet. The average thickness of OL from post-dredge sediment cores was 0.54 feet, with a maximum of 1.4 feet. Ten post-dredge cores contained no OL at all. In general, as distance away from the eastern shoreline in both dredge areas increased, OL thickness increased. Calculations of OL thickness in Tables 4, 5, 8, and 9 included any material with OL, meaning both OL and OL/ML mix were included. Therefore, numbers in these tables can be overestimates of pure OL thickness. Identification of the OL is a useful sediment core observation but is limited in its ability to predict PCB contamination. For example, post-dredge cores LG17 and LP09 were described as having no OL yet had Total PCB concentrations of 195 mg/kg and 90 mg/kg in the uppermost samples, respectively. The visual transition from OL to the underlying sediment can be used to supplement the use of  $z^*$  as the target dredge elevation. The visual transition, as mapped from sediment coring, may serve as a benchmark for confidently estimating: 1) the extent of PCB contamination; 2) the target dredge elevation required for successful removal of the highest PCB concentrations; and 3) volumes of contaminated sediment that require removal (Morris et al., 2011).

Total PCB concentrations in Area L exhibited no clear spatial pattern in either pre- or post-dredge cores, though concentrations were highest in cores that contained OL. Portions of Area L had been dredged prior to 2012, but total PCB concentrations were still above 100 mg/kg in most places prior to the start of dredging in 2012. Post-dredge Total PCB concentrations from Area P were often greater in the deep central section of the dredge Area (550 mg/kg average for the channel vs. 36 mg/kg average for channel flanks). The elevation in the central channel in Area P was approximately -7 to -11 feet (NGVD29), which extended from the northwest corner of Area L, traveling southeast through the center of Area P (Figures 9 and 10). The adjacent channel flanks were between -2 and -5 feet (NGVD29) (Figures 9 and 10). This lower-elevation-to-PCB-concentration relationship was valid for both pre- and post-dredge sampling for both dredge Areas.

Box-and-whisker plots of pre- and post-dredge Total PCB concentrations from the uppermost samples are presented in Figure 14. The median in Area L (black line inside the “box”) increased from 147 mg/kg in pre-dredge to 188 mg/kg in post-dredge, and the median from Area P decreased from 398 mg/kg to 47 mg/kg. Comparing all pre-dredge to post-dredge data, median Total PCB concentration decreased from 236 mg/kg to 124 mg/kg. However, core locations introduce bias to this comparison. Figure 15 shows the locations and Total PCB concentrations of the uppermost pre- and post-dredge samples from Areas L and P, where symbol diameter increases with increasing Total PCB concentration. The Area L median Total PCB concentration increased because many pre-dredge cores in Area L were collected on the less-contaminated channel flanks to the east

(Figure 15), whereas most post-dredge cores were collected in deeper, more-contaminated locations (Figures 9 and 15). The opposite is true for Area P: most pre-dredge cores were collected near the deeper channel (Figure 15), but most post-dredge cores were collected near channel flanks (Figures 10 and 15). As a result, the Area P median decreased from pre- to post-dredge.

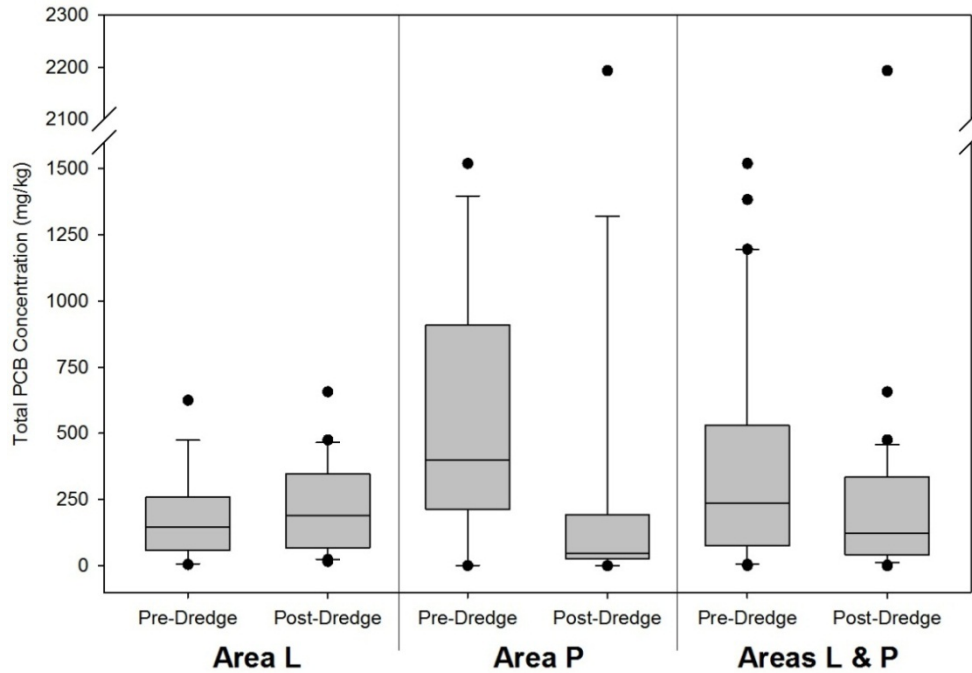


Figure 14. Box-and-Whisker Plots for Total PCB Concentrations.

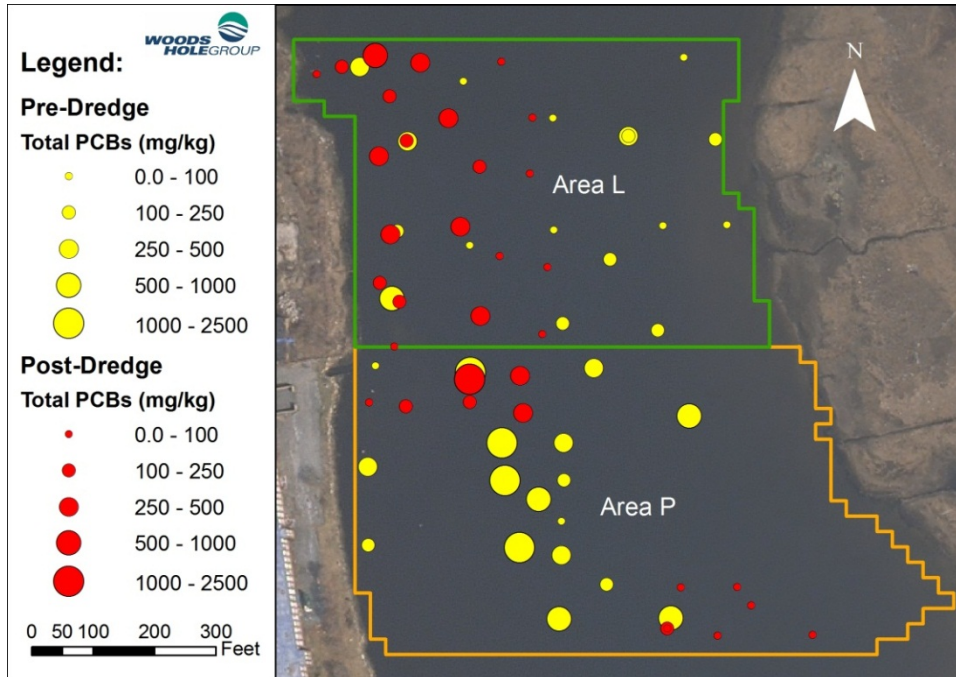


Figure 15. Pre- & Post-Dredge Cores in Areas L and P.

## **5.0 REFERENCES**

- Morris, M.W. A. Rigassio Smith, J. Cummings, and D. Walsh. 2011. Relationship between sediment morphology and PCB contamination in the Acushnet River, New Bedford, Massachusetts. *Proceedings of the Annual International Conference on Soils, Sediments, Water and Energy*.
- Woods Hole Group. 2010. Sediment Monitoring Summary Report. New Bedford Harbor Superfund Site, New Bedford, MA. Prepared under Contract W912WJ-09-D-0001 Task Order No 0010 for the U.S. Army Corps of Engineers New England District, Concord, MA.
- Woods Hole Group. 2012a. Environmental Monitoring, Sampling and Analysis Water Quality Monitoring Field Sampling Plan. New Bedford Harbor Superfund Site, New Bedford, MA. Prepared under Contract W912WJ-09-D-0001 Task Order No 0010-07 for the U.S. Army Corps of Engineers New England District, Concord, MA.
- Woods Hole Group. 2012b. Environmental Monitoring, Sampling and Analysis Quality Assurance Project Plan Addendum. New Bedford Harbor Superfund Site, New Bedford, Massachusetts. Prepared under Contract W912WJ-09-D-0001 Task Order No 0010-07 for the U.S. Army Corps of Engineers New England District, Concord, MA.

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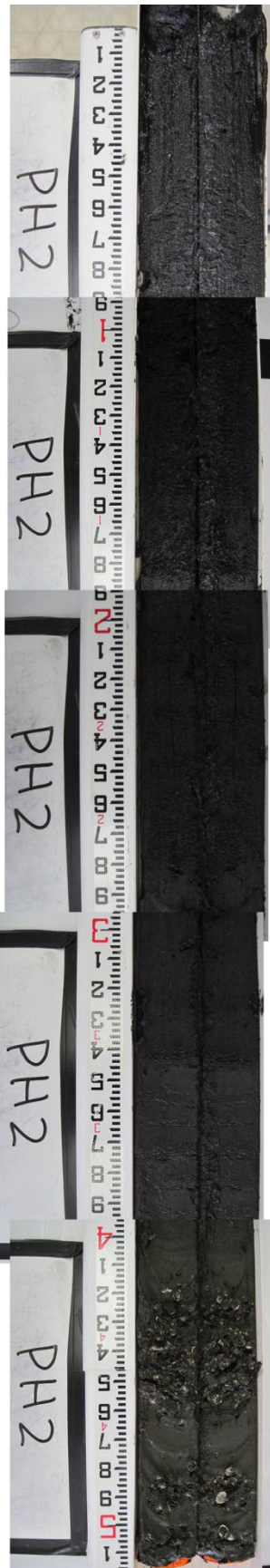
**APPENDIX A. 2012 CORING PHOTOGRAPHS AND FIELD LOGS**

(See Electronic Attachment)

## TABLE OF CONTENTS

Pre-dredge cores begin.....	A-1
Post-dredge cores begin .....	A-86

# 2012 PRE-DREDGE CORING PHOTOGRAPHS AND FIELD LOGS





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	<u>PH 2</u>	Latitude:	<u>41° 39.957</u>	Core Sample ID:	<u>S-12M-C001</u>
Collection Date:	<u>3/7/12</u>	Longitude:	<u>70° 55.078</u>	Water Depth (A):	<u>5.1</u>
Time Arrive Sta.:	<u>1050</u>	GPS Accuracy:	<u>± 9</u>	Length of Push Core Assembly (B):	<u>16.2</u>
Time of Collection:	<u>1101</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>5.3</u>
Time Depart Sta.:	<u>1118</u>			Length of Core (from bottom) (D):	<u>5.2</u>
Collection Equip.:	<u>P.C.</u>			Tide Elevation (from tide board) (G):	<u>-0.9</u>

Calculations for Determination of Z\* Elevation

All measurements are 20.1 feet

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-0.9</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-11.8</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<del>-8</del> <u>-10.0</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-6.6</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-6.0</u>

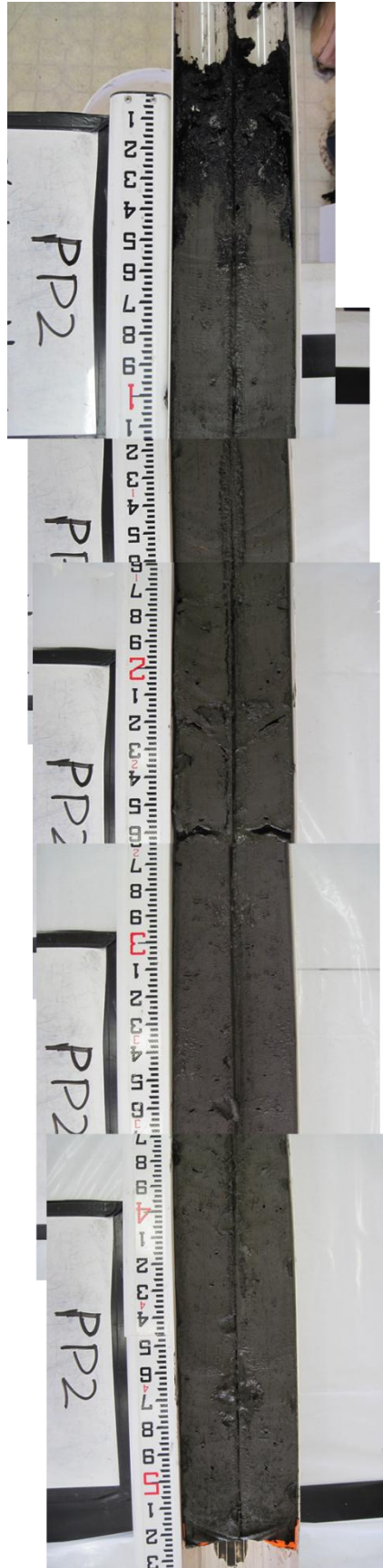
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0-2.8</u>	<u>OL</u>	<u>Organic soil with trace very fine sand content, sand is very fine to fine, water content dec. down core</u>	<u>5Y 2.5/1</u>	<u>very loose to moderately firm</u>	<u>fine sand</u>	<u>Heavy petroleum + H<sub>2</sub>S</u>	<u>S-12M-C001-2.3-2.8</u>
<u>2.8-3.4</u>	<u>OL/ML</u>	<u>Mix of OL and slightly sandy silt,</u>	<u>5Y 2.5/2</u>	<u>mod. firm</u>	<u>fine sand</u>	<u>Petroleum + H<sub>2</sub>S</u>	<u>- 2.8-3.4</u>
<u>3.4-4.2</u>	<u>ML</u>	<u>silt with little sand, fine sand</u>	<u>5Y 3/1</u>	<u>mod. firm</u>	<u>fine sand</u>	<u>H<sub>2</sub>S</u>	
<u>4.2-5.1</u>	<u>ML</u>	<u>silt with fine sand and shells/shell fragments, two shell layers from 4.2-4.6 and 4.8-5.1</u>	<u>5Y 3/1</u>	<u>mod. firm</u>	<u>fine sand excluding shells</u>	<u>H<sub>2</sub>S</u>	<u>- 3.4-3.9 - Archive</u>

Comments:  
 - 1 extra ppt  
 - 2 analytical samples: S-12M-C001-2.3-2.8  
                                   S-12M-C001-2.3-3.4  
 - 1 Archive Sample: S-12M-C001-3.4-3.9



**WOODS HOLE GROUP** Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID: PP2 Latitude: 41° 39.958 Core Sample ID: S-12M-C002  
 Collection Date: 3/7/12 Longitude: 70° 55.034 Water Depth (A): 4.2  
 Time Arrive Sta.: <sup>065</sup> 1112 GPS Accuracy: ± 9 ft Length of Push Core Assembly (B): 16.2  
 Time of Collection: 1121 Logged By: DGS Water Surface to Top of Handle (C): 6.1  
 Time Depart Sta.: 1132 Length of Core (from bottom) (D): 5.4  
 Collection Equip.: P.C Tide Elevation (from tide board) (G): -1.2

All measurements are 10.1 feet

**Calculations for Determination of Z\* Elevation**

(G) Elevation of Water Surface (NGVD) (as read from tide board): -1.2  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) -11.3  
 (Z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) -6.2  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -5.9  
 (I<sub>2</sub>) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.4

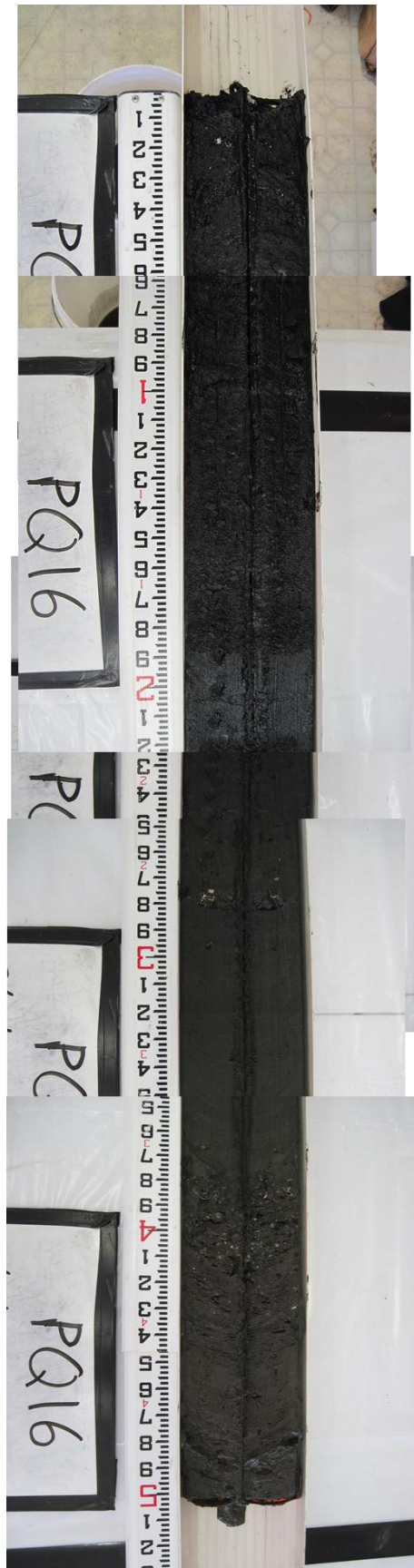
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

**Internal Core Description, Date:**

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.3	OL	Organic silt, trace sand content, fine to very fine sand, little shells and fragments moist	5Y 2.5/1	loose	fine sand	Petroleum	S-12M-C002-0.0-0.3
0.3-5.2	ML	Silt with trace/very low sand content, less moist, <del>trace</del> sand is very fine to fine, some mixing with OL layer from 0.3-0.6, water content decreases downcore	5Y 3/2	moderately firm to firm	fine sand	N/A	... 0.3-0.8 ... 0.8-1.3

Comments:  
 - 1 attempt  
 - 2 analytical samples; S-12M-C002-0-0.3, ... 0.3-0.8  
 1 Archive sample: S-12M-C002-0.8-1.3





**WOODS HOLE GROUP** Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID: PQ16 Latitude: 41° 39.900 Core Sample ID: S-12M-C003  
 Collection Date: 3/7/12 Longitude: 70° 55.030 Water Depth (A): 6.5  
 Time Arrive Sta.: 1155 GPS Accuracy: ± 9 ft Length of Push Core Assembly (B): 16.2  
 Time of Collection: 1203 Logged By: DGS Water Surface to Top of Handle (C): 4.3  
 Time Depart Sta.: 1213 Length of Core (from bottom) (D): 4.9  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): -1.8

All measurements are 88.1 feet

**Calculations for Determination of Z\* Elevation**

(G) Elevation of Water Surface (NVGD) (as read from tide board):	<u>-1.8</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-13.7</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-11.0</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-8.8</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-8.8</u>

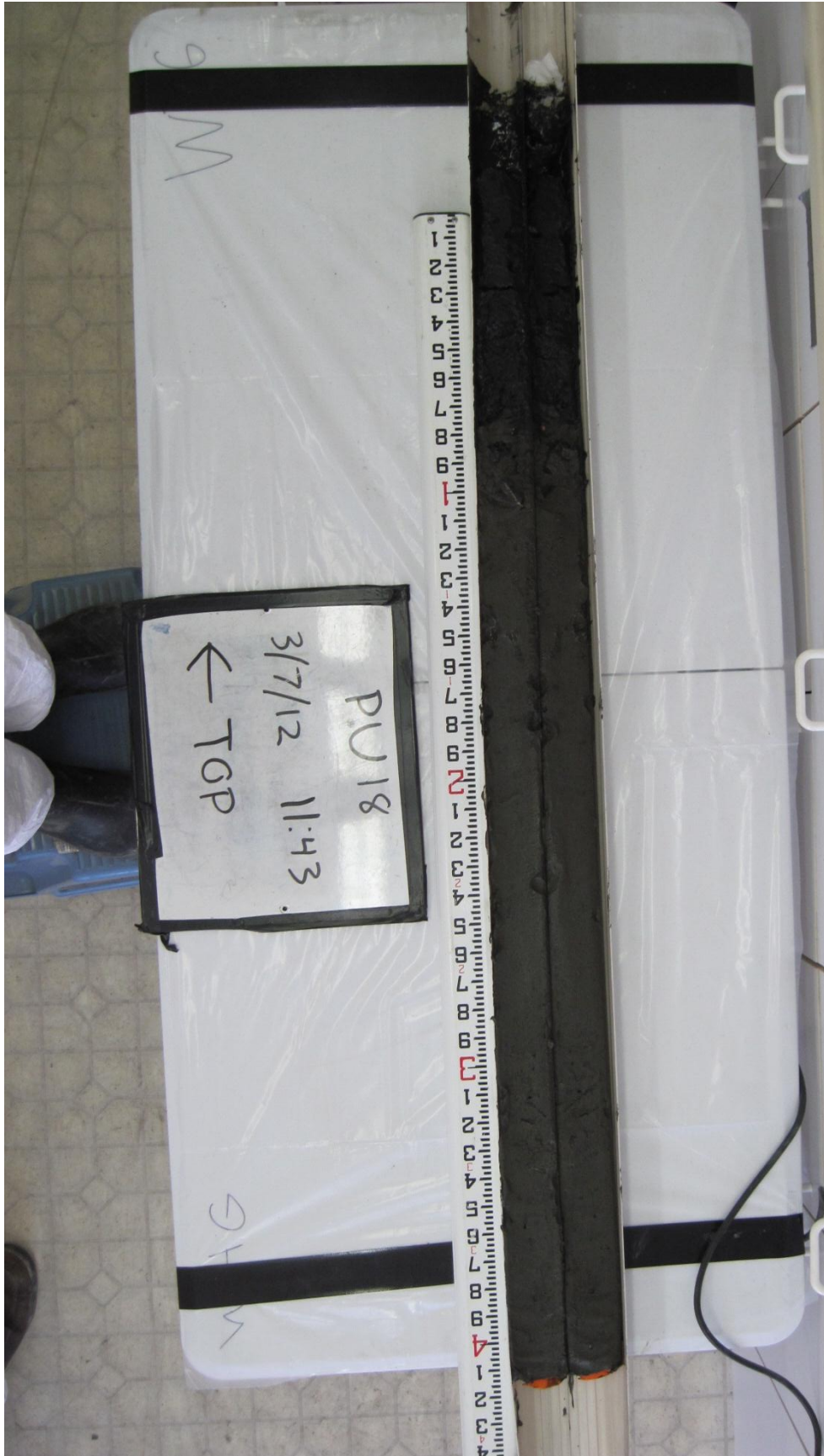
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

**Internal Core Description, Date:**

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0-2.2</u>	<u>OL</u>	<u>Organic Soil w/ No sand content, moist-wet, sulfur and oil odor w/ visible sheen.</u>	<u>5Y 2.5/1</u>	<u>loose</u>	<u>silt</u>	<u>Sulfur &amp; petro</u>	<u>S-12M-C003 1.7-2.2</u>
<u>2.2-5.0</u>	<u>ML</u>	<u>gradational contact Silty w/ trace fine v. fine sand Transitional sheen Shell has @ 2.8 and thin bed of shell hash @ 3.9-4.2</u>	<u>5Y 3/1</u>	<u>moderately firm</u>	<u>fine- v. fine sand &amp; excluding shells</u>	<u>Sulfur</u>	<u>S-12M-C003 2.2-2.7</u>

Comments:  
 - 1 attempt  
 - 2 analytical sample = S-12M-C003-1.7-2.2, ... 2.2-2.7  
 1 Archive = S-12M-C003-2.7-3.2





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID: PU18 <sup>with</sup> Latitude: 41° 39.891 Core Sample ID: S-12M-C004  
 Collection Date: 3/7/12 Longitude: 70° 55.007 Water Depth (A): 4.1  
 Time Arrive Sta.: 1135 GPS Accuracy: ± 9 Length of Push Core Assembly (B): 15.2  
 Time of Collection: 1143 Logged By: DGS Water Surface to Top of Handle (C): 6.5  
 Time Depart Sta.: 1152 Length of Core (from bottom) (D): 4.4  
 Collection Equip.: P.C Tide Elevation (from tide board) (G): -1.6

All measurements are 10.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.6  
 (H) Elevation of the bottom of the core (NGVD):  $G - (B - C)$  -10.3  
 (Z\*) Elevation of visual transition (NGVD):  $H + (\text{distance to visual transition from bottom of core})$  -6.6  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD):  $H + D$  -5.9  
 (I<sub>2</sub>) Elevation of the sediment-water interface as measured from water depth (NGVD):  $G - A$  -5.7

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.7	OL	<sup>Silt</sup> Organic material w/ No Sand. Wet w/ sulfur + petro odor and visible sheen	5Y 2.5/1	loose	silt	Sulfur Petro	S-12m- C004- 0.2-0.7
0.7-4.1	ML	Mottled contact silt w/ trace fine sands	5Y 3/2	firm	fine sand	N/A	S-12m- C004- 0.7-1.2

Comments:

→ 1 attempt

Archive-S-12m-C004-  
1.2-1.7





Project Name: New Bedford Harbor Environmental Monitoring

Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010

Location: New Bedford, MA

Chief Scientist: Dave Walsh

Vessel: George Hampson

Station ID:	PB8-REP	Latitude:	41° 39.932	Core Sample ID:	S-12M-C005
Collection Date:	3/7/12	Longitude:	70° 55.115	Water Depth (A):	<sup>DGS</sup> 2.6 <sup>DGS</sup> 2.5 <sup>DGS</sup> 2.3
Time Arrive Sta.:	1014	GPS Accuracy:	±9	Length of Push Core Assembly (B):	9.2
Time of Collection:	1032	Logged By:	DGS	Water Surface to Top of Handle (C):	<sup>DGS</sup> 3.9 <sup>DGS</sup> 3.3
Time Depart Sta.:	1046			Length of Core (from bottom) (D):	2.9
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	-0.7

All measurements are ±0.1 foot

## Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	-0.7
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.6
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-4.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.7
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.0

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

## External Description, Date:

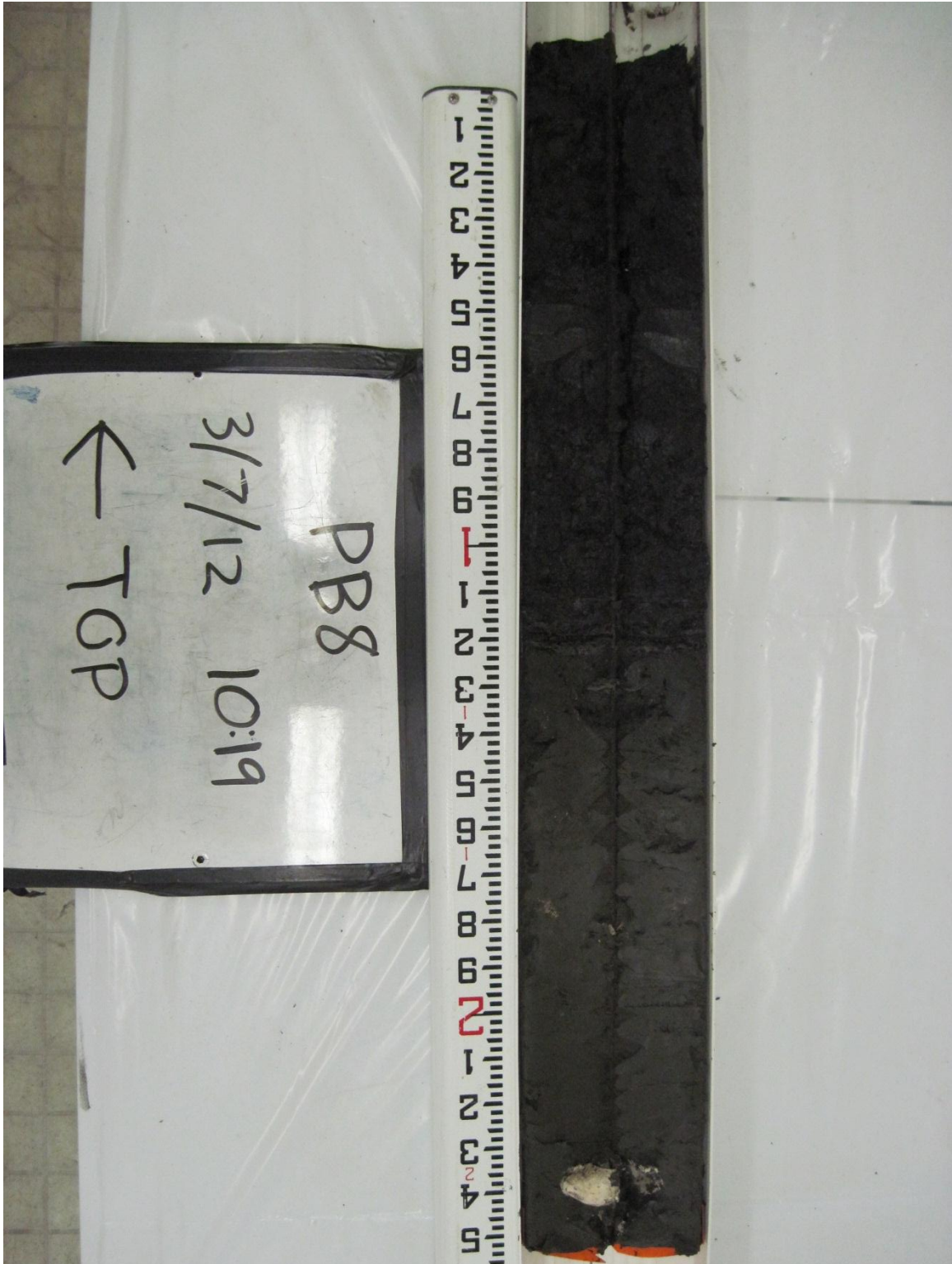
## Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.6	OL	Slightly sandy organic soil, very low to low sand content, fine to medium sand, wet, sheen visible	5Y 2.5/1	loose	fine to medium sand	Strong petroleum + H <sub>2</sub> S	S-12M-C005-0.1-0.6
0.6- <sup>DGS</sup> 1.1	OL/ML	Mixing of OL and silt, low sand content, fine to medium sand, <del>is</del> moist, little shell fragments	5Y 2.5/2	mod. <del>loose</del> <sup>DGS</sup> firm	fine to medium sand	petroleum and H <sub>2</sub> S	S-12M-C005-0.6-1.1
1.1-2.9	ML	silt with trace sand, sand is fine, less moist, <del>little</del> <sup>DGS</sup> shell debris at 2.0 ft	5Y 3/1	firm	fine sand	N/A	

## Comments:

- 2 attempts
- 2 analytical samples: S-12M-C005-0.1-0.6, ... 0.6-1.1
- 1 archive sample: S-12M-C005-1.1-1.6

REP of S-12M-C006 (PB8)





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	PB 8	Latitude:	41° 39.932	Core Sample ID:	S-12M-C006
Collection Date:	3/7/12	Longitude:	70° 55.114	Water Depth (A):	2.6
Time Arrive Sta.:	1014	GPS Accuracy:	±9	Length of Push Core Assembly (B):	9.2
Time of Collection:	1019	Logged By:	DGS	Water Surface to Top of Handle (C):	3.8
Time Depart Sta.:	1040			Length of Core (from bottom) (D):	2.5
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	-0.5

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	-0.5
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-5.9
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-4.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.4
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.1

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 1.2	OL	organic silt with trace sand, fine sands, consistency changes to mod. firm at 0.6 from loose, coal slag fragment at 0.8, visible sheen	5Y 2.5/1	loose to mod. firm	fine sand	strong petroleum + H <sub>2</sub> S	S-12M-C006-0.7-1.2 S-12M-C006-1.2-1.7
1.2 - 2.5	ML	Silt with trace fine sand and shell fragments, less moist, transition from above is very sharp, sandy lens with organic debris (roots)	5Y 3/1	firm	fine sand	N/A	S-12M-C006-1.7-2.2

Comments:

1 attempt  
 2 analytical samples: S-12M-C006-0.7-1.2, 1.2-1.7  
 1 archive sample: S-12M-C006-1.7-2.2

OL extends to different depth than in REP. Samples collected in OL, rather than at same depth between cores







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	PV12	Latitude:	41° 39.917	Core Sample ID:	S-12M-C007
Collection Date:	3/9/12	Longitude:	70° 55.046	Water Depth (A):	7.9
Time Arrive Sta.:	1046	GPS Accuracy:	±9	Length of Push Core Assembly (B):	16.2
Time of Collection:	1054	Logged By:	DGS	Water Surface to Top of Handle (C):	2.6
Time Depart Sta.:	1104			Length of Core (from bottom) (D):	5.4
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	0.3

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	0.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-13.3
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-10.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.9
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-7.6

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 3.2 <sup>EH</sup> 2.9	OL	Wet - moist down core No sand, petro ↓ sulfur odor - shale. SILT	5Y 2.5/1	loose	silt	sulfur Petro	S-12m - C007 - 2.9 - 3.4
2.9 - 5.4	ML	Moist, No Sand Shell fragments gradational Contact. Sulfur fragments. Petro shell and green in upper part of unit. 5.0-5.2 shell mush Trace of v. fine sand	5Y 3/1	firm	silt- v. fine sand	sulfur Petro	S-12m - C007 - 3.4 - 3.9

Comments:

- 1 attempt

Archive - S-12m  
C007 -  
3.9 - 4.4





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	PK13	Latitude:	41° 39.910	Core Sample ID:	S-12M-C008
Collection Date:	3/9/12	Longitude:	70° 55.061	Water Depth (A):	5.8
Time Arrive Sta.:	1103	GPS Accuracy:	± 9	Length of Push Core Assembly (B):	16.2
Time of Collection:	1110	Logged By:	DGS	Water Surface to Top of Handle (C):	5.6
Time Depart Sta.:	1118			Length of Core (from bottom) (D):	4.5
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	-0.1

All measurements are 20.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	-0.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-10.7
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-8.7
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.2
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.9

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

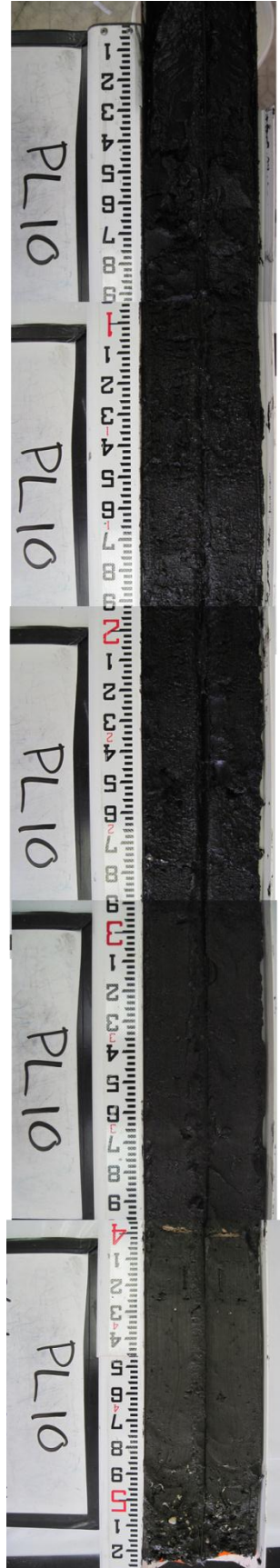
External Description, Date:

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 2.5	OL	organic soil, trace to no sand, sand is very fine, sheen visible on sediment, trace small shells, wet to more moist	5Y 2.5/1	loose to med. firm downcore	very fine sand excluding shells	heavy petroleum + H <sub>2</sub> S	S-12M-C008-2.0-2.5
2.5 - 4.5	ML	Silt with trace to no sand, shells and shell debris from 4.1-4.5, some mixing with OL from 2.5 to 3.1, moist, consistency grades downcore,	5Y 3/1	mod. firm to firm	very fine sand excluding shells	petroleum + H <sub>2</sub> S	S-12M-C008-2.5-3.0 S-12M-C008-3.0-3.5 Archive

Comments:  
 - 1 attempt  
 - 2 analytical samples: S-12M-C008-2.0-2.5, S-12M-C008-2.5-3.0  
 1 archive sample: S-12M-C008-3.0-3.5 Archive





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	<u>PL10</u>	Latitude:	<u>41° 39.923</u>	Core Sample ID:	<u>S-12M-C009</u>
Collection Date:	<u>3/9/12</u>	Longitude:	<u>70° 55.054</u>	Water Depth (A):	<u>8.0</u>
Time Arrive Sta.:	<u>1018</u>	GPS Accuracy:	<u>± 9</u>	Length of Push Core Assembly (B):	<u>16.2</u>
Time of Collection:	<u>1024</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>2.8</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>5.2</u>
Collection Equip.:	<u>P.C.</u>			Tide Elevation (from tide board) (G):	<u>1.0</u>

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>1.0</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-12.4</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-10.1</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-7.2</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-7.0</u>

(Note if I ≠ I<sub>2</sub>, within ±1.0 feet, discard and resample)

External Description, Date:

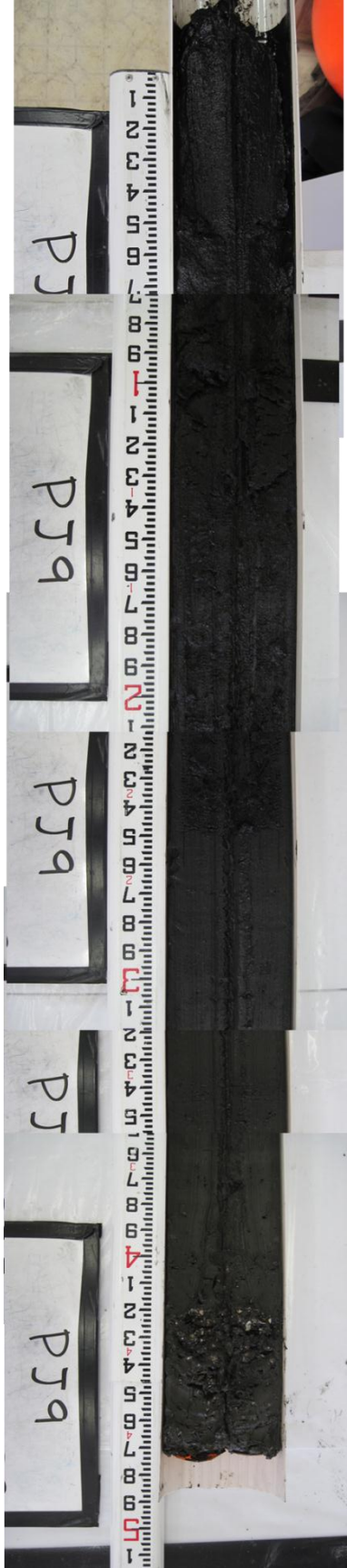
External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0 - 2.9</u>	<u>OL</u>	<u>organic soil, trace to no sand, wet to moist grading damage. Sand is very fine, trace small shells</u>	<u>Sy 2.5/1</u>	<u>very loose to loose</u>	<u>very fine sand</u>	<u>heavy petroleum</u>	<u>S-12M-C009 - 2.4-2.9</u>
<u>2.9 - <del>4.2</del> <sup>DGS</sup> 5.2</u>	<u>ML <del>OL</del> <sup>DGS</sup></u>	<u><del>very fine to fine sand</del> silt (mostly ML but color is darker). Color grades from darker to finer, trace to little sands (very fine to fine), shells + debris from 4.2-5.2, wood fragment at 4.0</u>	<u>Sy 2.5/2 to Sy 3/2</u>	<u>med. firm to firm</u>	<u>very fine to fine sand</u>	<u>petroleum and H<sub>2</sub>S</u>	<u>S-12M-C009 - 2.9-3.4 S-12M-C009 - 2.9-3.4 MSMSD S-12M-C009 - 3.4-3.9 Archive</u>

Comments:

- 1 attempt  
 - 2 analytical samples, 1 archive, 1 MSMSD





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	PJ9	Latitude:	41° 39, 928	Core Sample ID:	S-12M-C010
Collection Date:	3/9/12	Longitude:	70° 55.066	Water Depth (A):	6.8
Time Arrive Sta.:	1030	GPS Accuracy:	±9	Length of Push Core Assembly (B):	16.2
Time of Collection:	1038	Logged By:	DGS	Water Surface to Top of Handle (C):	4.5
Time Depart Sta.:				Length of Core (from bottom) (D):	4.7
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	0.7

All measurements are 30.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.7
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-11.0
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-8.7
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.3
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.1

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-2.4	OL	organics, silt, wet grading to moist. Petro odor visible stem	5Y 2.5/1	with moist loose firm	Silt	Petro	S-12m-C010-1.9-2.4
2.4-4.7	ML	Silt, <del>moist</del> w/ trace v. fine sand moist, sulfur odor. Thick bed of shell wash 4.2-4.7	5Y 3/2	firm	v. fine sand	Sulfur	S-12m-C010-2.4-2.9

Comments:

- 1 attempt

to core 29-3.4 EH  
 S-12m-C010-29-3.4







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Wabsh Vessel: George Hampson

Station ID:	<u>PJ6</u>	Latitude:	<u>41° 39.938</u>	Core Sample ID:	<u>S-12M-coil</u>
Collection Date:	<u>3/4/12</u>	Longitude:	<u>70° 55.067</u>	Water Depth (A):	<u>8.0</u>
Time Arrive Sta.:	<u>0926</u>	GPS Accuracy:	<u>±9</u>	Length of Push Core Assembly (B):	<u>16.2</u>
Time of Collection:	<u>0934</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>2.9</u>
Time Depart Sta.:	<u>0943</u>			Length of Core (from bottom) (D):	<u>4.8</u>
Collection Equip.:	<u>P.C.</u>			Tide Elevation (from tide board) (G):	<u>1.8</u>

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>1.8</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-11.5</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-9.4</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-6.7</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-6.2</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
3.7 4.4 0-2.7	OL	Organic Soil with little trace to no sand, sand is very fine, sheen visible wet to moist downcore	5Y 2.5/1	loose to mod. firm downcore	very fine sand	heavy petroleum	S-12M-coil-2.2-2.7
2.7-4.8	ML	Silt with little to trace sand, sand is fine, color gets lighter at 3.7, moist to less moist, shells and shell debris from 4.4-4.8.	5Y 3/1 to 5Y 3/2	firm	fine sand	H <sub>2</sub> S	S-12M-coil-2.7-3.2 S-12M-coil-3.2-3.7 (archive)

Comments:

- 1 attempt, sheen on water surface during collection
- 2 analytical samples, 1 archive sample





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	<u>PA 9</u>	Latitude:	<u>41° 39.928</u>	Core Sample ID:	<u>S-12M-C012</u>
Collection Date:	<u>3/9/12</u>	Longitude:	<u>70° 55.045</u>	Water Depth (A):	<u>9.2</u>
Time Arrive Sta.:	<u>1001</u>	GPS Accuracy:	<u>± 9</u>	Length of Push Core Assembly (B):	<u>16.2</u>
Time of Collection:	<u>1007</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>1.9</u>
Time Depart Sta.:	<u>1015</u>			Length of Core (from bottom) (D):	<u>4.9</u>
Collection Equip.:	<u>P.C.</u>			Tide Elevation (from tide board) (G):	<u>1.2</u>

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>1.2</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-13.1</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-10.9</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-8.2</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-8.0</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0-2.7</u>	<u>OL</u>	<u>organic soil with trace sand, wet to moist. downcore, sand is fine, few shells and shell debris.</u>	<u>5Y 2.5/1</u>	<u>loose to mod. firm</u>	<u>fine sand excluding shells</u>	<u>heavy petroleum</u>	<u>S-12M-C012 - 2.2-2.7</u>
<u>2.7-4.7</u>	<u>ML</u>	<u>silt with trace to no sand, transition from previous layer. 2.7-3.4 is slightly sandier and darker, sand is fine when evident, moist to less moist, shells and shell debris in little quantities</u>	<u>5Y 3/1 to 5Y 3/2</u>	<u>firm</u>	<u>fine sand excluding shells</u>	<u>light H<sub>2</sub>S</u>	<u>S-12M-C012 2.7-3.2 ... -REP S-12M-C012 3.2-3.7 (archive)</u>

Comments:

- 1 attempt  
- 2 analytical samples, 1 archive, 1 REP

3.4





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	<u>PN 6</u>	Latitude:	<u>41° 39.938</u>	Core Sample ID:	<u>S-12M-C013</u>
Collection Date:	<u>3/9/12</u>	Longitude:	<u>70° 55.045</u>	Water Depth (A):	<u>9.6</u>
Time Arrive Sta.:	<u>0946</u>	GPS Accuracy:	<u>± 9</u>	Length of Push Core Assembly (B):	<u>16.2</u>
Time of Collection:	<u>0951</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>1.5</u>
Time Depart Sta.:	<u>0958</u>			Length of Core (from bottom) (D):	<u>4.8</u>
Collection Equip.:	<u>P.C.</u>			Tide Elevation (from tide board) (G):	<u>1.5</u>

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>1.5</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-13.2</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-10.9</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-8.4</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-8.1</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0-2.5</u>	<u>OL</u>	<u>organic soil with little sand, low sand content (fine sand) wet to moist downcore trace to little shells and shell debris, sheen visible,</u>	<u>5Y 2.5/1</u>	<u>loose to med. firm</u>	<u>fine sand excluding shells</u>	<u>Heavy petroleum + H<sub>2</sub>S</u>	<u>S-12M-C013-2.0-2.5</u> <u>S-12M-C013</u>
<u>2.5-4.4</u>	<u>ML</u>	<u>silt with trace to no sand transitional zone (2.5-3.0) is sandier and darker, small shells and shell debris from 3.7-4.4, less moist,</u>	<u>5Y 3/2 or 5Y 3/1</u>	<u>firm</u>	<u>fine sand at layer top (2.5-3.0)</u>	<u>light H<sub>2</sub>S</u>	<u>2.5-3.0 MSMSD</u> <u>S-12M-C013</u> <u>+ 3.0-3.5 (archive)</u>

Comments:  
 - 1 attempt  
 - 2 analytical samples, 1 archive, 1 MSMSD





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	PM18	Latitude:	41° 39.891	Core Sample ID:	S-12M-C014
Collection Date:	3/12/12	Longitude:	70° 55.047	Water Depth (A):	5.9
Time Arrive Sta.:	0901	GPS Accuracy:	±9	Length of Push Core Assembly (B):	16.2
Time of Collection:	0908	Logged By:	DGS	Water Surface to Top of Handle (C):	4.2
Time Depart Sta.:	0915			Length of Core (from bottom) (D):	5.4
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	-0.1

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	-0.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-12.1
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-9.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.7
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.0

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-2.4	OL	Organics silt, wet gading to moist, visible sheen	2.5Y 2.5/1	wet to EH moist loose to firm	Silt	Retro Sulfur	S-12m-C014-19-2.4
2.4-5.3	ML	gradual contact silt w/ v. fine Snd, sulfur odor	2.5Y 3/1	moist to EH firm	v. fine Snd	Sulfur	S-12m-C014-2.9-2.9

Comments: - 1 attempt, perhaps some over-penetration  
 Archie - S-12m-C014-2.9-3.4







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Harrington

Station ID:	LE02	Latitude:	41° 40.039	Core Sample ID:	S-12M-C015
Collection Date:	3/12/12	Longitude:	70° 55.117	Water Depth (A):	9.4
Time Arrive Sta.:	0956	GPS Accuracy:	±9	Length of Push Core Assembly (B):	18.2
Time of Collection:	1004	Logged By:	DGS	Water Surface to Top of Handle (C):	2.6
Time Depart Sta.:	1012			Length of Core (from bottom) (D):	5.6
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	1.4

All measurements are 20.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	1.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-14.2
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-10.9
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-8.6
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-8.0

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 2.3	OL	organic soil with trace to no sand, sheen visible, wet to moist, wood fragment at 1.5 ft, irregular contact w/ lower layer	Sy 2.5/1	very loose to mod. firm	very fine sand	heavy petroleum	S-12M-C015 - 1.8-2.3 S-12M-C015 - 1.8-2.3 - REP
2.3 - 5.6	ML	Silt with shells and little sand, sand is limited to layers with shells, shell layer from 2.4-3.3 and shells dispersed throughout, pebble at 4.8	Sy 3/2	firm	fine sand excluding shells and pebble	H <sub>2</sub> S	S-12M-C015 - 2.3-2.8 S-12M-C015 - 2.8-3.3 (archive)

Comments:  
 - sheen on water prior to and during core collection  
 - 1 attempt  
 - 2 analytical samples, 1 REP, 1 archive





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID: PB13 Latitude: 41° 39.911 Core Sample ID: S-12M-C016  
 Collection Date: 3/7/13 Longitude: 70° 55.115 Water Depth (A): 2.8  
 Time Arrive Sta.: 0956 GPS Accuracy: ±9 Length of Push Core Assembly (B): 9.2  
 Time of Collection: 1000 Logged By: DGS ? Water Surface to Top of Handle (C): 2.9  
 Time Depart Sta.: \_\_\_\_\_ Length of Core (from bottom) (D): 2.6  
 Collection Equip.: pushcore Tide Elevation (from tide board) (G): -0.2

All measurements are 20.3 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-0.2</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-6.5</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-4.1</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-3.9</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-3.0</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0 - 0.2</u>	<u>OL</u>	<u>organic soil with little sand, sand is fine to medium, piece of bark at 0.2, wet to moist</u>	<u>5Y 2.5/1</u>	<u>loose to med. firm</u>	<u>fine to medium sand</u>	<u>light petroleum</u>	<u>S-12M-C016 -0.0-0.2</u>
<u>0.2 - 2.5</u>	<u>ML</u>	<u>silt with some sand, gradual contact (0.4 ft thick) with OL layer, lens of very fine sand at 0.7, shell debris at 0.7, color and water content grade down core</u>	<u>5Y 3/2</u>	<u>med. firm to firm</u>	<u>fine to medium sand</u>	<u>N/A</u>	<u>S-12M-C016 -0.7-1.2 (archive)</u>

Comments:

- 1 attempt  
 - 2 analytical samples, 1 archive sample





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: ~~D. Stora~~ Dave Walsh Vessel: George Hampson

Station ID:	PV5	Latitude:	41° 39.945	Core Sample ID:	S-12M-C017
Collection Date:	3/7/12	Longitude:	70° 55.000	Water Depth (A):	5.0
Time Arrive Sta.:	0932	GPS Accuracy:	± 9	Length of Push Core Assembly (B):	9.2
Time of Collection:	0939	Logged By:	<del>DGS</del> DGS	Water Surface to Top of Handle (C):	1.7
Time Depart Sta.:	0950			Length of Core (from bottom) (D):	2.5
Collection Equip.:	pushcore			Tide Elevation (from tide board) (G):	0.2

All measurements are 0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	0.2
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.3
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-5.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.8
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.8

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.5	OL	organic w trace amounts of med-fine sand, silt w/ petro shell most.	2.5Y 2.5/1	Firm	Med Sand	Petro	S-12M-C017-0.5 to 0.0-0.5
0.5-4	ML	Silt w/ med sand and trace coarse sand.	2.5Y 4/1	Firm	Coarse Sand	None	S-12M-C017-0.5-1.0

Comments: -1 attempt

Archive S-12m-C017-1.0-1.5





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	<u>PN14</u>	Latitude:	<u>41° 39.908</u>	Core Sample ID:	<u>S-12M-C018</u>
Collection Date:	<u>3/12/12</u>	Longitude:	<u>70° 55.046</u>	Water Depth (A):	<u>7.0</u>
Time Arrive Sta.:	<u>0919</u>	GPS Accuracy:	<u>± 9</u>	Length of Push Core Assembly (B):	<u>16.2</u>
Time of Collection:	<u>0926</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>4.1</u>
Time Depart Sta.:	<u>0933</u>			Length of Core (from bottom) (D):	<u>4.8</u>
Collection Equip.:	<u>P.C.</u>			Tide Elevation (from tide board) (G):	<u>0.3</u>

All measurements are ±0.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	<u>0.3</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-11.8</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-9.9</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-7.0</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-6.7</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0-2.9</u>	<u>OL</u>	<u>organics w/ trace fine sand @ bottom of unit. there w/ petro smell. moist</u>	<u>2.5Y 2.5/1</u>	<u>Soft - Firm</u>	<u>fine sand</u>	<u>Petro</u>	<u>S-12m- C018 - 2.4-2.9</u>
<u>2.9- 4.6</u>	<u>ML</u>	<u>Silt w/ trace medium sand shell hash @ bottom of unit</u>	<u>2.5Y 3/1</u>	<u>Firm</u>	<u>Med. Sand</u>	<u>None</u>	<u>S-12m- C018 - 2.9-3.4</u>

Comments: -1 attempt Archival S-12m-  
C018-3.4-3.9







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID:	LH08	Latitude:	41° 40.016	Core Sample ID:	S-12M-C019
Collection Date:	3/12/12	Longitude:	70° 55.100	Water Depth (A):	8.0
Time Arrive Sta.:	0935	GPS Accuracy:	±9	Length of Push Core Assembly (B):	16.2
Time of Collection:	0946	Logged By:	DGS	Water Surface to Top of Handle (C):	3.3
Time Depart Sta.:	0953			Length of Core (from bottom) (D):	3.9
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	0.9

All measurements are 20.3 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	0.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-12.0
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-11.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-8.1
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-7.1

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 1.9	OL	organic silt with trace to no sand, wet to moist, some organic debris (stems) sand is very fine,	5Y 2.5/1	loose to mod. firm	very fine sand	Petroleum	S-12M-C019 -1.4-1.9 archive
1.9 - 3.7	OL/ML	Mix of OL/ML silt, little sand (fine to medium), shells and shell fragments, moist	5Y 2.5/2	mod firm to firm	medium sand	Petroleum	S-12M-C019 -1.9-2.4 S-12M-C019 -2.4-2.9 archive
3.7 - 3.9	ML	silt with trace sand and small shells/shell fragments, sand is very fine, less moist	5Y 3/2	firm	very fine sand	N/A	S-12M-C019 -3.7-3.9 archive

Comments:  
 - 1 attempt  
 - <sup>DGS</sup> analytical samples, <sup>DGS</sup> archive samples  
 1 3





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dave Walsh Vessel: George Hampson

Station ID: LG13 Latitude: 41° 39.995 Core Sample ID: S-12M-~~000~~ C020  
 Collection Date: 3/12/12 Longitude: 70° 58.104 Water Depth (A): 8.4  
 Time Arrive Sta.: 1049 GPS Accuracy: ± 9 Length of Push Core Assembly (B): 15.2  
 Time of Collection: 1053 Logged By: DGS Water Surface to Top of Handle (C): 3.0  
 Time Depart Sta.: 1109 Length of Core (from bottom) (D): 3.0  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): 2.0

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board): 2.0  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) -10.2  
 (Z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) -10.0  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -7.2  
 (I<sub>2</sub>) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.4

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

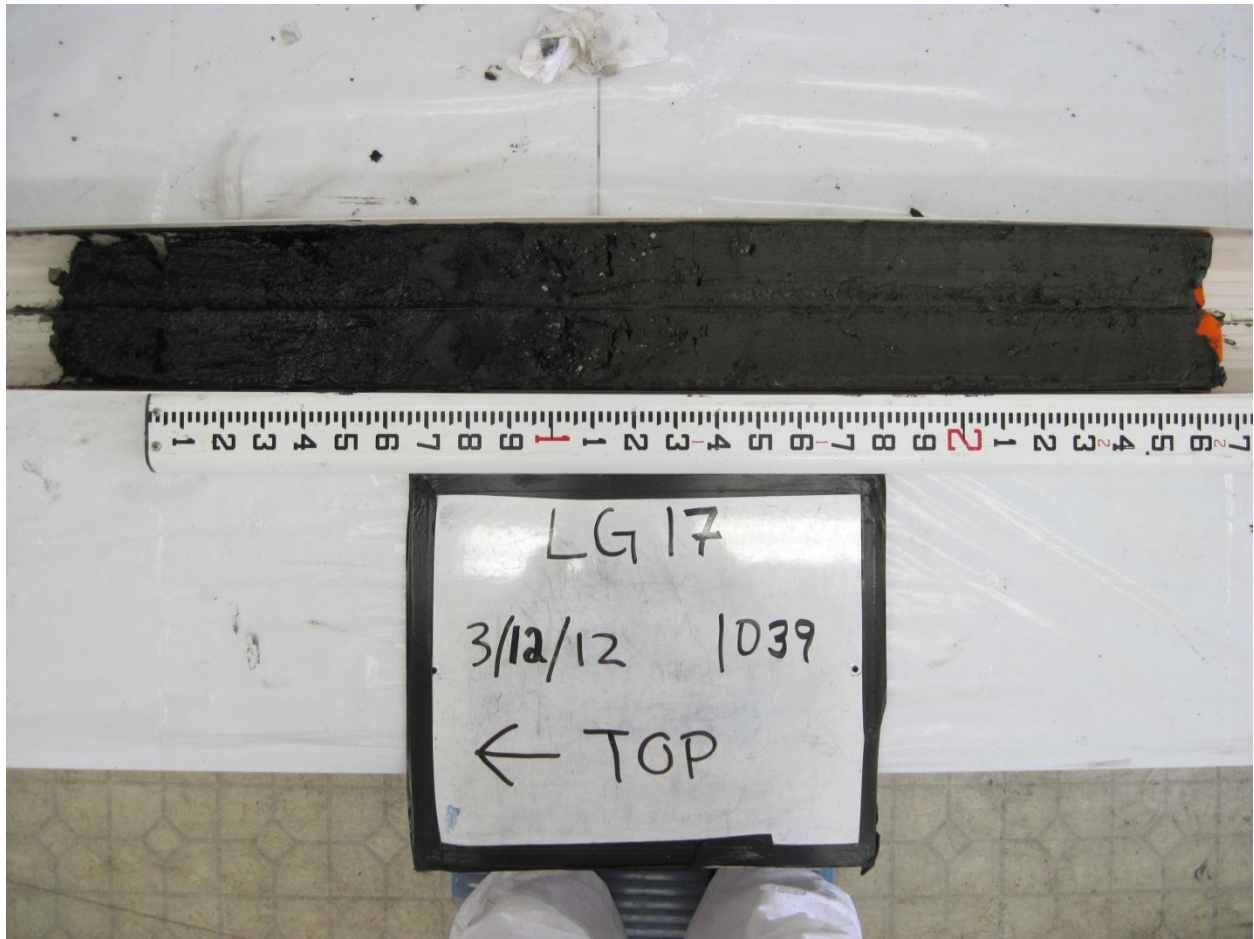
External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-1.2	OL	organic soil with little to trace sand fine to very fine sand very wet to moist sheen visible	5Y 2.5/1	very loose to mod firm	fine sand	strong petroleum	S-12M-C020 -0.7-1.2 Archive S-12M-C020 -1.2-1.7
1.2-2.8	OL/ML	mix of OL/ML trace to little fine sand, moist, color and water content grade downcore	5Y 3/1	mod. firm	very fine sand	light petroleum	S-12M-C020 -1.2-1.7 MSMSD S-12M-C020 -1.7-2.2 (archive)
2.8-3.0	ML	Silt with small shells and shell debris, trace to no sand	5Y 3/2	firm	very fine sand	N/A	

Comments:

- 1 attempt, H<sub>2</sub>S smell from core during collection  
 - <sup>DGS</sup> 2 analytical samples, 1 MSMSD, <sup>DGS</sup> 2 Archive









Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Thompson

Station ID: PB 2 Latitude: 41° 39.959 Core Sample ID: S-12m-C022  
 Collection Date: 3/13/12 Longitude: 70° 55.112 Water Depth (A): 1.4  
 Time Arrive Sta.: 0902 GPS Accuracy: ± 9 Length of Push Core Assembly (B): 9.2  
 Time of Collection: 0913 Logged By: DGS Water Surface to Top of Handle (C): 6.3  
 Time Depart Sta.: 0926 Length of Core (from bottom) (D): 0.8  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): -0.3

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board): -0.3  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) -3.2  
 (z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) N/A  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -2.4  
 (L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.7

(Note if I ≠ L, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.55	SW-SM	Well graded medium sand w/ silt and gravel, moist firm w/ moderate sheen and petro smell	2.5Y 2.5/1	firm	15mm	Petro	S-12m-C022-00-0.5
0.55-0.8	GW-GM	Well graded fine pebbly gravel w/ coarse sub-angular sand and silt. Large lithoclastic inclusions (35mm) Soft-poorly indurated moist. Strong sheen and petro odor	2.5Y 2.5/1	soft	35mm	Petro	S-12m-C022-0.5-0.8

Comments:

- 4 attempts, 4th core was saved, all others did not remain in core barrel, oily/fatty sheen from core bottom







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: G. Hampton

Station ID:	LQ13	Latitude:	41° 39.995	Core Sample ID:	S-12m-C023
Collection Date:	3/13/12	Longitude:	70° 55.048	Water Depth (A):	6.3
Time Arrive Sta.:	1016	GPS Accuracy:	±9	Length of Push Core Assembly (B):	14.2
Time of Collection:	1021	Logged By:	DGS	Water Surface to Top of Handle (C):	4.1
Time Depart Sta.:	1026			Length of Core (from bottom) (D):	3.1
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	0.9

Calculations for Determination of Z\* Elevation

All measurements are 28.1 foot

(G) Elevation of Water Surface (NGVD) (as read from tide board):	0.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-9.2
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-6.2
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.1
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.4

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-0.1	OL	organics, moderate medium sand w/ trace pebbles. wet	2.5Y 2.5/1	very soft	5mm	Petro	S-12m-C023-ET N/A - Not enough material to sample
0.1-3.1	ML	silt w/ trace fine sand. moist. No shell, no odor	2.5Y 4/1	soft to firm	fine sand	None	S-12m-C023-0.1-0.6

Comments: -1 attempt, ~0.2 ft of material lost from the barrel upon recovery  
 Archive = S-12m-C023 0.7-1.2





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. M. Walsh Vessel: George Huxton

Station ID: LL14 Latitude: 41° 39.991 Core Sample ID: S-12m-CO24  
 Collection Date: 3/13/12 Longitude: 70° 55.078 Water Depth (A): 10.1 ft  
 Time Arrive Sta.: 1030 GPS Accuracy: ±9 Length of Push Core Assembly (B): ~~19.2~~ 19.2  
 Time of Collection: 1036 Logged By: DGS Water Surface to Top of Handle (C): 5.1  
 Time Depart Sta.: 1041 Length of Core (from bottom) (D): 3.4  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): 1.2

All measurements are FSL foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board): 1.2  
 (H) Elevation of the bottom of the core (NGVD):  $G - (B - C)$  -12.9  
 (Z\*) Elevation of visual transition (NGVD):  $H + (\text{distance to visual transition from bottom of core})$  -9.9  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD):  $H + D$  -9.5  
 (L) Elevation of the sediment-water interface as measured from water depth (NGVD):  $G - A$  -8.9

(Note if I ≠ L within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0-0.4</u>	<u>OL</u>	<u>Organics, silt w/ trace v. fine sand. wet to moist v. fast to soft. visible sheen</u>	<u>2.5Y 2.5/1</u>	<u>Soft</u>	<u>v. fine sand</u>	<u>Petro</u>	<u>N/A as per Jacobs sampling plan 3/6/12</u>
<u>0.4-3.3</u>	<u>ML</u>	<u>Silt w/ trace v. fine sand. moist firm. no sheen</u>	<u>2.5Y 3/1</u>	<u>Firm</u>	<u>v. fine sand</u>	<u>None</u>	<u>S-12m-CO24-0.4-0.9</u>

Comments: - 1 attempt Archive S-12m-CO24-0.9-1.4





Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist:

Client: USACE NAE

Vessel:

Station ID:	<u>LU15</u>	Latitude:	<u>41° 39.987</u>	Core Sample ID:	<u>S-12m-CO25</u>
Collection Date:	<u>3/13/12</u>	Longitude:	<u>70° 55.028</u>	Water Depth (A):	<u>5.8</u>
Time Arrive Sta.:	<u>1004</u>	GPS Accuracy:	<u>± 9</u>	Length of Push Core Assembly (B):	<u>14.2</u>
Time of Collection:	<u>1008</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>4.2</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>3.5</u>
Collection Equip.:	<u>PC</u>			Tide Elevation (from tide board) (G):	<u>0.7</u>

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>3.5</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-6.5</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-3.3</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-2.3</u>
(L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-2.3</u>

(Note if I ≠ L, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0-1.0</u>	<u>OL</u>	<u>organics w/ silt, wet to moist. Petro odor - light green.</u>	<u>2.5Y 2.5/1</u>	<u>v. soft- soft</u>	<u>silt</u>	<u>Petro Sulfur</u>	<u>S-12m- CO25- 0.5-1.0 "..."-REP</u>
<u>1.0-3.3</u>	<u>ML</u>	<u>very strong contact silt w/ very fine sand - trace EH moderately graded silt w/ some v. fine sand! Trace amounts of med. sand Moist. firm</u>	<u>2.5Y 4/2</u>	<u>firm</u>	<u>medium sand</u>	<u>None</u>	<u>S-12m- CO25- 1.0-1.5</u>

Comments:

1 attempt

Archive S-12m-  
CO25-1.5-2.0





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Huntington

Station ID: LY19 Latitude: 41° 39.968 Core Sample ID: S-12m-CO26  
 Collection Date: 3/13/12 Longitude: 70° 55.011 Water Depth (A): 6.3  
 Time Arrive Sta.: 0950 GPS Accuracy: ± 9 Length of Push Core Assembly (B): 14.2  
 Time of Collection: 0954 Logged By: DGS Water Surface to Top of Handle (C): 4.3  
 Time Depart Sta.: 0959 Length of Core (from bottom) (D): 2.7  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): 0.6

All measurements are 10.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board): 0.6  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) -9.3  
 (Z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) -8.2  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.6  
 (I<sub>2</sub>) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.7

(Note if I ≠ I<sub>2</sub>, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.6	OL	organics w/ silt gradational contact and mixing w/ lower unit. increase in medium and fine sand content downwards wet - moist - <del>gray</del> visible sheen	2.5Y 2.5/1	v. soft to soft	med. sand	Petro	S-12m- CO26 - 1.1 - 1.6
1.6 - 2.8	ML	large in situ bi-valve @ contact silt w/ some medium sand. moist	2.5Y 3/1	Firm	med. sand	NONE	S-12m- CO26-1.6- 2.1

Comments:

-1 attempt

Archive S-12m  
CO26-2.1-2.6







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hampton

Station ID:	LQ05	Latitude:	41° 40.025	Core Sample ID:	S-12M-C027
Collection Date:	3/13/12	Longitude:	70° 55.048	Water Depth (A):	8.1
Time Arrive Sta.:	1138	GPS Accuracy:	±9	Length of Push Core Assembly (B):	14.2
Time of Collection:	1143	Logged By:	DGS	Water Surface to Top of Handle (C):	2.2
Time Depart Sta.:	1148			Length of Core (from bottom) (D):	3.1
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	2.2

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	2.2
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-9.8
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-6.9
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.7
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.9

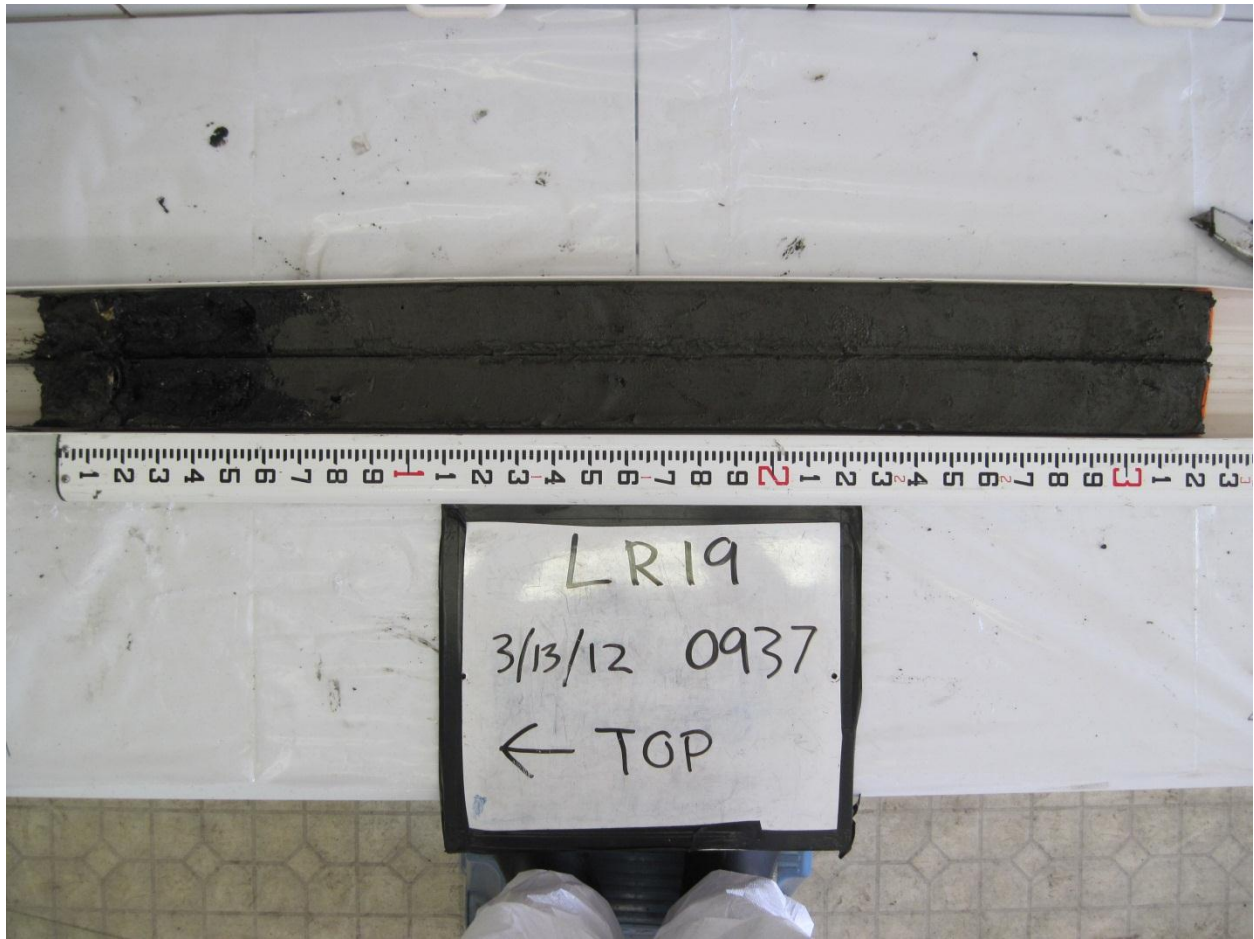
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-0.2	OL	agones, silt w/ trace v. fine sand. wet w/ visible sheen	2.5Y 2.5/1	v. soft	v. fine sand	Petro	N/A as per SACDOS 3/16/12
0.2-3.0	ML	Sharp irregular contact. silt w/ some fine sand. Moist. Large in-situ bivalve @ 0.5	2.5Y 4/1	firm	fine sand	NONE	S-12m-C027-02-0.7

Comments: - 1 attempt  
 Archive-S-12m-C027 0.7-1.2





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hampton

Station ID:	<u>LR19</u>	Latitude:	<u>41° 39.970</u>	Core Sample ID:	<u>S-12M-C028</u>
Collection Date:	<u>3/13/12</u>	Longitude:	<u>70° 55.045</u>	Water Depth (A):	<u>5.6</u>
Time Arrive Sta.:	<u>0930</u>	GPS Accuracy:	<u>± 9 ft</u>	Length of Push Core Assembly (B):	<u>14.2</u>
Time of Collection:	<u>0937</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>4.8</u>
Time Depart Sta.:	<u>0947</u>			Length of Core (from bottom) (D):	<u>3.2</u>
Collection Equip.:	<u>P.C.</u>			Tide Elevation (from tide board) (G):	<u><del>0.3</del> 0.3</u>

All measurements are 20.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>0.3</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-9.1</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-6.5</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-5.9</u>
(L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-5.3</u>

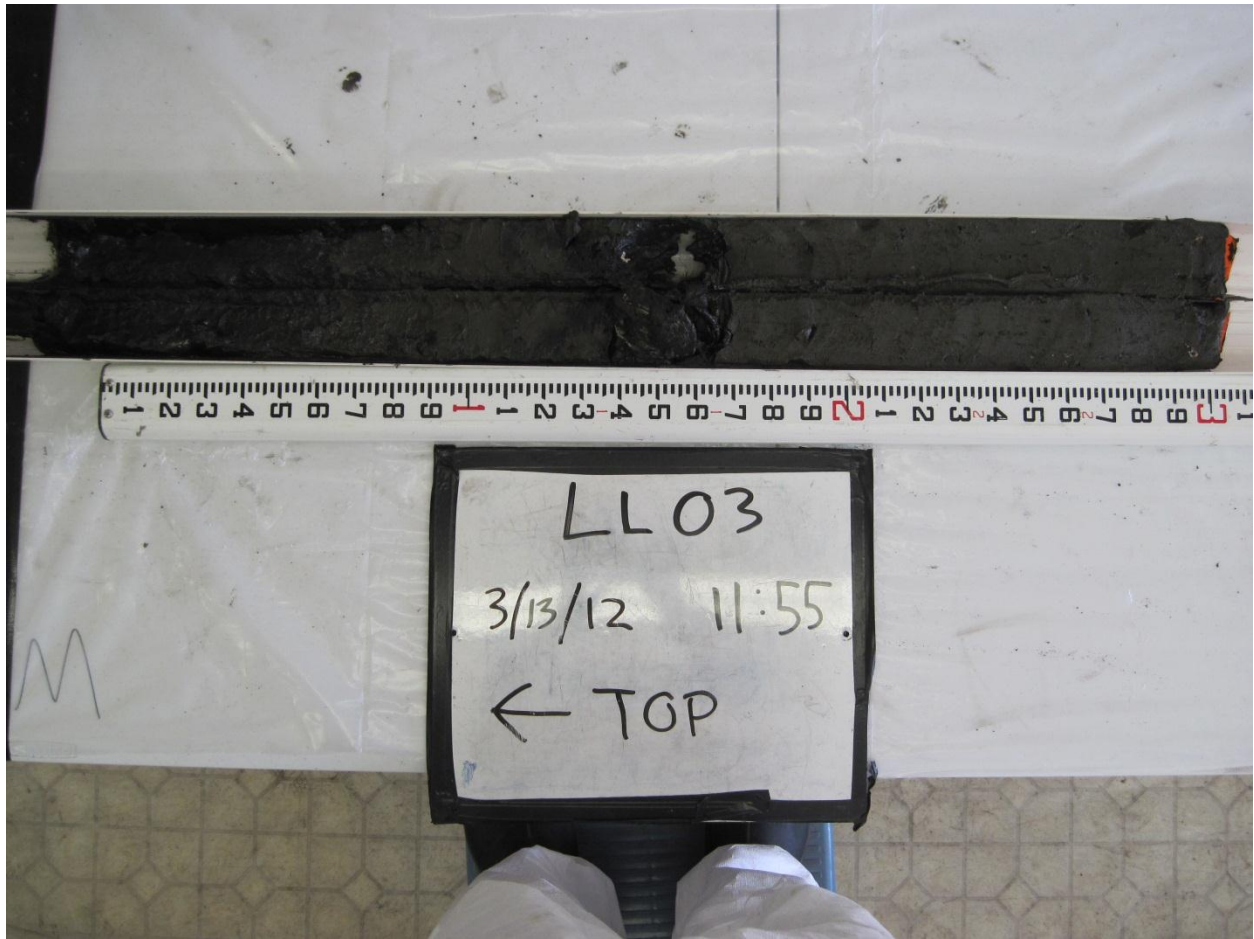
(Note if I ≠ L, within ±1.0 feet, discard and resample)


External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0-0.6</u>	<u>OL</u>	<u>organics w/ silt and some medium sand shell wash and plastic debris w/ in unit wet - most visible shen</u>	<u>2.5Y 2.5/1</u>	<u>Soft</u>	<u>medium sand</u>	<u>Sulfur &amp; Petio</u>	<u>S-12m- C028- 0.1-0.6</u>
<u>0.6- 3.2</u>	<u>ML</u>	<u>silt w/ trace v. fine sand Moist.</u>	<u>2.5Y 4/1</u>	<u>firm</u>	<u>v. fine sand</u>	<u>None</u>	<u>S-12m- C028- 0.6-1.1</u>

Comments: - 1 attempt Recore S-12m-  
C028-  
1.1-1.6



		Project Name: New Bedford Harbor Environmental Monitoring Project #: W912WJ-09-D-0001, Task Order No. 0010 Location: New Bedford, MA Chief Scientist: <u>M. Walsh</u>	Client: USACE NAE Vessel: <u>George Hampton</u>
Station ID:	<u>LL03</u>	Latitude:	<u>41° 40.035</u>
Collection Date:	<u>3/13/12</u>	Longitude:	<u>70° 55.080</u>
Time Arrive Sta.:	<u>1150</u>	GPS Accuracy:	<u>± 9</u>
Time of Collection:	<u>1155</u>	Logged By:	<u>DGS</u>
Time Depart Sta.:	<u>1201</u>		
Collection Equip.:	<u>P.C.</u>		
		Core Sample ID:	<u>Order S-12m-C029</u>
		Water Depth (A):	<u>9.1</u>
		Length of Push Core Assembly (B):	<u>14.2</u>
		Water Surface to Top of Handle (C):	<u>1.5</u>
		Length of Core (from bottom) (D):	<u>3.0</u>
		Tide Elevation (from tide board) (G):	<u>2.3</u>

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>2.3</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-10.4</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-8.2</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-7.4</u>
(L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-6.8</u>

(Note if I ≠ L within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0 - 0.8</u>	<u>OL</u>	<u>organic w/ trace mounds of fine sand. wet to moist. visible sheen</u>	<u>2.5y 2.5/1</u>	<u>v. soft to soft</u>	<u>fine sand</u>	<u>Petro &amp; Sulfur</u>	<u>S-12m-C029-0.8-0.8 None as per Salong</u>
<u>0.8 - 3.0</u>	<u>MC</u>	<u>irregular, graded compact. silt w/ trace fine sand. moist large bi-valve @ 1.6 w/ OL material w/in shell w/visible sheen - See picture</u>	<u>2.5y 4/1</u>	<u>firm</u>	<u>fine sand</u>	<u>None</u>	<u>S-12m-C029-0.8-1.3</u>

Comments: - 1 attempt Archive: S-12m-C029-1.3-1.8





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hutton

Station ID: LV07-RFP Latitude: 41° 40.020 Core Sample ID: S-12m-C030  
 Collection Date: 3/13/12 Longitude: 70° 55.021 Water Depth (A): 7.4  
 Time Arrive Sta.: 1116 GPS Accuracy: ±9 Length of Push Core Assembly (B): 13.2  
 Time of Collection: 1131 Logged By: DGS Water Surface to Top of Handle (C): 2.9  
 Time Depart Sta.: 1135 Length of Core (from bottom) (D): 2.5  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): 2.1

All measurements are ±0.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board): 2.1  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) -8.2  
 (Z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) -6.3  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -5.7  
 (I<sub>2</sub>) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.3

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

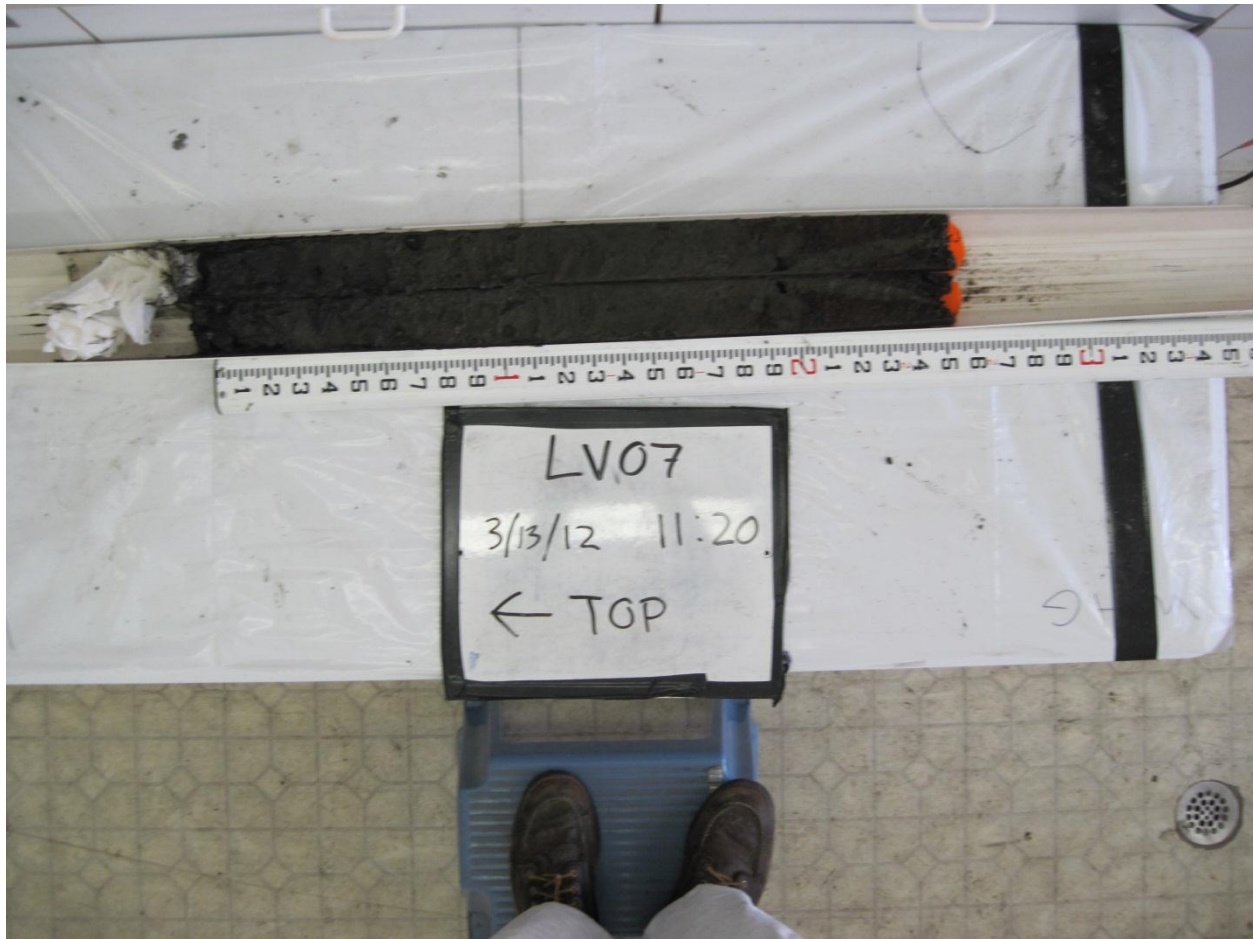
Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 0.6	OL	aggregates of v. fine sand increasing down unit, well to moist w/ visible sheen	2.5Y 2.5/1	v. loose to loose	v fine sand	Petro	S-12m-C030-0.6-1.1
0.6 - 2.4	ML	well graded silt w/ some fine sand, moist interbedded w/ Pt @ 2.0 : 2.2 Sandy lens @ .95 consistency of coarse sub-sand sand	2.5Y 4/1	Firm	fine sand	None	S-12m-C030-1.1-1.6

Comments:

-1 attempt

Archive S-12m-C030-1.6-2.1







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hampton

Station ID: LV07 Latitude: 41° 40.020 Core Sample ID: S-12m-C031  
 Collection Date: 3/13/12 Longitude: 70° 55.021 Water Depth (A): 7.4, 7.4  
 Time Arrive Sta.: 1116 GPS Accuracy: ±9 Length of Push Core Assembly (B): 13.2, 13.2  
 Time of Collection: 1120, 1131 Logged By: DGS Water Surface to Top of Handle (C): 2.6, 2.9  
 Time Depart Sta.: 1135 Length of Core (from bottom) (D): 2.4, 2.5  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): 2.0, 2.1

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board): 2  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) - 8.6  
 (Z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) - 6.85  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D - 6.2  
 (L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A - 5.4

(Note if I ≠ L, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0. - 0.65	OL	organics w/ trace fine sand in lower unit. wet to most visible stem	2.5Y 2.5/1	v-soft to soft	fine sand	Petro	S-12m-C031-0.1-0.6
0.65 - 2.0	ML	well graded silt w/ fine to coarse sand. sand lenses throughout irregular	2.5Y 4/1	firm	coarse sand	None	S-12m-C031-0.6-1.1
2.0 - 2.5	PT	irregular contact w/ above unit	10YR 3/2	firm	M/A	None	S-12m-C031-0.6-1.1 MSMSD

Comments: - 1 attempt each (1 core + REP) Archive S-12m-C031-1.1-1.6





Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh

Client: USACE NAE

Vessel: Orange Hopper

Station ID: 27FF Latitude: 41° 40.329 Core Sample ID: S-12m-C032  
 Collection Date: 3/13/12 Longitude: 70° 54.960 Water Depth (A): 8.8  
 Time Arrive Sta.: 1249 GPS Accuracy: ± 9 Length of Push Core Assembly (B): 12.7  
 Time of Collection: 1252 Logged By: D&S Water Surface to Top of Handle (C): 1.8  
 Time Depart Sta.: 1257 Length of Core (from bottom) (D): 1.7  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): 2.5

All measurements are 20.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 3.5  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.4  
 (Z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) -5.9  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -5.7  
 (I<sub>2</sub>) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.3

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 0.2	OL	organics w/ silt and trace fine Sand, wet	2.5Y 3/1	v. Soft	fine Sand	None TRACE Petroleum	S-12m- C032- 0.0-0.5
0.2 - 1.2	ML	Silt w/ some medium and fine Sand. medium Sand content in bottom of unit. moist	2.5Y 4/1	firm	med Sand	none	S-12m- C032- 0.5-1.0
1.2 - 3.7	P <sub>T</sub>	organic peat layer w silt interbedded	10YR 3/2	firm	Silt	none	

Comments:  
 - 1 attempt



**WOODS HOLE GROUP** Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hampton

Station ID: LZ02 Latitude: 41° 40.041 Core Sample ID: 42 S-12m-C033  
 Collection Date: 3/12/12 Longitude: 70° 55.001 Water Depth (A): <sup>DGS</sup> 5.2 (5.3)  
 Time Arrive Sta.: 1113 GPS Accuracy: ± 9 Length of Push Core Assembly (B): <sup>DGS</sup> 7.2 9.2 (8.0)  
 Time of Collection: <sup>ETH</sup> 1121, 1124 logged By: DGS Water Surface to Top of Handle (C): <sup>ETH</sup> 2.2 (0.7)  
 Time Depart Sta.: 1137 Length of Core (from bottom) (D): <sup>ETH</sup> 1.2 (1.5)  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): <sup>ETH</sup> 2.6 (2.7)

All measurements are 50.1 Fm

**Calculations for Determination of Z\* Elevation**

(G) Elevation of Water Surface (NGVD) (as read from tide board):	2.7
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-4.6
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-3.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.1
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.6

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

**External Description, Date:**

**Internal Core Description, Date:**

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 0.2	OL	Organics w/ silt and fine sands <sup>ETH</sup> Trace amounts of fine sands	2.5Y 2.5/1	v. soft	fine sand	Petro 3	S-12m-C033 0.0-0.2
0.2 - 1.0	SN- SM	gradational contact w/ upper unit, well graded sand <sup>ETH</sup> medium; coarse sand w/ silt and gravel w/ lenses of sub-rounded pebbles, most non-cohesive, increasing fines in lower unit	2.5Y 5/1	firm	10mm	none	S-12m-C033 0.2-0.7
1.0 - 1.4	SP	Poorly graded fine sand irregular upper contact	2.5Y 6/3	firm	fine sand	None	

**Comments:**  
~~2 Cores to~~ <sup>DGS</sup> collected 2nd core to verify ~~the~~ first core  
 - used the second core collected for sampling  
 Archive S-12m-C033-0.7-1.2





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: *Gracie Huxton*

Station ID: *LBB07* Latitude: *41° 40.019* Core Sample ID: *S-12m-C034*  
 Collection Date: *3/13/12* Longitude: *70° 54.990* Water Depth (A): *2.8*  
 Time Arrive Sta.: *1100* GPS Accuracy: *±9* Length of Push Core Assembly (B): *12.7*  
 Time of Collection: *1105* Logged By: *DGS* Water Surface to Top of Handle (C): *8.0* <sup>DGS</sup> *7.2*  
 Time Depart Sta.: *1114* Length of Core (from bottom) (D): <sup>DGS</sup> *2.0*  
 Collection Equip.: *P.C.* Tide Elevation (from tide board) (G): *1.9*

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board): *1.9*  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) *-3.6*  
 (Z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) N/A  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D *-1.6*  
 (J) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A *-0.9*

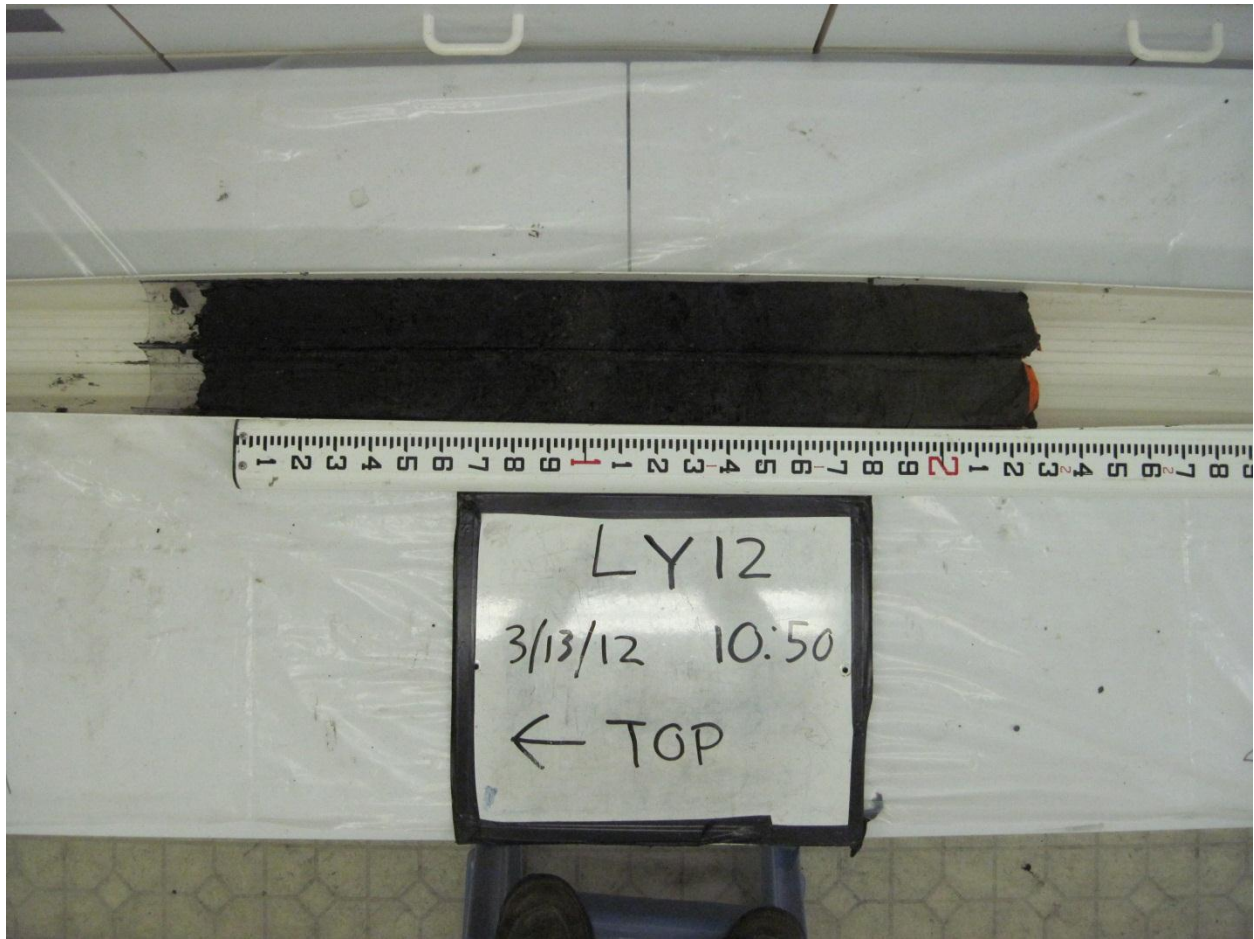
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<i>0 - 0.6</i>	<i>SP</i>	<i>poorly graded fine sand w/ some organic moist, w/ visible sheen - large invertebrate in situ @ 0.2</i>	<i>2.5Y 2.5/1</i>	<i>firm</i>	<i>fine sand</i>	<i>Retro</i>	<i>S-12m-C034-0.1-0.6</i>
<i>0.6 - 1.2</i>	<i>SW-SM</i>	<i>moderately graded fine sand w/ some medium pebbles all sand and trace coarse sand. gradational upper; lower contacts</i>	<i>2.5Y 3/2</i>	<i>firm</i>	<i>coarse sand</i>	<i>NONE</i>	<i>S-12m-C034-0.6-1.1</i> <i>" " + MSMSD</i>
<i>1.2 - 1.6</i>	<i>SW-SM</i>	<i>poorly graded coarse sand w/ silt and trace gravel</i>	<i>2.5Y 4/2</i>	<i>firm</i>	<i>gravel pebbles</i>	<i>NONE</i>	
<i>1.6 - 1.9</i>	<i>PT</i>	<i>irregular upper contact</i>	<i>2.5Y 5/2</i>	<i>firm</i>	<i>peat</i>	<i>NONE</i>	

Comments: *- 1 attempt* *Archive S-12m-C034-1.1-1.6*







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: \_\_\_\_\_ Vessel: \_\_\_\_\_

Station ID:	<u>LY12</u>	Latitude:	<u>41° 39.996</u>	Core Sample ID:	<u>S-12m-C035</u>
Collection Date:	<u>3/13/12</u>	Longitude:	<u>70° 55.009</u>	Water Depth (A):	<u>4.7</u>
Time Arrive Sta.:	<u>1045</u>	GPS Accuracy:	<u>± 9</u>	Length of Push Core Assembly (B):	<u>12.8</u>
Time of Collection:	<u>1050</u>	Logged By:	<u>DGS</u>	Water Surface to Top of Handle (C):	<u>5.5</u>
Time Depart Sta.:	<u>1056</u>			Length of Core (from bottom) (D):	<u>2.2</u>
Collection Equip.:	<u>P.C.</u>			Tide Elevation (from tide board) (G):	<u>1.5</u>

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>1.5</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>- 5.8</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>- 5.2</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>- 3.6</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>- 3.2</u>

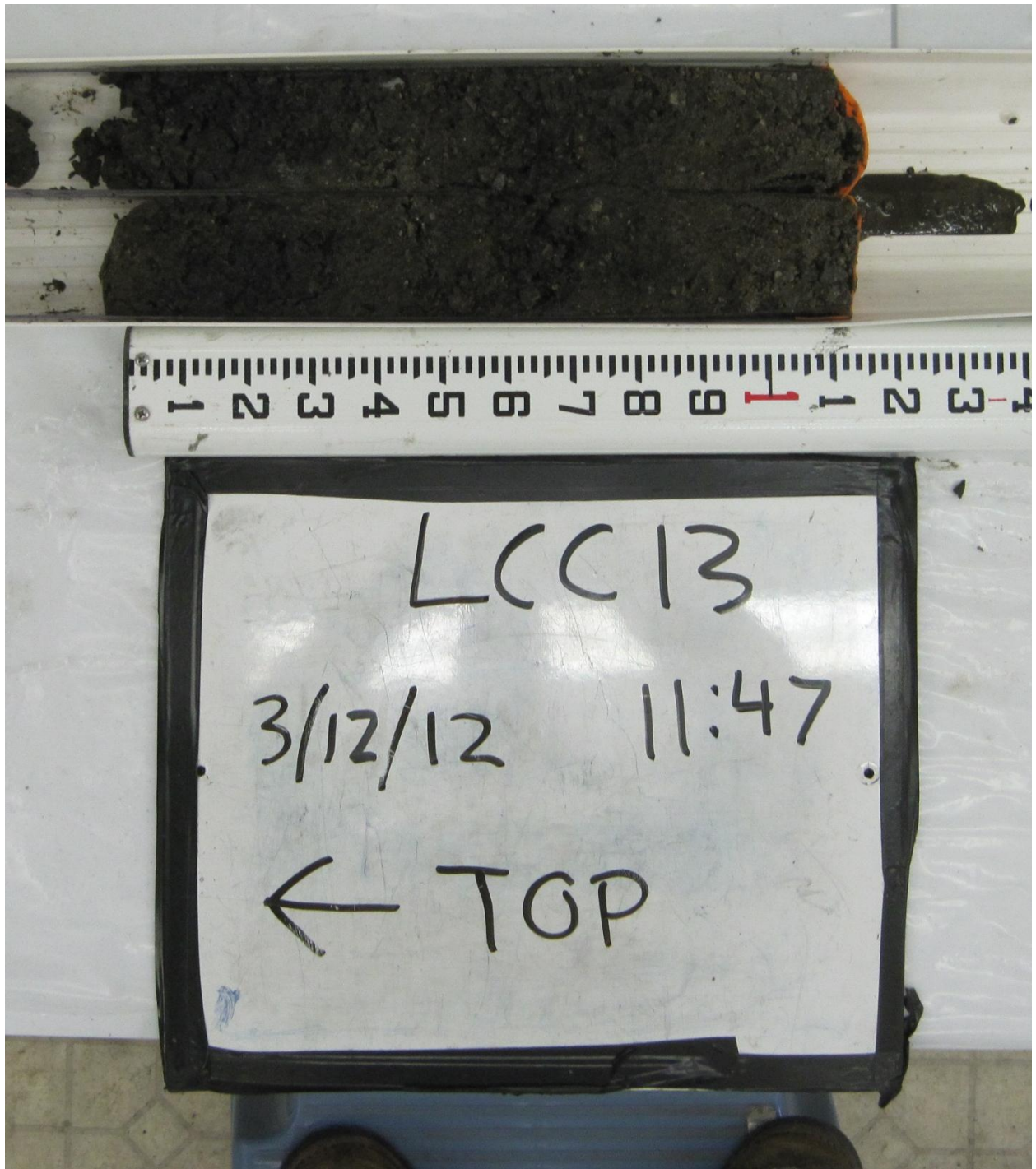
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<del>0-0.8</del> 0.0-1.6	OL	organics w/ trace medium sand w/a bed of SW-SM @ 1.0. Wet to moist. Visible shells	2.5Y 2.5/1	Soft to firm	pebble	Petro Sulfur	S-12m-C035 1.1-1.6
1.6-2.2	ML	silt w/ medium sand	2.5Y 4/2	firm	medium sand	None	S-12m-C035 1.6-2.1

Comments: - 1 attempt Archive - S-12m-C035  
2.1-2.6





Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh

Client: USACE NAE

Vessel: George Hapton

1.5

Station ID: LCC13      Latitude: 41° 39.996      Core Sample ID: S-12m-C036  
 Collection Date: 3/12/12      Longitude: 70° 54.986      Water Depth (A): 3.5  
 Time Arrive Sta.: 1141      GPS Accuracy: ± 9.4ft      Length of Push Core Assembly (B): 7.2  
 Time of Collection: 1147      Logged By: DGS      Water Surface to Top of Handle (C): 2.2  
 Time Depart Sta.: \_\_\_\_\_      Length of Core (from bottom) (D): 1.1  
 Collection Equip.: P.C.      Tide Elevation (from tide board) (G): 2.7

Calculations for Determination of Z\* Elevation

All measurements are ±0.1 foot

(G) Elevation of Water Surface (NGVD) (as read from tide board): 2.7  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) -2.3  
 (z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) N/A  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -1.2  
 (I<sub>2</sub>) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -0.8

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.4	SW-SM	well graded coarse sand w/ silt and pebbles, visible when	2.5Y 3/2	Firm	25mm	Petro	S-12m-C036-0.0-0.4
0.4 - 1.1	SW-SM	well graded coarse sand w/ silt and pebbles bed of coarse material @ 0.6 gradational upper contact	2.5Y 4/2	Firm	10mm	None	S-12m-C036-0.4-0.9

Comments:

- 1 attempt

NO Archive





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: \_\_\_\_\_ Vessel: \_\_\_\_\_

Station ID:	26X	Latitude:	41° 40.333	Core Sample ID:	S-12m-C037
Collection Date:	3/13/12	Longitude:	70° 55.004	Water Depth (A):	8.8
Time Arrive Sta.:	1235	GPS Accuracy:	±9	Length of Push Core Assembly (B):	12.7
Time of Collection:	1239	Logged By:	DGS	Water Surface to Top of Handle (C):	1.7
Time Depart Sta.:	1243			Length of Core (from bottom) (D):	2.0
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	2.6

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	2.6
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.4
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-6.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.4
(J) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.2

(Note if I ≠ J within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.2	OL	organic, v. moist v. silty silt	2.5Y 2.5/1	Soft	silt	Sulfur petro	S-12m- C037- 0.0-0.5 "....."-REP
0.2 - 1.9	ML	poorly graded silt w/ trace fine sand and shell fragments sharp irregular upper contact	2.5Y	firm	fine sand	Sulfur	S-12m- C037- 0.5-1.0

Comments:

- 1 attempt No Archive





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hampton

Station ID: 38RS Latitude: 41° 40.281 Core Sample ID: S-12m-C038  
 Collection Date: 3/13/12 Longitude: 70° 55.036 Water Depth (A): 7.4  
 Time Arrive Sta.: 1212 GPS Accuracy: ±9 Length of Push Core Assembly (B): 12.7  
 Time of Collection: 1220 Logged By: DGS Water Surface to Top of Handle (C): 2.9  
 Time Depart Sta.: \_\_\_\_\_ Length of Core (from bottom) (D): 2.1  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): 2.6

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>2.6</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-7.2</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-5.7</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-5.1</u>
(L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-4.8</u>

(Note if I ≠ L, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0 - 0.6</u>	<u>OL</u>	<u>organic w/ some silt and trace amounts of coarse sand fine sand</u>	<u>2.5Y 2.5/1</u>	<u>Soft</u>	<u>fine sand</u>	<u>Petro</u>	<u>S-12m-C038 0.0-0.5</u>
<u>0.6 - 2.1</u>	<u>ML</u>	<u>poorly graded silt w/ trace fine sand and shell fragments</u>	<u>2.5Y 3/1</u>	<u>firm</u>	<u>fine sand</u>	<u>Sulfur</u>	<u>S-12m-C038 0.5-1.0 S-12m-C038 0.5-1.0-115/115</u>

Comments:

- 1 attempt each (1 core + 1 REP)







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hampton

Station ID:	38RS-REP	Latitude:	41° 40.281	Core Sample ID:	S-12m-C039
Collection Date:	3/13/12	Longitude:	70° 55.036	Water Depth (A):	7.4
Time Arrive Sta.:	1212	GPS Accuracy:	±9	Length of Push Core Assembly (B):	12.7
Time of Collection:	1225	Logged By:	DGS	Water Surface to Top of Handle (C):	2.6
Time Depart Sta.:				Length of Core (from bottom) (D):	2.1
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	2.6

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	2.6
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.5
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-5.9
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.4
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.8

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.5	OL	orguics w/ some silt w/ trace of fine sand	2.5Y 2.5/1	soft	<del>Below</del> sulfur fine sand	Retro Sulfur	S-12m-C039-0.0-0.5
0.5 - 2.1	ML	poorly graded silt w/ fine fine sand and shell fragments	2.5Y 3/1	fine	fine Sand	Sulfur	S-12m-C039-0.5-1.0

Comments:  
 - 1 attempt, Field REP





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hapton

Station ID:	30X	Latitude:	41° 40.315	Core Sample ID:	S-12m-C040
Collection Date:	3/13/12	Longitude:	70° 55.004	Water Depth (A):	8.2
Time Arrive Sta.:	1459	GPS Accuracy:	± 9	Length of Push Core Assembly (B):	12.7
Time of Collection:	1304	Logged By:	DGS	Water Surface to Top of Handle (C):	2.2
Time Depart Sta.:	1309			Length of Core (from bottom) (D):	2.2
Collection Equip.:	P.C.			Tide Elevation (from tide board) (G):	2.4

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	2.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.1
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-7.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.9
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.8

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

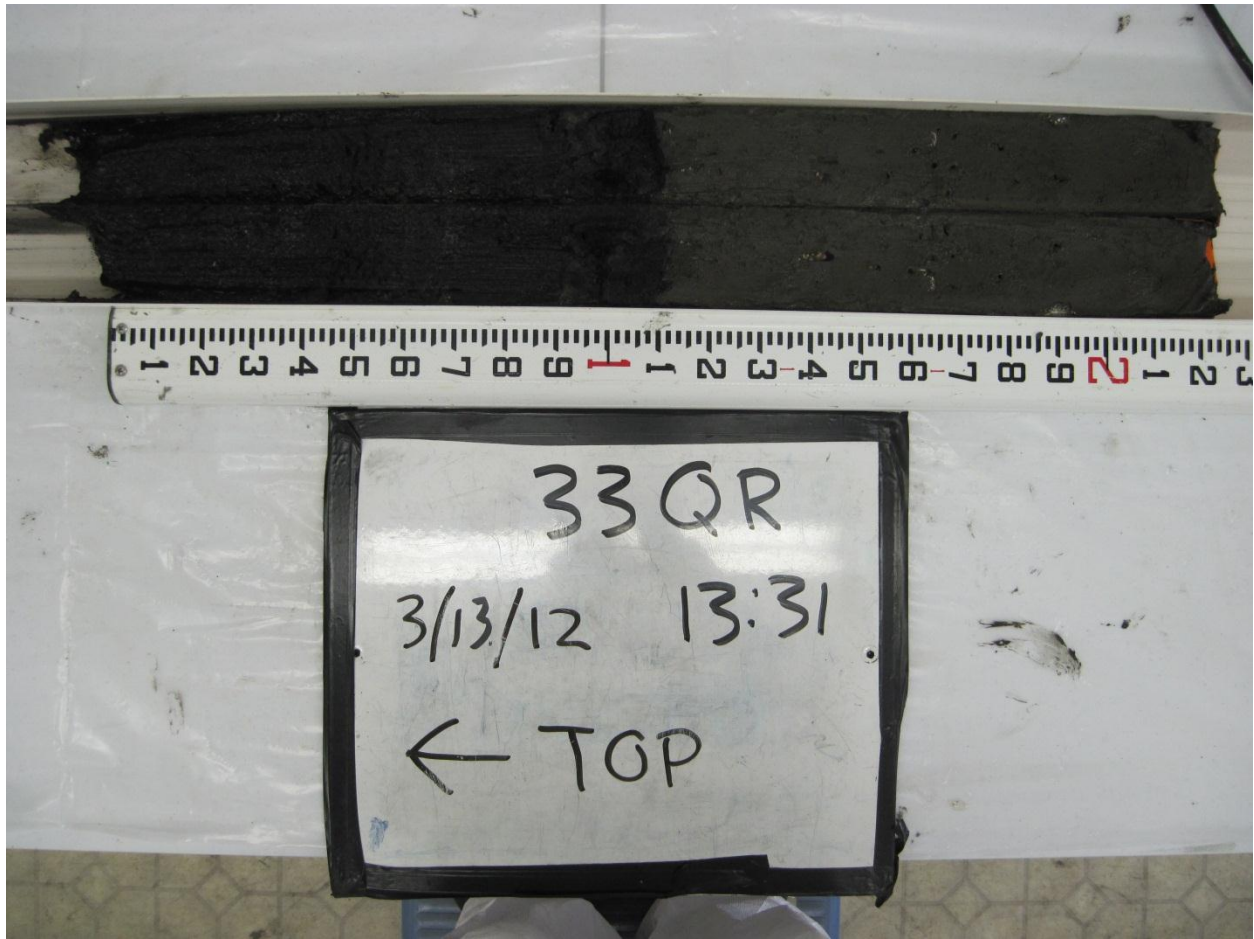
Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.2	OL	organics w/ silt. visible screen	2.5Y 2.5/1	Soft	Silt	Sulfur Petrol	S-12m-C040-0.0-0.5
1.2 - 2.2	ML	Silt w/ trace med. sand. whole scallop shell @ 1.4 and Pt inclusions @ 1.7	2.5Y 4/1	firm	med sand	Sulfur Petrol	S-12m-C040-0.5-1.0

Comments:

- 1 attempt

No Archive





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hampton C041

Station ID:	33QR	Latitude:	41° 40.303	Core Sample ID:	S-12m- <del>027</del> <sup>DS</sup>
Collection Date:	3/13/12	Longitude:	70° 55.040	Water Depth (A):	7.3
Time Arrive Sta.:	1326	GPS Accuracy:	± 9	Length of Push Core Assembly (B):	12.7
Time of Collection:	1331	Logged By:	DGS	Water Surface to Top of Handle (C):	2.9
Time Depart Sta.:	1335			Length of Core (from bottom) (D):	2.2
Collection Equip.:	P.C			Tide Elevation (from tide board) (G):	2.3

All measurements are 0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	2.3
(H) Elevation of the bottom of the core (NGVD): G - ( B - C )	-7.5
(z*) Elevation of visual transition (NGVD): H + ( distance to visual transition from bottom of core )	-6.4
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.3
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

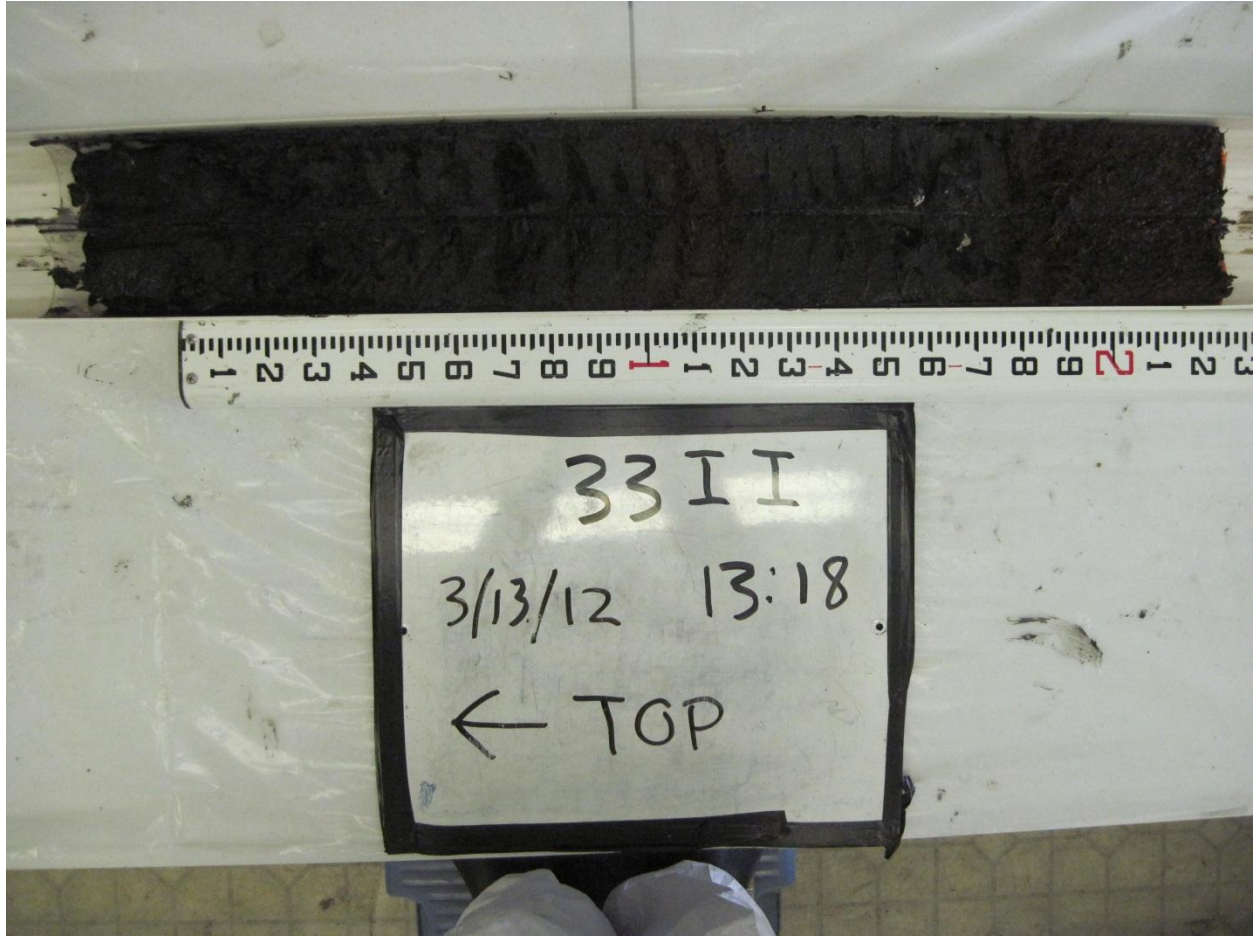
External Description, Date:

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.1	OL	orgnics w/ silt and visible green. wet to moist	2.5Y 2.5/1	v. soft to soft	Silt	Petro	S-12m-C041-00-0.5
1.1 - 2.2	ML	Silt w/ trace medium sand and shells sharp contact	2.5Y 4/1	firm	med. sand	Sulfur	S-12m-C041-0.5-1.0

Comments:





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: M. Walsh Vessel: George Hampton

Station ID: 33II Latitude: 41° 40.302 Core Sample ID: S-12m-C042  
 Collection Date: 3/13/12 Longitude: 70° 54.942 Water Depth (A): 5.5  
 Time Arrive Sta.: 1315 GPS Accuracy: ± 9 Length of Push Core Assembly (B): 12.7  
 Time of Collection: 1318 Logged By: DGS Water Surface to Top of Handle (C): 4.5  
 Time Depart Sta.: 1322 Length of Core (from bottom) (D): 2.2  
 Collection Equip.: P.C. Tide Elevation (from tide board) (G): 2.4

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.4  
 (H) Elevation of the bottom of the core (NGVD): G - (B - C) -5.8  
 (z\*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core) -5.4  
 (I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.6  
 (I<sub>2</sub>) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.1

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.8	OL	Organics w/ silt grading to med sand downward w/ coarse sand @ bottom of unit. Pt inclusions @ 1.0 to 0.7 visible shear throughout	2.5Y 2.5/1	Soft to firm	pebbles <del>to 5mm</del> (5mm)	Sulfur & Petroleum	S-12m- C042- 0.0-0.5
1.8 - 2.2	PT	peat	2.5Y 4/3	Firm	N/A	None	S12m- C042- 0.5-1.0

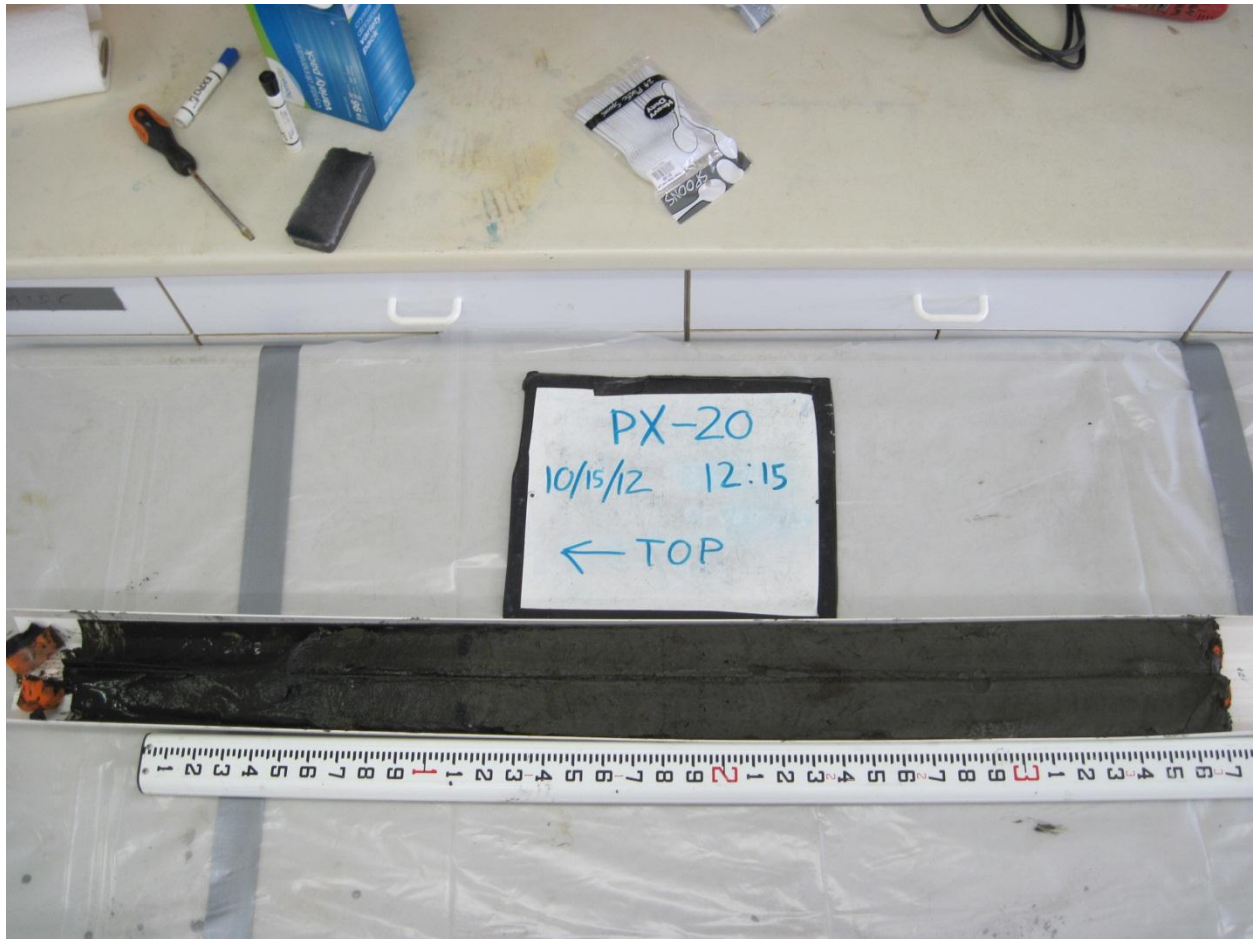
Comments:

- 1 attempt no archive

# 2012 POST-DREDGE CORING PHOTOGRAPHS AND FIELD LOGS



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	Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE
	Project #: W912WJ-09-D-0001, Task Order No. 0010		
Location: New Bedford, MA		Vessel: R/V George Hampson	
Chief Scientist: Dack Stuart			
Station ID:	PX20	Latitude:	41° 39.887
Collection Date:	10/5/12	Longitude:	70° 54.990
Time Arrive Sta.:	1208	GPS Accuracy:	12
Time of Collection:	1215	Logged By:	DS
Time Depart Sta.:			
Collection Equip.:	Push Core	Attempts:	1
		Core Sample ID:	S-120-C001
		Water Depth (A):	8.0
		Length of Push Core Assembly (B):	19.3
		Water Surface to Top of Handle (C):	7.2
		Length of Core (from bottom) (D):	3.7
		Tide Elevation (from tide board) (G):	-0.6
<small>B - A - C → D</small> <span style="float: right;"><small>All measurements are ±0.1 foot</small></span>			
Calculations for Determination of Z* Elevation			
(G) Elevation of Water Surface (NGVD) (as read from tide board):			-0.6
(H) Elevation of the bottom of the core (NGVD): G - (B - C)			-12.7
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)			-10.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D			-9.0
(L <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A			-8.6
<small>(Note if I ≠ L<sub>2</sub> within ±1.0 feet, discard and resample)</small>			
External Description, Date:			

Internal Core Description, Date:							
Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-1.1	OL	organics, trace sub-angular fine sands. Wet, low plasticity. Causing firming downwards	5Y 2.5/1	very soft	trace fine sand	H <sub>2</sub> S	S-120-C001 0.6-1.1
EH 1.1-3.7 <del>1.6</del>		poorly graded, trace sub-angular fine sands moist, cohesive, medium plasticity	5Y 4/1	firm	Trace fine Sand	H <sub>2</sub> S	S-120-C001 1.1-1.6

Comments: Archive ~~1.6~~ 1.6-2.1

\*All descriptors per ASTM D2488-06





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	PX20-REP	Latitude:	41° 39, 887	Core Sample ID:	S-120-C001-REP
Collection Date:	10/15/12	Longitude:	70° 54, 990	Water Depth (A):	8.6
Time Arrive Sta.:	1208	GPS Accuracy:	14	Length of Push Core Assembly (B):	19.3
Time of Collection:	1225	Logged By:	DS	Water Surface to Top of Handle (C):	7.2
Time Depart Sta.:				Length of Core (from bottom) (D):	3.6
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	-0.6

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.6
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-12.7
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	DS -9.7 -10.0
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-9.1
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-8.6

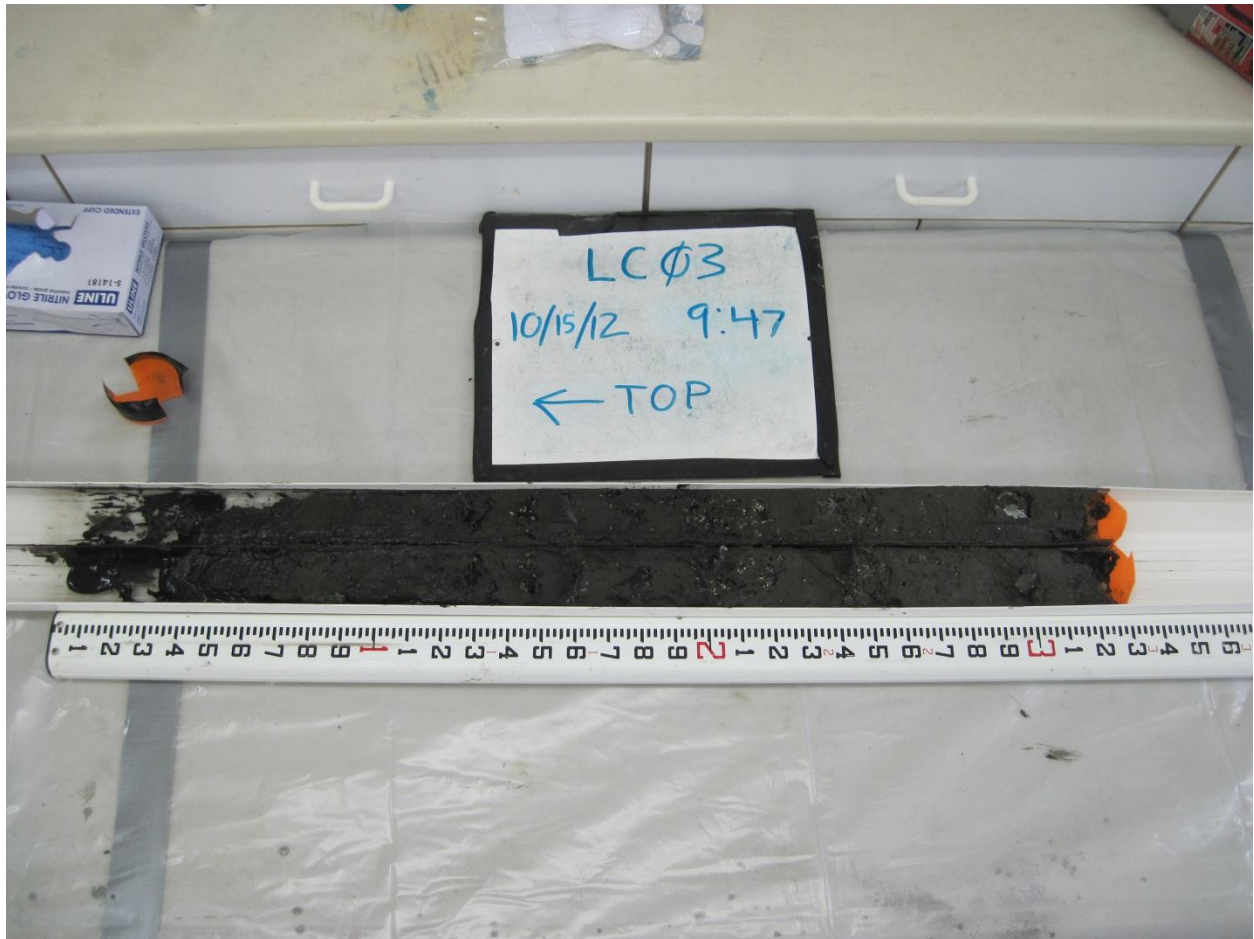
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-0.6	OL	Organics, trace sub-rounded very fine sand. Wet, vacillane, non-plastic	2.5Y 2.5/1	very soft	trace v. fine sand	H2S	S-120-C001-0.1-0.6-REP
0.6-3.6	ML	well graded silt w/ trace sub-angular fine sand. Moist, low plastic, low cohesiveness	2.5Y 4/1	firm	trace fine sand	H2S	S-120-C001-0.9-1.4-REP
	OL	0.7-0.9 - organic inclusion w/ sharp contacts and trace qty of sub-angular fine sand	10YR 2/1	soft	trace fine sand	-	

Comments:  
 2nd interval sample taken below the OL inclusion  
 Archive: S-120-C001-1.1-1.6-REP





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	LC03	Latitude:	41° 40.048	Core Sample ID:	S-120-C002
Collection Date:	10/15/12	Longitude:	70° 55.123	Water Depth (A):	<del>11.4</del> 12.4
Time Arrive Sta.:	0936	GPS Accuracy:	16 ft	Length of Push Core Assembly (B):	19.3
Time of Collection:	0947	Logged By:	DS	Water Surface to Top of Handle (C):	3.2
Time Depart Sta.:	1000			Length of Core (from bottom) (D):	3.3
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	3.1

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	3.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-13.0
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-10.5
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-9.7
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-9.3

(Note if I<sub>1</sub> ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-0.8	OL	Poorly graded organics w/ trace v. fine sand, silt clod inclusions graded lower contact, slight sheen. wet, non-cohesive	5Y 2.5/1	v. soft	v. fine sand	Petro	S-120-C002-0.3-0.8
0.8-1.3	ML	poorly graded silt w/ some sub-angular coarse-fine sand. visible sheen throughout dry. coars sand-gravel @ lower contact w/ strong Petro odor and visible sheen	5Y 3/1	soft	gravel	Petro H <sub>2</sub> S	S-120-C002-0.8-1.3
1.3-3.2	ML	Silty w/ shell lenses. cohesive, moist	5Y 3/1	firm	silt	H <sub>2</sub> S	

Comments:  
 Archive S-120-C002-1.3-1.8







Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	<u>PAA18</u>	Latitude:	<u>41° 39.895</u>	Core Sample ID:	<u>S-120-C003</u>
Collection Date:	<u>10/5/12</u>	Longitude:	<u>70° 54.978</u>	Water Depth (A):	<u><del>8.1</del> 7.8</u>
Time Arrive Sta.:	<u>1124</u>	GPS Accuracy:	<u>18 Pp</u>	Length of Push Core Assembly (B):	<u>19.3</u>
Time of Collection:	<u>1130</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>8.8</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>2.6</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>0.8</u>

B - A - C → D All measurements are ±0.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>0.8</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-9.7</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u><del>DS - 8.1</del> N/A</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-7.1</u>
(L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-7.0</u>

(Note if I ≠ L within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0 - 1.0</u>	<u>ML</u>	<u>poorly graded silt w/ beds of organics w/ trace fine sand, wet soft, low plasticity</u>	<u>2.5Y 3/1</u>	<u>soft</u>	<u>silt</u>	<u>Retco H<sub>2</sub>S</u>	<u>S-120-C003 0.5-1.0</u>
<u>1.0-2.6</u>	<u>ML</u>	<u>poorly graded silt w/ trace fine sand, firm, moist, medium plasticity. Shell inclusion @ 1.5</u>	<u>2.5Y 3/2</u>	<u>firm</u>	<u>fine sand</u>	<u>H<sub>2</sub>S</u>	<u>S-120-C003-1.0-1.5</u>

Comments:

Recore S-120-C003-1.5-2.0





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>PU16</u>	Latitude:	<u>41° 39.900</u>	Core Sample ID:	<u>S-120-C004</u>
Collection Date:	<u>10/ 12</u>	Longitude:	<u>70° 55.003</u>	Water Depth (A):	<u>9.3</u>
Time Arrive Sta.:	<u>1010</u>	GPS Accuracy:	<u>17 ft</u>	Length of Push Core Assembly (B):	<u>18.3</u>
Time of Collection:	<u>1042</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>6.2</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>2.1</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>3</u>	Tide Elevation (from tide board) (G):	<u>1.9</u>

B - A - C ↔ D All measurements are ±0.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>1.9</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-10.2</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>N/A</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-8.1</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-7.4</u>

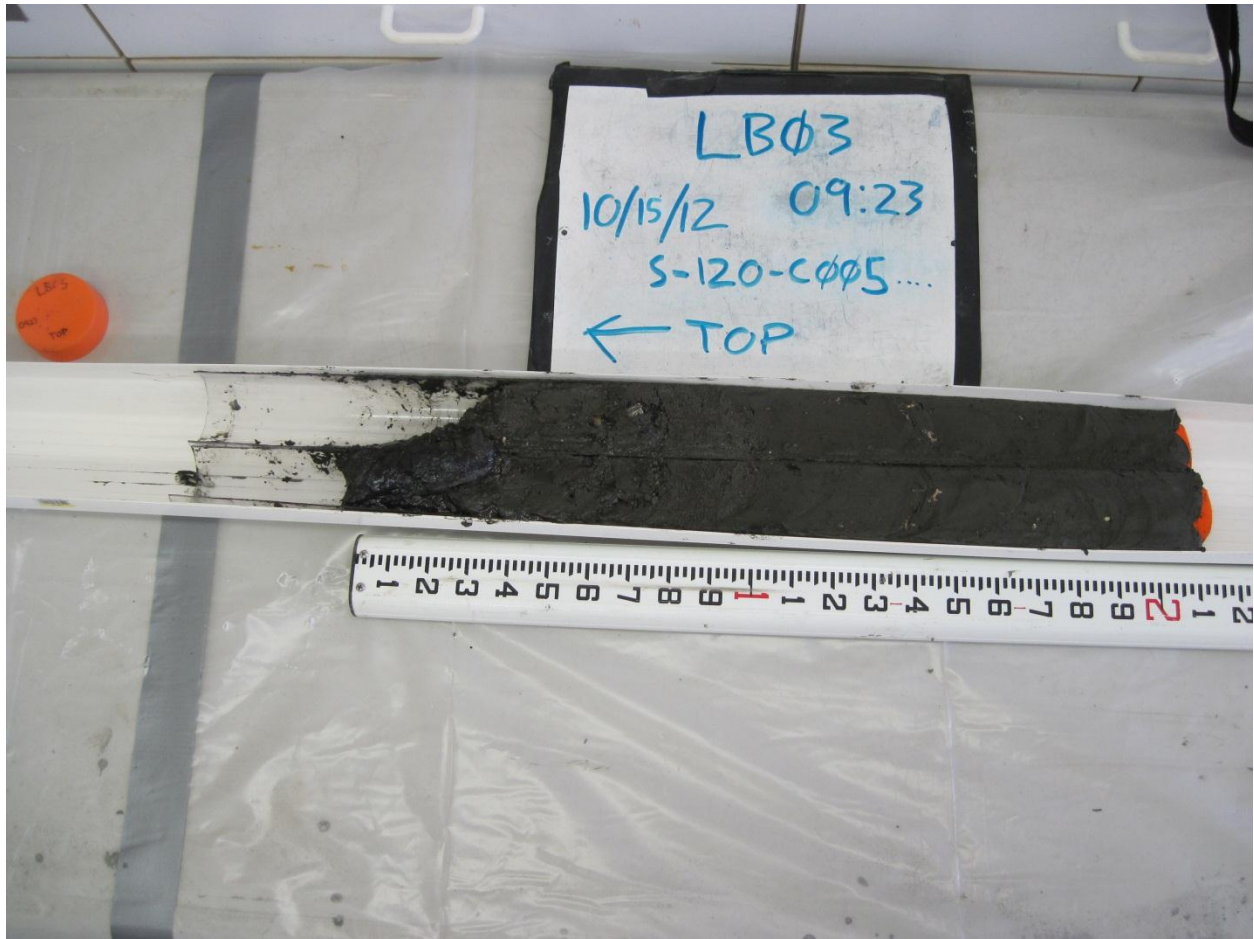
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0-2.1</u>	<u>ML</u>	<u>poorly graded silt w/ trace sub-angular fine sand. wet grady to moist; soft grady to firm cohesive</u>	<u>10YR 2.5Y 4/1</u>	<u>fin</u>	<u>fine sand</u>	<u>H<sub>2</sub>S</u>	<u>S-120-C004 0.0-0.5 S-120-C004- 0.5-1.0</u>

Comments:  
 wind is making getting on station difficult, spuds dragged once already  
 Review S-120-C004-1.0-1.5





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>LBO3</u>	Latitude:	<u>41° 46.038</u>	Core Sample ID:	<u>S-120-C005</u>
Collection Date:	<u>10/15/12</u>	Longitude:	<u>70° 55.132</u>	Water Depth (A):	<u>9.5</u>
Time Arrive Sta.:	<u>0850</u>	GPS Accuracy:	<u>12 ft</u>	Length of Push Core Assembly (B):	<u>17.9</u>
Time of Collection:	<u>0923</u> or <u>0904</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>5.2</u> <u>5.9</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>2.0</u> <u>2.1</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>2</u>	Tide Elevation (from tide board) (G):	<u>3.6</u>

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>3.6</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-8.4</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-6.7</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-6.3</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-5.9</u>

(Note if I ≠ I<sub>2</sub>, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0 - 0.4</u>	<u>OL</u>	<u>organics w/ trace amt. of sub-angular fine sand. Inclusions of lower unit w/ weak contact. Wet, non-cohesive; visible silt w/ pebbles; H<sub>2</sub>S odor</u>	<u>5Y</u> <u>2.5/1</u>	<u>very soft.</u>	<u>fine sand</u>	<u>H<sub>2</sub>S</u> <u>petro</u>	<u>S-120-C005-</u> <u>0.0-0.4</u>
<u>0.4 - 2.1</u>	<u>ML</u>	<u>Silt w/ well graded lense of coarse to v. fine sub angular sand, coarsening upwards w/ strong contact Barnacle @ 0.7', firm, moist, cohesive low plasticity.</u>	<u>5Y</u> <u>4/2</u>	<u>firm</u>	<u>Coarse Sand</u>	<u>H<sub>2</sub>S</u>	<u>S-120-C005-</u> <u>0.4-0.9</u>

Comments:  
 waves made C difficult to measure, first attempt too short, 2nd attempt good  
 ↳ water surface  
 Archive = S-120-C005-0.4-0.9





Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	<u>PY16</u>	Latitude:	<u>41° 39.900</u>	Core Sample ID:	<u>S-120-C006</u>
Collection Date:	<u>10/15/12</u>	Longitude:	<u>70° 54.983</u>	Water Depth (A):	<u>8.2</u>
Time Arrive Sta.:	<u>1100</u>	GPS Accuracy:	<u>±14</u>	Length of Push Core Assembly (B):	<u>17.3</u>
Time of Collection:	<u>1112</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>7.3</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>1.8</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>1.2</u>

B - A - C + D

All measurements are 50.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>1.2</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-8.8</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>N/A</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-7.0</u>
(L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-7.0</u>

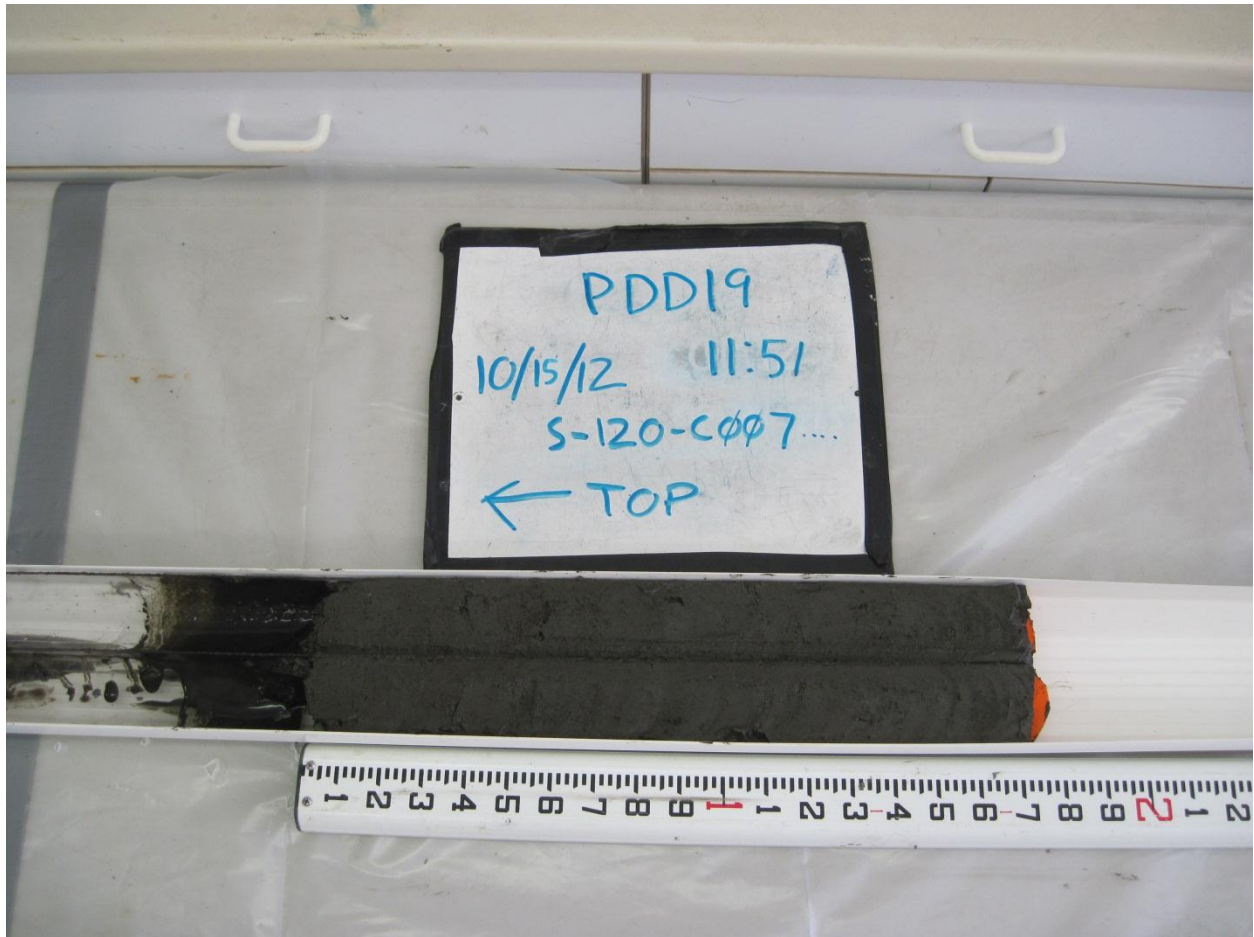
(Note if I ≠ L, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.05	OL	light veneer of organics wet, v. soft, non-cohesive, light green	5Y 2.5/1	v. soft	organics	H <sub>2</sub> S	S-120-C006- 0.1 - 0.6
0.05 - 1.8	ML	poorly graded silt w/ trace sub-angular fine sand. Moist, soft grading to firm, cohesive, poor plasticity. Red inclusion @ 0.9-1.0. Small organic inclusion @ 0.6, 0.75 and 1.65	2.5Y 4/1	soft- firm	fine sand	H <sub>2</sub> S	S-120-C006- 0.6 - 1.1

Comments:







Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Daek Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	PDD19	Latitude:	41° 39.887	Core Sample ID:	S-120-C007
Collection Date:	10/15/12	Longitude:	70° 54.956	Water Depth (A):	6.2
Time Arrive Sta.:	1141	GPS Accuracy:	±14	Length of Push Core Assembly (B):	18.3
Time of Collection:	1151	Logged By:	DS	Water Surface to Top of Handle (C):	9.4
Time Depart Sta.:				Length of Core (from bottom) (D):	1.7
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	0.0

B - A - C + D  
 All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	0.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.9
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	N/A
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.2
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.2

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.7	ML	poorly graded silt w/ Some sub-angular fine sand. Soft grading to firm; moist, cohesive, non-plastic.	2.5Y 4/1	Soft to firm	fine sand	H2S	S-120-007- 0.0-0.5  S-120-007- 05-1.0 Archive →

Comments:





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>PDO4</u>	Latitude:	<u>41° 39.949</u>	Core Sample ID:	<u>S-120-C008</u>
Collection Date:	<u>10/16/12</u>	Longitude:	<u>70° 58.101</u>	Water Depth (A):	<u>6.8</u>
Time Arrive Sta.:	<u>0917</u>	GPS Accuracy:	<u>12</u>	Length of Push Core Assembly (B):	<u>18.8</u>
Time of Collection:	<u>0930</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>8.1</u>
Time Depart Sta.:				<sup>3.9</sup> Length of Core (from bottom) (D):	<u>3.0</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>4.0</u>

B - A - C + D All measurements are 25.3 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>4.0</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-6.7</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-4.9</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-3.7</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-2.8</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:


Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.2	OL	well graded, sandy organics with some sub-angular gravel. Unconsolidated, moist, firm. Shell fragments and visible sheen	2.5Y 2.5/1	firm	gravel	Retro	S-120-008-0.7-1.2
1.2 - 3.0	ML	poorly graded silt. Shell fragments @ 2.2 and 2.9	2.5Y 4/1	firm	silt	H <sub>2</sub> S	S-120-008-1.2-1.7

Comments:


Archive S-120-008-1.7-2.2



		Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE	
		Project #: W912WJ-09-D-0001, Task Order No. 0010			
		Location: New Bedford, MA			
		Chief Scientist: Dack Stuart		Vessel: R/V George Hampson	
Station ID:	LF16	Latitude:	41° 39.982	Core Sample ID:	S-120-C009
Collection Date:	10/16/12	Longitude:	70° 55.110	Water Depth (A):	10.0
Time Arrive Sta.:	1352	GPS Accuracy:	13	Length of Push Core Assembly (B):	21.3
Time of Collection:	1401	Logged By:	DS	Water Surface to Top of Handle (C):	6.4
Time Depart Sta.:				Length of Core (from bottom) (D):	3.9
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	-1.1
Calculations for Determination of Z* Elevation					
(G) Elevation of Water Surface (NGVD) (as read from tide board):				-1.1	
(H) Elevation of the bottom of the core (NGVD): G - (B - C)				-16.0	
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)				-13.5	
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D				-12.1	
(J) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A				-11.1	
(Note if I ≠ J, within ±1.0 feet, discard and resample)					
External Description, Date:					

Internal Core Description, Date:							
Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.4	OL	poorly graded organics and silt. very soft, wet, non-cohesive. visible stems and retro odor. shell @ 1.0. weak lower contact w/ inclusions of lower unit in bottom 0.4'	2.5y 2.5/1	v. soft- soft	silt	retro	S-120-C009- 0.9-1.4 ... C009-1.4-1.9
1.4 - 3.1	ML	poorly graded silt w/ little v. fine sand. inclusions of greasy silt clods. retro/organic staining throughout. soft/firm mud, cohesive, poor plasticity	2.5y 4/1	firm	very fine sand	retro	...
3.1 - 3.9	ML	well graded silt w/ few fine sands and sin-angular coarse sand. firm consistency, <del>poor</del> poor plasticity	2.5y 4/1	firm	coarse sand	+1/2S	...
<b>Comments:</b> Archive: S-120-C009-3.1-3.6 MSMSD: S-120-C009-3.1-3.6 MSMSD							



		Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE	
		Project #: W912WJ-09-D-0001, Task Order No. 0010			
		Location: New Bedford, MA			
		Chief Scientist: Dack Stuart		Vessel: R/V George Hampson	
Station ID:	<u>L620</u>	Latitude:	<u>41° 39.965</u>	Core Sample ID:	<u>S-120-C010</u> <del>010</del> <u>010</u>
Collection Date:	<u>10/16/12</u>	Longitude:	<u>70° 55.105</u>	Water Depth (A):	<u>8.2</u> <del>9.9</del> <u>9.9</u>
Time Arrive Sta.:	<u>0938</u>	GPS Accuracy:	<u>15</u>	Length of Push Core Assembly (B):	<u>18.8</u>
Time of Collection:	<u>1003</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>6.1</u>
Time Depart Sta.:				<sup>2.8</sup> Length of Core (from bottom) (D):	<u>2.3</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>3</u>	Tide Elevation (from tide board) (G):	<u>4.0</u>
		B - A - C ↔ D		All measurements are ±0.1 feet	
<b>Calculations for Determination of Z* Elevation</b>					
(G) Elevation of Water Surface (NGVD) (as read from tide board):				<u>4.0</u>	
(H) Elevation of the bottom of the core (NGVD): G - (B - C)				<u>-8.7</u>	
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)				<u>-6.9</u>	
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D				<u>-6.4</u>	
(J) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A				<u>-5.9</u>	
(Note if I ≠ J, within ±1.0 feet, discard and resample)					
<b>External Description, Date:</b>					

**Internal Core Description, Date:**

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-0.5	OL	slty well graded organics and medium sand, few sub-angular gravel (10mm) w/ trace bits of shell wash and garbage. weak lower contact moist, non-cohesive, fining downwards into v. fine sand and silt. visible stream	2.5/1 2.5/1	v. soft	10mm cobble	Retro	S-120-C010-0.0-0.5
0.5-2.3	ML	partly graded silt w/ trace v. fine sand, large lithoclast @ 0.8 (25mm cobble) w/ gravel large. firm moist, cohesive, poor plasticity	2.5/1 4/1	firm	75mm cobble	H <sub>2</sub> S	S-120-C010-0.5-1.0

**Comments:**

Analyze S-120-C010-1.0-1.5







Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	PB04	Latitude:	41° 39.950	Core Sample ID:	S-120-C00011
Collection Date:	10/16/12	Longitude:	70° 55.114	Water Depth (A):	7.7
Time Arrive Sta.:	0856	GPS Accuracy:	14	Length of Push Core Assembly (B):	18.3
Time of Collection:	0905	Logged By:	DS	Water Surface to Top of Handle (C):	7.9
Time Depart Sta.:				Length of Core (from bottom) (D):	1.9 1.8
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	4.7

B - A - C ↔ D All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	4.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.3
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-5.4
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.5
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.6

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-0.9	OL	well graded organics with beds of sub-angular gravel and sub-rounded medium sands. Well grady to moist, soft/loose, grady to med. density, non-cohesive. Irregular sharp lower contact w/ large litho clast (50mm) visible shear	2.5 y 2.5/1	firm	gravel	Petro	S-120-C011-04-0.9
0.9-1.8	ML	poorly graded silt & moist, firm, cohesive, poor plasticity. large Bio clast @ 1.7 (100mm oyster).	2.5 y 4/1	firm	silt	H <sub>2</sub> S	S-120-C011-09-1.9

Comments:

Archive: S-120-C011-1.9-1.9





Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	<u>LG13</u>	Latitude:	<u>41° 39.995</u>	Core Sample ID:	<u>S-120-C012</u>
Collection Date:	<u>10/16/12</u>	Longitude:	<u>70° 55.106</u>	Water Depth (A):	<u>8.3</u>
Time Arrive Sta.:	<u>1414</u>	GPS Accuracy:	<u>12</u>	Length of Push Core Assembly (B):	<u>18.3</u>
Time of Collection:	<u>1423</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>6.7</u>
Time Depart Sta.:				<sup>9.3</sup> Length of Core (from bottom) (D):	<u>2.0</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>-1.2</u>

B - A - C ↔ D

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-1.2</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-12.8</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-11.1</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-10.8</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-9.5</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.3	OL	poorly graded organics and silt. wet, v. soft, non-cohesive, no plasticity, visible sheen. Sharp lower contact	2.5 Y 2.5/1	v. soft	silt	petro	S-120-C012-0.0-0.3
0.3 - 2.0	ML	poorly graded silt, trace sub-angular medium sand shell wash coarse @ 1.0: 1.6. firm, moist, cohesive, poor plasticity.	2.5 Y 4/1	firm	medium sand	H <sub>2</sub> S	S-120-C012-0.5-0.8

Comments:

archive - S-120-C012-0.8-1.3

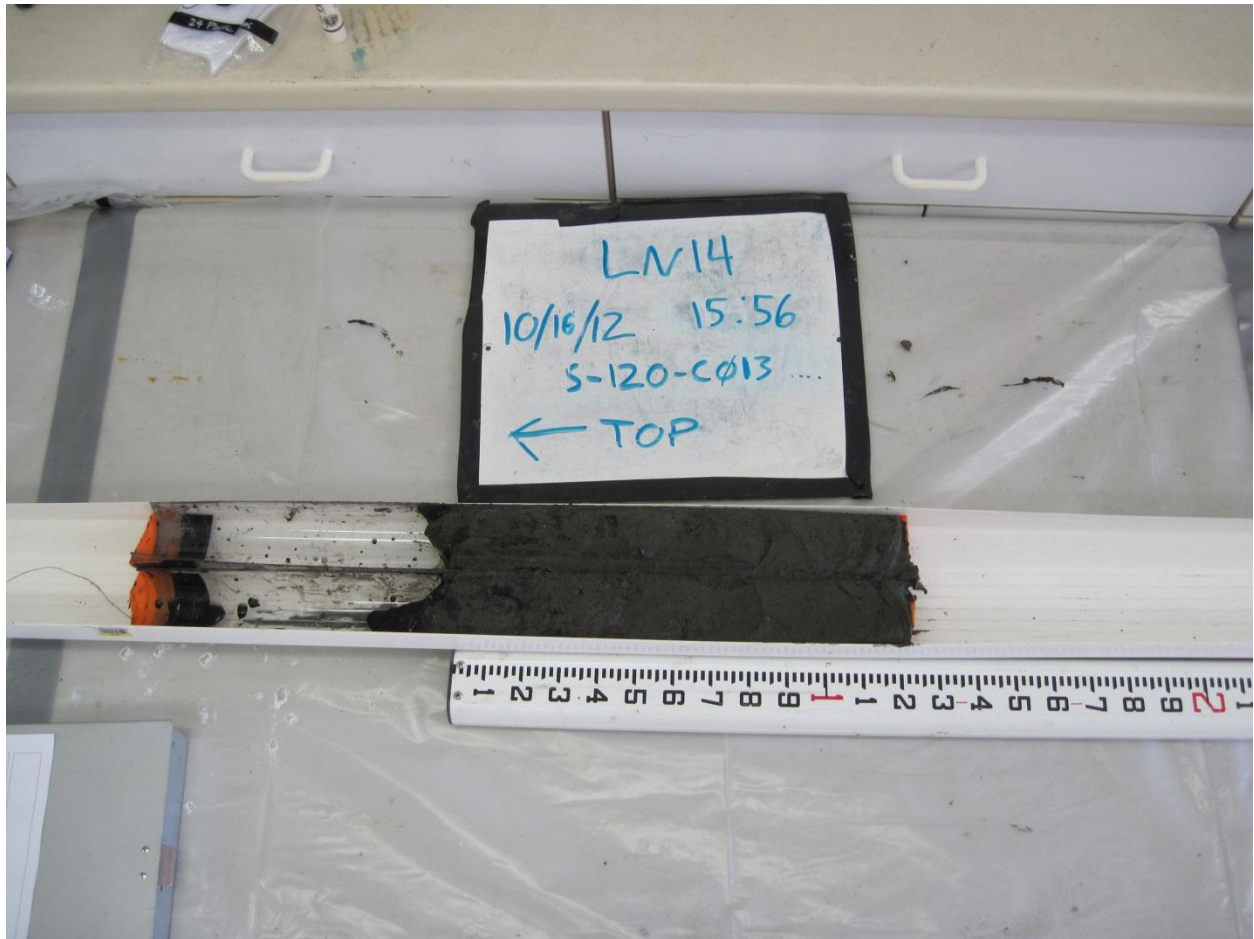


		Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE	
		Project #: W912WJ-09-D-0001, Task Order No. 0010			
		Location: New Bedford, MA			
		Chief Scientist: Dack Stuart		Vessel: R/V George Hampson	
Station ID:	LG13-REP	Latitude:	41° 39.995	Core Sample ID:	S-120- <del>000</del> C012-REP
Collection Date:	10/16/12	Longitude:	70° 55.106	Water Depth (A):	8.3
Time Arrive Sta.:	1414	GPS Accuracy:	12	Length of Push Core Assembly (B):	18.3
Time of Collection:	1434	Logged By:	DS	Water Surface to Top of Handle (C):	6.6
Time Depart Sta.:				3.4 Length of Core (from bottom) (D):	2.1
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	<del>-1.2</del> -1.3
Calculations for Determination of Z* Elevation <small>B - A - C ↔ D      All measurements are ±0.1 feet</small>					
(G) Elevation of Water Surface (NGVD) (as read from tide board):		-1.3			
(H) Elevation of the bottom of the core (NGVD): G - (B - C)		-13.0			
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)		-11.1			
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D		<del>-10.8</del> -10.9			
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A		-9.6			
(Note if I ≠ I <sub>2</sub> , within ±1.0 feet, discard and resample)					
External Description, Date:					

Internal Core Description, Date:							
Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-0.2	OL	agencies. v. soft, non-cohesive w/lt. visible silt	2.5Y 2.5/1	v. soft	organics	detro	S-120-C012- 0.0-0.2-REP
0.2-2.1	ML	silt. moist, <sup>soft</sup> cohesive, poor plasticity. lense of shell nash @ 1.5. little medium sand towards bottom of core	2.5Y 4/1	<del>firm</del> soft	silt	H <sub>2</sub> S	S-120-C012- 0.2-0.7-REP

Comments:  
 3.4 ppm voc reading in core before opening

Archive - S-120-C012-0.7-1.2





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>LV14</u>	Latitude:	<u>41° 39.989</u>	Core Sample ID:	<u>S-120-<del>00</del> C013</u>
Collection Date:	<u>10/16/12</u>	Longitude:	<u>70° 55.067</u>	Water Depth (A):	<u>9.4</u>
Time Arrive Sta.:	<u>1550</u>	GPS Accuracy:	<u>14</u>	Length of Push Core Assembly (B):	<u>17.2</u>
Time of Collection:	<u>1556</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>6.7</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>1.2</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u><del>-1.4</del> -1.5</u>

B - A - C ↔ D      All measurements are ±0.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-1.5</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-12.0</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>N/A</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-10.8</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-10.9</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0 - 1.2</u>	<u>ML</u>	<u>Silt w/ some medium sands. <del>to</del> Moist, firm, cohesive. Thin veneer of OL @ top of sample - light visible stream</u>	<u>2.5Y 4/1</u>	<u>firm</u>	<u>medium Sand</u>	<u>H<sub>2</sub>S</u>	<u>S-120-C013 0.0 - 0.5  S-120-C013 0.5 - 1.0</u>

Comments:

Archive - S-120-C013 - 1.0 - 1.5







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>PH02</u>	Latitude:	<u>41° 39.956</u>	Core Sample ID:	<u>S-120-<del>090</del> C014</u>
Collection Date:	<u>10/16/12</u>	Longitude:	<u>70° 55.076</u>	Water Depth (A):	<u>8.4</u>
Time Arrive Sta.:	<u>1637</u>	GPS Accuracy:	<u>14</u>	Length of Push Core Assembly (B):	<u>20.2</u>
Time of Collection:	<u>1647</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>8.0</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>2.9</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>-1.3</u>

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-1.3</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-13.5</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-12.0</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-10.6</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-9.7</u>

(Note if I ≠ I<sub>2</sub>, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0-0.8</u>	<u>OL</u>	<u>organoics w/ some fine sand; plant detritus and shell fragments. wet, unconsolidated. strong petro odor, visible slicken gradational lower contact</u>	<u>2.5Y 2.5/1</u>	<u>v. soft</u>	<u>silt</u>	<u>Petro H<sub>2</sub>S</u>	<u>S-120-C014- <del>0.3-0.8</del> DS 0.9-1.4</u>
<u>0.8-1.4</u>	<u>OL</u>	<u>organoics and silt w/ trace v. fine sand, firm, moist cohesive. strong petro smell → visible slicken strong lower contact</u>	<u>2.5Y 4/1</u>	<u>firm</u>	<u>v. fine sand</u>	<u>H<sub>2</sub>S</u>	<u>S-120-C014 <del>0.8-1.3</del> DS 1.4-1.9</u>
<u>1.4-2.9</u>	<u>ML</u>	<u>silt w/ shell hash case @ upper contact. moist, firm, consolidated, poor plasticity</u>	<u>2.5Y 4/1</u>	<u>firm</u>	<u>silt</u>	<u>H<sub>2</sub>S</u>	

Comments:

Voc = 12.7

Archive S-120-C014-1.3-1.4 DS 1.4-2.4





Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Daek Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	<u>LG17</u>	Latitude:	<u>41° 39.977</u>	Core Sample ID:	<u>S-120-<del>000</del> C015</u>
Collection Date:	<u>10/16/12</u>	Longitude:	<u>70° 55.103</u>	Water Depth (A):	<u>7.8</u>
Time Arrive Sta.:	<u>1335</u>	GPS Accuracy:	<u>14</u>	Length of Push Core Assembly (B):	<u>18.3</u>
Time of Collection:	<u>1341</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u><del>7.1</del> 8.4</u>
Time Depart Sta.:				<sup>21</sup> Length of Core (from bottom) (D):	<u>1.9</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>-1.0</u>

B - A - C + D

All measurements are 20.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-1.0</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-10.9</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>N/A</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-9.0</u>
(L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-8.8</u>

(Note if I ≠ L, within ±1.0 feet, discard and resample)

External Description, Date:

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0 - 1.9</u>	<u>ML</u>	<u>thin veneer of oc at top of core. Silt w/ trace fine sand. Bioclast @ 0.3. Black stringy trough much of the core. Shell hash @ 1.7. Moist, firm cohesive, poor plasticity. Visible stain at top of sample core</u>	<u>2.5y 4/1</u>	<u>firm</u>	<u>fine sand</u>	<u>H2S Pecto</u>	<u>S-120-C015- 0.0-0.5 <del>0.5-1.0</del> S-120-C015 0.5-1.0</u>

Comments:

Odor was strong during core collection

Anche re S-120-C015-1.0-1.5









Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	<u>LM18</u>	Latitude:	<u>41° 39.973</u>	Core Sample ID:	<u>S-120-<del>000</del> CØ17</u>
Collection Date:	<u>10/16/12</u>	Longitude:	<u>70° 55.074</u>	Water Depth (A):	<u>9.0</u>
Time Arrive Sta.:	<u>1607</u>	GPS Accuracy:	<u>17</u>	Length of Push Core Assembly (B):	<u>17.2</u>
Time of Collection:	<u>1625</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>0.5</u> <u>5.9 6.2</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>1.8</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>3</u>	Tide Elevation (from tide board) (G):	<u>-1.5</u>

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-1.5</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-12.5</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-11.6</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-10.7</u>
(J) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-10.5</u>

(Note if I ≠ J, within ±1.0 feet, discard and resample)

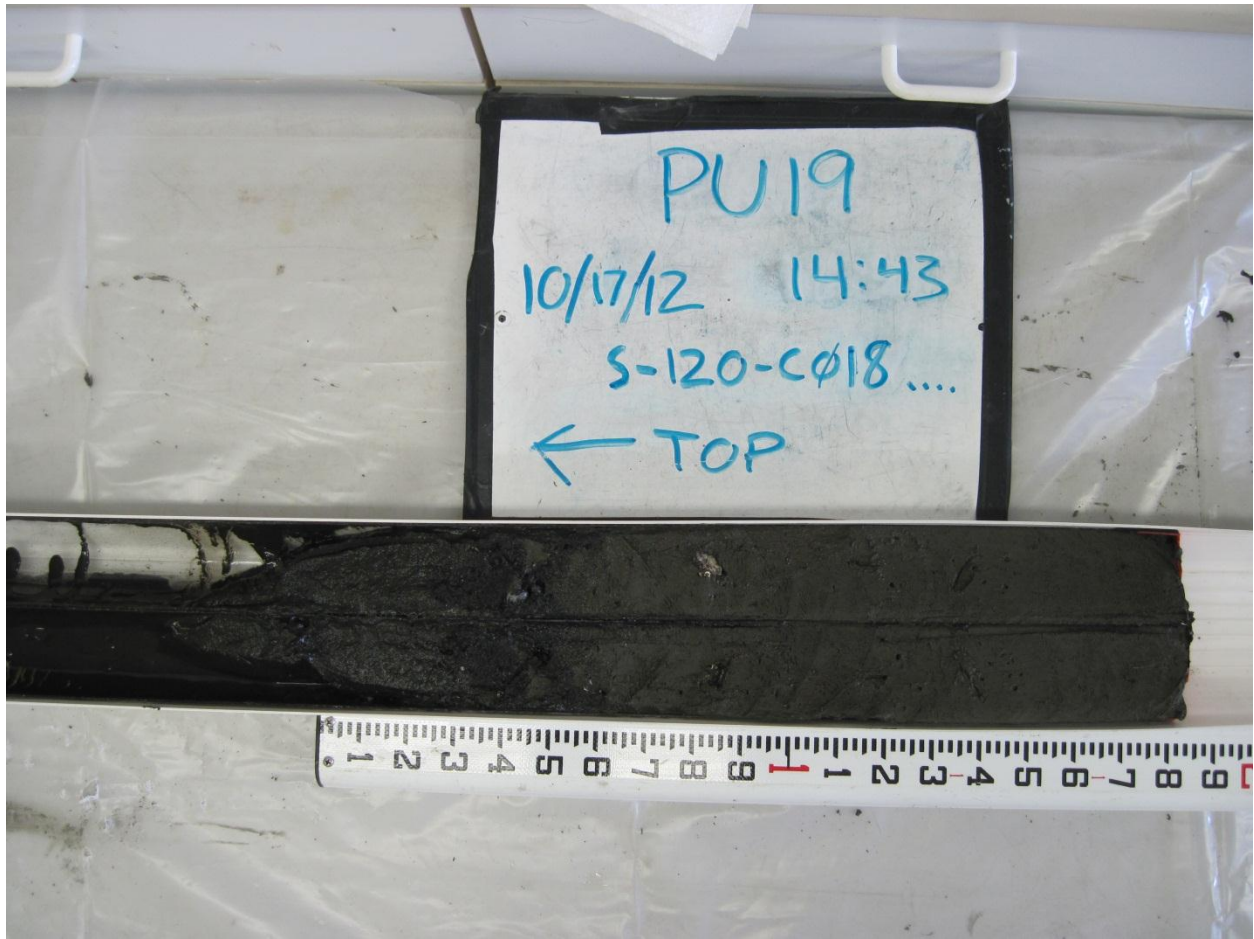
External Description, Date:

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.9	OL	Silty, organics, wet, unconsolidated, fluid mud at top, no visible sheen, sharp to graded contact with lower unit	2.5Y 2.5/1	very soft to soft	very fine sand	Petro	S-120-CØ17-0.4-0.9
0.9-1.8	ML	Silt, moist, moderately firm consolidated, small shells and shell fragments, poor plasticity	2.5Y 4/1	mod. firm	Silt	H <sub>2</sub> S	S-120-CØ17-0.9-1.4

Comments:

Archive: S-120-CØ17-1.4-1.8





	Project Name: New Bedford Harbor Environmental Monitoring			Client: USACE NAE	
	Project #: W912WJ-09-D-0001, Task Order No. 0010				
Location: New Bedford, MA			Vessel: R/V George Hampson		
Chief Scientist: Dack Stuart					
Station ID:	PU19 <sup>NS</sup>	Latitude:	41° 39.889	Core Sample ID:	S-120- <del>000</del> C018
Collection Date:	10/17/12	Longitude:	70° 55.008	Water Depth (A):	7.6 / 7.6 <sup>DS</sup>
Time Arrive Sta.:	1435	GPS Accuracy:	14	Length of Push Core Assembly (B):	18.2 / 18.2 <sup>DS</sup>
Time of Collection:	1443 / 1454 <sup>DS</sup>	Logged By:	DS	Water Surface to Top of Handle (C):	8.2 / 7.9 <sup>DS</sup>
Time Depart Sta.:				2.4 2.7 Length of Core (from bottom) (D):	1.8 / 2.3 <sup>DS</sup>
Collection Equip.:	Push Core	Attempts:	1 / 1 <sup>NS</sup>	Tide Elevation (from tide board) (G):	-0.9
B - A - C ↔ D <span style="float: right;">All measurements are ±0.1 foot</span>					
<b>Calculations for Determination of Z* Elevation</b>					
(G) Elevation of Water Surface (NGVD) (as read from tide board):					-0.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C)					-10.9
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)					-9.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D					-9.1
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A					-8.5
(Note if I ≠ I <sub>2</sub> within ±1.0 feet, discard and resample)					
<b>External Description, Date:</b>					

Internal Core Description, Date:							
Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.5	OL	Silty, organics, wet to very wet, unconsolidated, no sheen, slight mixing of OL and ML to 0.6 ft, graded contact	2.5Y 2.5/1	Very soft	Silt	light Petro	S-120-C018-0.0-0.5
0.5-1.8	ML	Silty, few shells and shell fragments, moist, consolidated, poor plasticity	2.5Y 4/1	soft to med-firm	silt	light H <sub>2</sub> S	S-120-C018-0.5-1.0

**Comments:**  
Archive: S-120-C018-1.0-1.5





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	PUI9-REP	Latitude:	41° 39.889	Core Sample ID:	S-120- <del>00</del> C018-REP
Collection Date:	10/17/12	Longitude:	70° 55.008	Water Depth (A):	7.6
Time Arrive Sta.:	1435	GPS Accuracy:	14	Length of Push Core Assembly (B):	18.2
Time of Collection:	1454	Logged By:	DS	Water Surface to Top of Handle (C):	7.9
Time Depart Sta.:				Length of Core (from bottom) (D):	2.3
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	-0.9

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	-0.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-11.2
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-9.2
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-8.9
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-8.5

(Note if I ≠ I<sub>2</sub>, within ±1.0 feet, discard and resample)


External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.3	OL	Organics, silt, trace v. fine sand. Wet, non-cohesive, visible shear.	2.5Y 2.5/1	v. soft	v. fine	light PETRO	S-120-C018- 0.0-0.3-REP
0.3 - 2.3	ML	Silt w/ trace medium sands. firm, moist, cohesive, lithoclast 0.07	2.5Y 4/1	firm	medium sand	H <sub>2</sub> S	S-120-C018- 0.3-0.8-REP

Comments:  
  
Archive - S-120-C018-0.8-1.3 REP



		Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE	
		Project #: W912WJ-09-D-0001, Task Order No. 0010			
		Location: New Bedford, MA			
		Chief Scientist: Dack Stuart		Vessel: R/V George Hampson	
Station ID:	PL04	Latitude:	41° 39.947	Core Sample ID:	S-120- <del>000</del> C019
Collection Date:	10/17/12	Longitude:	70° 55.059	Water Depth (A):	8.8
Time Arrive Sta.:	1522	GPS Accuracy:	14	Length of Push Core Assembly (B):	18.7
Time of Collection:	1537	Logged By:	DS	Water Surface to Top of Handle (C):	<del>6.0</del> 6.4
Time Depart Sta.:				Length of Core (from bottom) (D):	3.2
Collection Equip.:	Push Core	Attempts:	2	Tide Elevation (from tide board) (G):	-1.2
Calculations for Determination of Z* Elevation					
(G) Elevation of Water Surface (NGVD) (as read from tide board):				-1.2	
(H) Elevation of the bottom of the core (NGVD): G - (B - C)				-13.5	
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)				-11.3	
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D				-10.3	
(J) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A				-10.0	
(Note if I ≠ J, within ±1.0 feet, discard and resample)					
External Description, Date:					

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.0	OL	organics, silt, trace medium sand, wet, v. soft, non-cohesive, visible fauna, strong PETRO odor	2.5Y 2.5/1	v. soft	medium sand	PETRO	S-120-C019-0.5-1.0
1.0 - 3.2	ML	silt, shell hash 1.9-2.8; moist, firm, cohesive, poor plasticity.	2.5Y 4/1	firm	silt	H <sub>2</sub> O	S-120-C019-1.0-1.5

Comments:

Anchre - S-120-C019-1.0-1.5



	Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE
	Project #: W912WJ-09-D-0001, Task Order No. 0010		
Location: New Bedford, MA		Vessel: R/V George Hampson	
Chief Scientist: Dack Stuart			
Station ID:	PH04	Latitude:	41° 39.950
Collection Date:	10/17/12	Longitude:	70° 55.078
Time Arrive Sta.:	1504	GPS Accuracy:	15
Time of Collection:	1512	Logged By:	DS
Time Depart Sta.:			
Collection Equip.:	Push Core	Attempts:	1
		Core Sample ID:	S-120- <del>000</del> -C020
		Water Depth (A):	7.2
		Length of Push Core Assembly (B):	19.7
		Water Surface to Top of Handle (C):	8.6
		3.9	
		Length of Core (from bottom) (D):	3.0
		Tide Elevation (from tide board) (G):	-1.0
Calculations for Determination of Z* Elevation			
(G) Elevation of Water Surface (NGVD) (as read from tide board):			-1.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C)			-12.1
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)			-10.2
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D			-9.1
(L) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A			-8.2
(Note if I ≠ L, within ±1.0 feet, discard and resample)			
External Description, Date:			

Internal Core Description, Date:

Core Length Interval (0 = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.1	OL	organics trace fine sand. well. v. soft, non cohesive. visible blue. petro odor. gradational lower contact	2.5Y 2.5/1	v. soft	fine sand	PETRO	S-120-C020- 0.6-1.1  S-120-C020- 1.1-1.6
1.1 - 3.0	ML	silt. moist, firm, cohesive. organic staining top 1.1-1.6. Beddy of shell wash 1.6-2.0	2.5Y 4/1	firm	silt	H <sub>2</sub> S PETRO	

Comments:

note s-120-c020-1.6-2.0







Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	PLØ2	Latitude:	41° 39.957	Core Sample ID:	S-120- <del>000</del> -CØ21
Collection Date:	10/7/12	Longitude:	70° 55.060	Water Depth (A):	8.0
Time Arrive Sta.:	1545	GPS Accuracy:	13	Length of Push Core Assembly (B):	18.2
Time of Collection:	1551	Logged By:	DS	Water Surface to Top of Handle (C):	7.0
Time Depart Sta.:				Length of Core (from bottom) (D):	2.8
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	-1.3

B - A - C + D

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	1.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-9.9
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-8.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.1
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.7

(Note if I ≠ I<sub>2</sub>, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-1.0	OL	<del>soft</del> organics, silt, wet, v. soft non cohesive, visible shear. gradational lower contact	2.5Y 2.5/1	<del>soft</del> soft	silt	PETRO	S-120-CØ21- Ø.5-1.Ø
1.0-2.8	ML	silt, trace medium sand. firm, cohesive, moist, organic staining at top of unit (1.0-1.5) shell hash @ 2.5	2.5Y 4/1	firm	medium smd	H <sub>2</sub> S	S-120-CØ21- 1.Ø-1.5

Comments:

Archive - S-120-CØ21-1.5-2.Ø





Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	<u>LQ19</u>	Latitude:	<u>41° 39.968</u>	Core Sample ID:	<u>S-120-<del>000</del> CØ22</u>
Collection Date:	<u>10/17/12</u>	Longitude:	<u>70° 55.052</u>	Water Depth (A):	<u>8.3</u>
Time Arrive Sta.:	<u>1557</u>	GPS Accuracy:	<u>12</u>	Length of Push Core Assembly (B):	<u>17.2</u>
Time of Collection:	<u>1603</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>6.7</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>1.7</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>-1.3</u>

B - A - C ↔ D

All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-1.3</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-11.8</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>N/A</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-10.1</u>
(L <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-9.6</u>

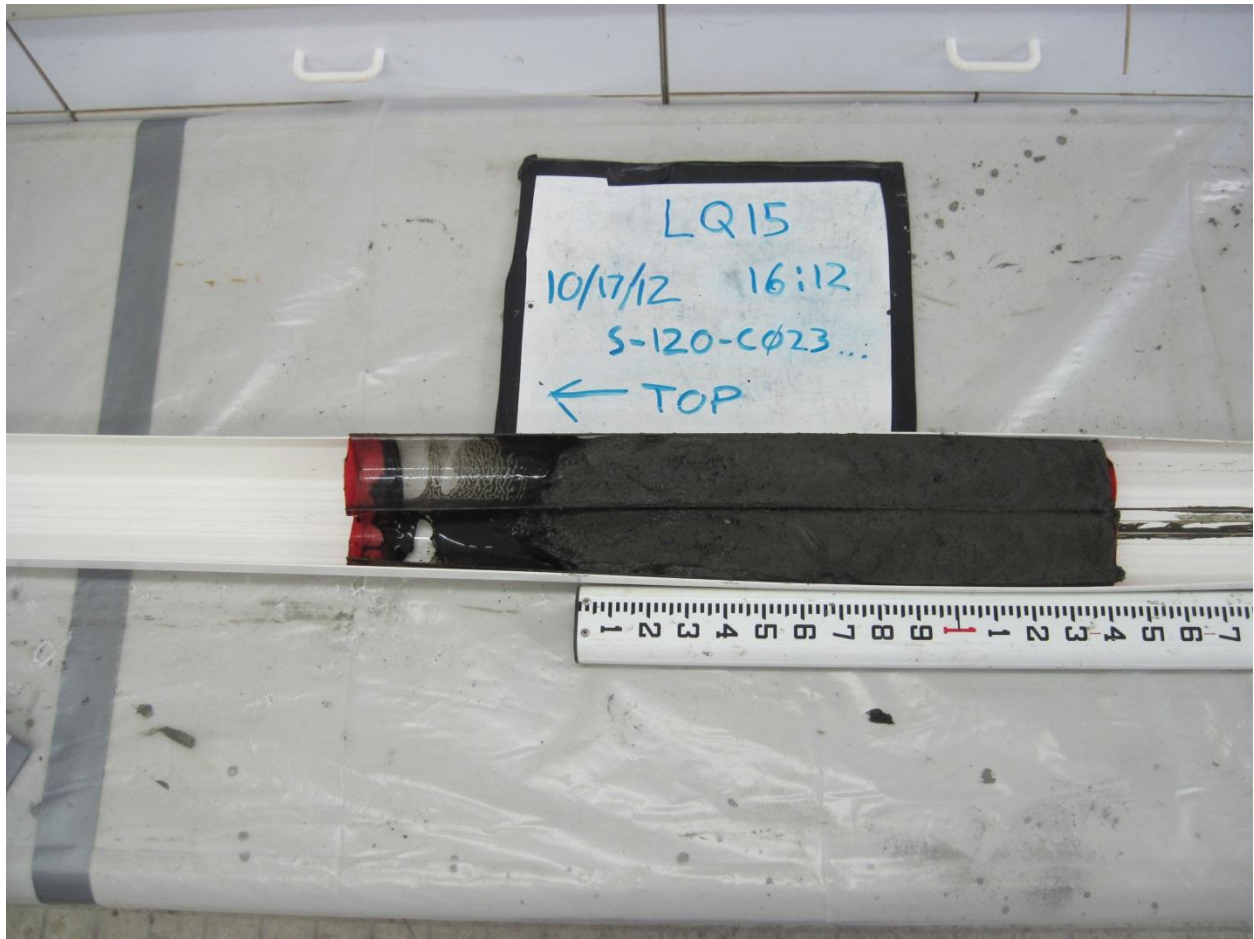
(Note if I ≠ L<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0 - 1.7</u>	<u>ML</u>	<u>Thin veneer of OC at the top of unit. Silt. trace medium sand. Moist, firm cohesive, poor plasticity.</u>	<u>2.5 Y 4/1</u>	<u>firm</u>	<u>Silt</u>	<u>NONE</u>	<u>S-120-CØ22-ØØ-Ø5</u> <u>S-120-CØ22-Ø5-1.Ø</u> <u>Archive</u>

Comments:





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Daek Stuart Vessel: R/V George Hampson

Station ID:	<u>LQ15</u>	Latitude:	<u>41° 39.986</u>	Core Sample ID:	<u>S-120-<del>500</del> C023</u>
Collection Date:	<u>10/17/12</u>	Longitude:	<u>70° 55.050</u>	Water Depth (A):	<u>8.0</u>
Time Arrive Sta.:	<u>1607</u>	GPS Accuracy:	<u>12</u>	Length of Push Core Assembly (B):	<u>17.2</u>
Time of Collection:	<u>1612</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>7.4</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>1.4</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>-1.2</u>

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-1.2</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-11.0</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>N/A</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-9.6</u>
(J) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-9.2</u>

(Note if I ≠ J, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0 - 1.4</u>	<u>ML</u>	<u>poorly graded silt, trace v. fine sand, moist, firm, cohesive, poor plasticity. thin veneer of organic at surface</u>	<u>2.5Y 7/1</u>	<u>firm</u>	<u>v. fine</u>	<u>H<sub>2</sub>S</u>	<u>S-120-C023 -0.0-0.5 S-120-C023 -0.0-0.5 MSUSD</u>

Comments:  
Archive: S-120-C023-0.5-1.0

**NO PHOTO OF S-12O-C024 (core LM09)**



Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	LM09	Latitude:	41° 40.013	Core Sample ID:	S-120-000 cφ24
Collection Date:	10/17/12	Longitude:	70° 55.074	Water Depth (A):	8.6
Time Arrive Sta.:	1619	GPS Accuracy:	10	Length of Push Core Assembly (B):	19.2
Time of Collection:	1628	Logged By:	DS	Water Surface to Top of Handle (C):	8.1
Time Depart Sta.:				Length of Core (from bottom) (D):	1.8
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	-1.1

B - A - C ↔ D All measurements are 20.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	-1.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-12.2
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	-10.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-10.4
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-9.7

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.2	OL	organics, wet, v. soft, non cohesive, visible silt, Petro odor. Sharp lower contact	2.5 y 2.5/1	v. soft	silt	PETRO	S-120-cφ24 φ.4 - φ.2
0.2 - 1.8	ML	poorly graded silt w/ trace sub-angular medium sand. Moist firm, cohesive.	2.5 y 4/1	firm	med. sand	H <sub>2</sub> S	S-120-cφ24 φ.2 - φ.7

Comments:

Anchore - S-120 - cφ24 - φ.7 - 1.2







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	LP09	Latitude:	41° 40.011	Core Sample ID:	S-120- <del>000</del> C025
Collection Date:	10/17/12	Longitude:	70° 55.056	Water Depth (A):	7.7
Time Arrive Sta.:	1635	GPS Accuracy:	13	Length of Push Core Assembly (B):	17.7
Time of Collection:	1643	Logged By:	DS	Water Surface to Top of Handle (C):	8.0
Time Depart Sta.:				Length of Core (from bottom) (D):	1.9
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	-1.1

B - A - C ↔ D All measurements are ±0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	-1.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-10.8
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	N/A
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-8.9
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-8.8

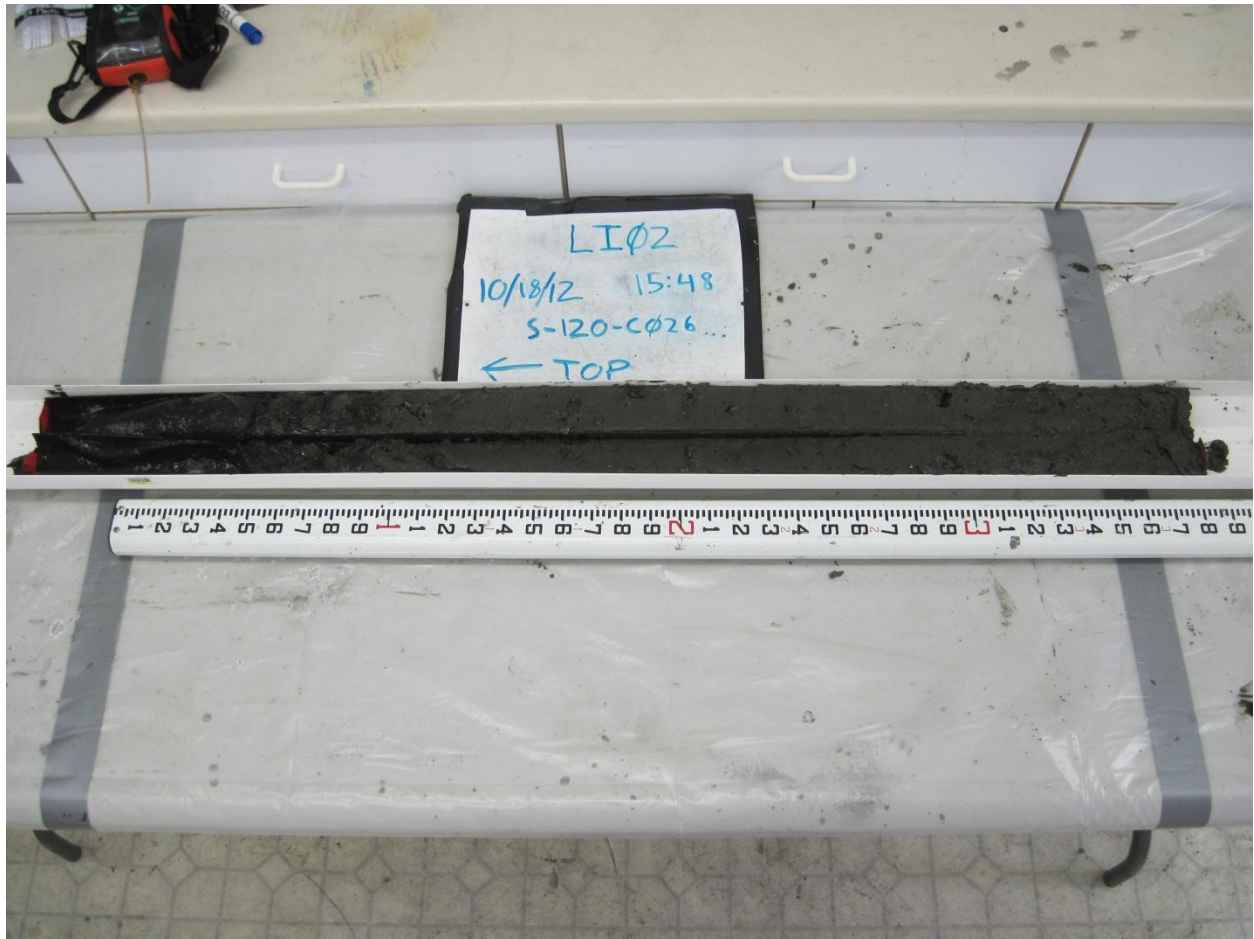
(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.9	ML	poorly graded silt. firm, moist, cohesive, poor plasticity. bioclast @ approx 0.4	2.5Y 4/1	firm	silt	H <sub>2</sub> S	S-120-C025-0.6-0.5

Comments:  
 Archive - S-120-C025-0.5-1.0





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>L I Ø 2</u>	Latitude:	<u>41° 40.041</u>	Core Sample ID:	<u>S-120-C026</u>
Collection Date:	<u>10/18/12</u>	Longitude:	<u>70° 55.095</u>	Water Depth (A):	<u>9.2</u>
Time Arrive Sta.:	<u>1543</u>	GPS Accuracy:	<u>12</u>	Length of Push Core Assembly (B):	<u>19.2</u>
Time of Collection:	<u>1548</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>5.5</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>3.8</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>-0.9</u>

B - A - C ↔ D All measurements are 50.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-0.9</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-14.6</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-11.3</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-10.8</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-10.1</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

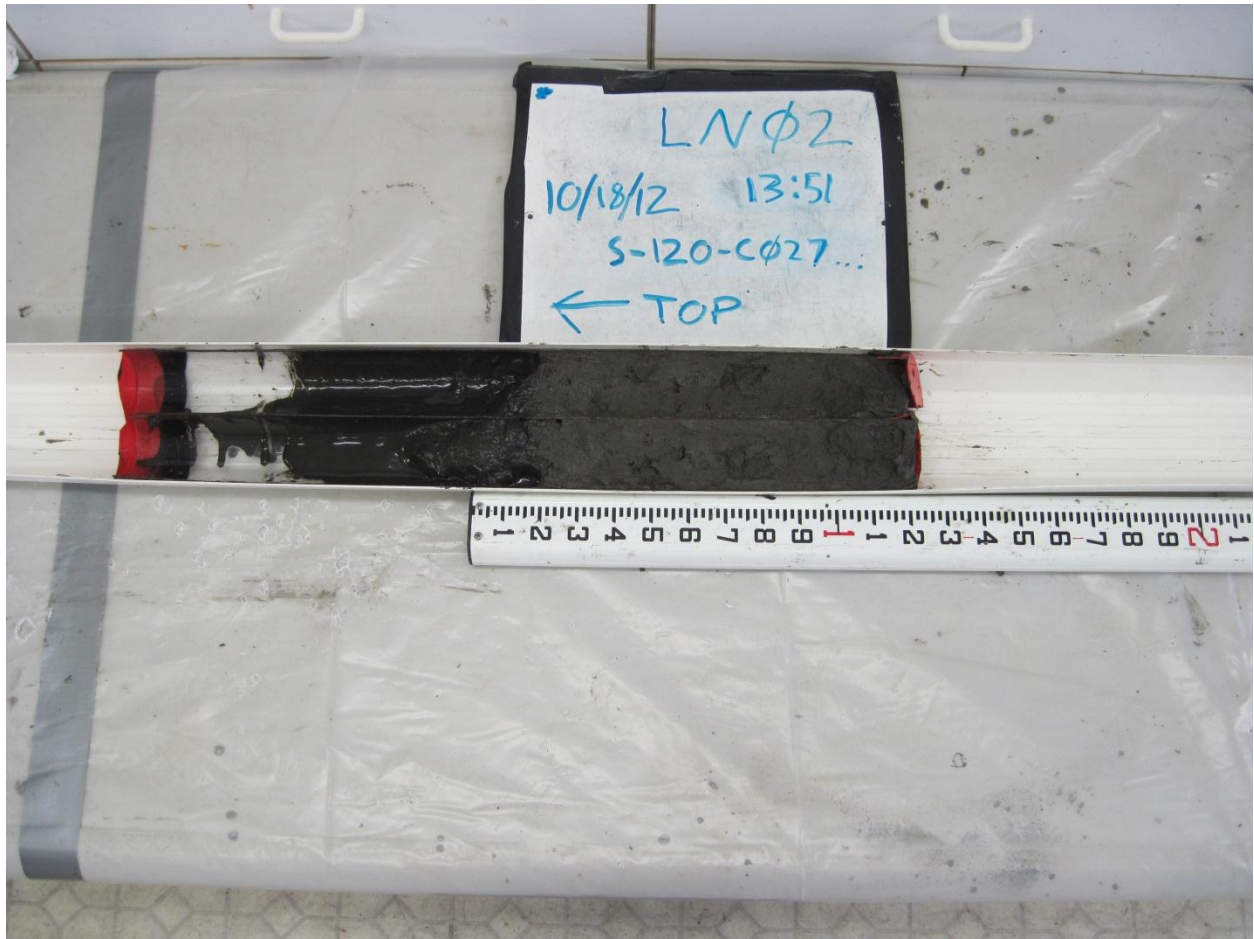
External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.5	OL	organics, silt, trace fine sand, wet, non-cohesive, gradational lower contact	2.5Y 2.5/1	v. soft	fine sand	H <sub>2</sub> S petro	S-120-CØ26- Ø.Ø-Ø.5
0.5-1.0	OL/ML	OL/ML mixing transitional zone					S-120-CØ26- Ø.5-1.Ø
1.0-3.8	ML	silt, trace organics near top of unit, few fine sand throughout, shell hash at 1.0' + 2.0'	2.5Y 4/1	firm	fine sand	H <sub>2</sub> S	Archive: S-120-CØ26- 1.Ø-1.5

Comments:

Previously described without OL/ML mixing zone. Description updated



	Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE
	Project #: W912WJ-09-D-0001, Task Order No. 0010		
Location: New Bedford, MA		Vessel: R/V George Hampson	
Chief Scientist: Dack Stuart			
Station ID:	<u>LNØ2</u>	Latitude: <u>41° 40.04</u>	Core Sample ID: <u>S-120-<del>000</del> CØ27</u>
Collection Date:	<u>10/18/12</u>	Longitude: <u>70° 55.066</u>	Water Depth (A): <u>8.7</u>
Time Arrive Sta.:	<u>1345</u>	GPS Accuracy: <u>12</u>	Length of Push Core Assembly (B): <u>17.2</u>
Time of Collection:	<u>1351</u>	Logged By: <u>DS</u>	Water Surface to Top of Handle (C): <u>6.9</u>
Time Depart Sta.:			Length of Core (from bottom) (D): <u>1.2</u>
Collection Equip.:	<u>Push Core</u>	Attempts: <u>1</u>	Tide Elevation (from tide board) (G): <u>0.9</u>
<small>B - A - C → D</small> <span style="float: right;"><small>All measurements are 80.1 feet</small></span>			
<b>Calculations for Determination of Z* Elevation</b>			
(G) Elevation of Water Surface (NGVD) (as read from tide board):			<u>0.9</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)			<u>-9.4</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)			<u>-8.4</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D			<u>-8.2</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A			<u>-7.8</u>
<small>(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)</small>			
<b>External Description, Date:</b>			

**Internal Core Description, Date:**

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.2	OL	Organics, silt trace v. fine Sand. Wet, v. soft, non-cohesive. Strong lower contact.	2.5Y 2.5/1	v. Soft	v. fine sand	NONE	S-120-CØ27 -00-0.2
0.2 - 1.2	ML	Silt. firm, moist, cohesive poor plasticity.	2.5 4/1	firm	Silt	NONE	S-120-CØ27 Ø2 - <del>Ø27</del> Ø.7

**Comments:**

Archive - S-120-CØ27-Ø.7-1.2





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>LH08</u>	Latitude:	<u>41° 40.020</u>	Core Sample ID:	<u>S-120-<del>000</del> C028</u>
Collection Date:	<u>10/8/12</u>	Longitude:	<u>70° 55.100</u>	Water Depth (A):	<u>10.9</u>
Time Arrive Sta.:	<u>1445</u>	GPS Accuracy:	<u>12</u>	Length of Push Core Assembly (B):	<u>19.2</u>
Time of Collection:	<u>1452</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>8.9 5.9</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>2.2</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>-0.1</u>

B - A - C ↔ D All measurements are 20.3 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>0.1</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-13.2</u>
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-12.2</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-11.0</u>
(L2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-10.8</u>

(Note if I ≠ L<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.2	OL	organics, silt, trace fine sand. Shell hash throughout - 0.1' lens at bottom contact. wet, v. soft. non cohesive. visible green, retro odor.	2.5Y 2.5/1	v. soft	fine sand	RETRO	S-120-C028-0.7-1.2
1.2 - 2.2	ML	Silt, sub-angular medium sand. shell hash throughout, bioclast @ 1.6, peat bedding @ 1.4. firm, moist, cohesive.	2.5Y 4/1	firm	medium sand	F2S	S-120-C028-1.2-1.7

Comments:  
  
Amber - @ S-120-C028-1.7-2.2







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	LP05	Latitude:	41° 40.026	Core Sample ID:	S-120- <del>590</del> Cφ29
Collection Date:	10/18/12	Longitude:	70 55.055	Water Depth (A):	9.2
Time Arrive Sta.:	1332	GPS Accuracy:	14	Length of Push Core Assembly (B):	17.2
Time of Collection:	1341	Logged By:	DS	Water Surface to Top of Handle (C):	6.4
Time Depart Sta.:				Length of Core (from bottom) (D):	1.5
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	1.2

B - A - C + D All measurements are 0.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.2
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-9.6
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	N/A
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-8.1
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-8.0

(Note if I ≠ I<sub>2</sub>, within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-1.5	Mb	Silt w/ trace sub-angular fine to coarse sand. Shell wash in upper unit. Unit grades from wet, soft, unconsolidated to firm, moist, cohesive. No organic clod inclusion @ 0.3.	2.5y 4/1	Soft to firm	Coarse Sand	R/S R/S	S-120-LR05 S-120-Cφ29 0.0-0.5  S-12

Comments:

Archive S-120-Cφ29-0.5-1.0





Project Name: New Bedford Harbor Environmental Monitoring  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart

Client: USACE NAE

Vessel: R/V George Hampson

Station ID:	<u>LF08</u>	Latitude:	<u>41° 40.016</u>	Core Sample ID:	<u>S-120-C030</u>
Collection Date:	<u>10/18/12</u>	Longitude:	<u>70° 55.110</u>	Water Depth (A):	<u>9.5</u>
Time Arrive Sta.:	<u>1502</u>	GPS Accuracy:	<u>16</u>	Length of Push Core Assembly (B):	<u>19.2</u>
Time of Collection:	<u>1510</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>6.2</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>2.7</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>-0.4</u>

B - A - C → D

All measurements are 25.1 foot

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>-0.4</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-13.4</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-11.2</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-10.7</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-9.9</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
<u>0.0 - 0.5</u>	<u>OL</u>	<u>organics, some silt, w/ct. v. soft, incohesive. strong lower contact. visible shell</u>	<u>2.5y</u> <u>2.5/1</u>	<u>v. soft</u>	<u>silt</u>	<u>PETRO</u>	<u>S-120-C030</u> <u>0.0 - 0.5</u>
<u>0.5 - 2.7</u>	<u>ML</u>	<u>silt w/ some medium sand increasing in lower unit. shell hash at upper contact and 1.6 - 2.1 firm, moist, cohesive</u>	<u>2.5y</u> <u>4/1</u>	<u>firm</u>	<u>medium sand</u>	<u>H<sub>2</sub>S</u>	<u>S-120-C030</u> <u>0.5 - 1.0</u>

Comments: & MS/MSD - S-120-C030 - 0.5 - 1.0 MSMSD

Archive S-120-C030-1.0-1.5



	Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE
	Project #: W912WJ-09-D-0001, Task Order No. 0010		
Location: New Bedford, MA		Vessel: R/V George Hampson	
Chief Scientist: Dack Stuart			
Station ID:	<u>LF02</u>	Latitude:	<u>41° 40.043</u>
Collection Date:	<u>10/18/12</u>	Longitude:	<u>70° 55.111</u>
Time Arrive Sta.:	<u>1518</u>	GPS Accuracy:	<u>12</u>
Time of Collection:	<u>1535</u>	Logged By:	<u>DS</u>
Time Depart Sta.:			
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>2</u>
		Core Sample ID:	<u>S-120-<del>600</del> C031</u>
		Water Depth (A):	<u>10.0</u>
		Length of Push Core Assembly (B):	<u>18.2</u>
		Water Surface to Top of Handle (C):	<u>5.0</u>
		Length of Core (from bottom) (D):	<u>2.6</u>
		Tide Elevation (from tide board) (G):	<u>-0.7</u>
<small>B - A - C ↔ D</small> <span style="float: right;"><small>All measurements are 50.1 foot</small></span>			
<b>Calculations for Determination of Z* Elevation</b>			
(G) Elevation of Water Surface (NGVD) (as read from tide board):			<u>-0.7</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)			<u>-13.9</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)			<u>-12.5</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D			<u>-11.3</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A			<u>-10.7</u>
<small>(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)</small>			
<b>External Description, Date:</b>			


**Internal Core Description, Date:**

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.2	OL	organics, wet, v. soft, iridescent, visible sheen	2.5- 2.5/1	v. soft	organics	PETRO	S-120-C031 0.7-1.2
1.2 - 2.6	ML	Silt w/ some medium sand increasing down unit. Sharp upper contact. 1.1 to 1.2 clast @ 1.2, shell wash base @ approx 2.0, upper 0.5 of unit mottled w/ organics. Moist, firm, cohesive.	2.5Y 4/1	firm	medium sand	H2S	S-120-C031 1.2-1.7

**Comments:**

Archive S-120-C031-1.7-2.2

**NO PHOTO OF S-12O-C032 (core LG04)**

		Project Name: New Bedford Harbor Environmental Monitoring		Client: USACE NAE	
		Project #: W912WJ-09-D-0001, Task Order No. 0010			
		Location: New Bedford, MA			
		Chief Scientist: Dack Stuart		Vessel: R/V George Hampson	
Station ID:	LG04	Latitude:	41° 40.032	Core Sample ID:	S-120- <del>000</del> -C032
Collection Date:	10/18/12	Longitude:	70° 55.106	Water Depth (A):	10.4
Time Arrive Sta.:	1400	GPS Accuracy:	12	Length of Push Core Assembly (B):	19.2
Time of Collection:	1415	Logged By:	DS	Water Surface to Top of Handle (C):	6.5
Time Depart Sta.:				Length of Core (from bottom) (D):	2.5
Collection Equip.:	Push Core	Attempts:	1	Tide Elevation (from tide board) (G):	0.5
<small>B - A - C ↔ D</small> <span style="float: right;"><small>All measurements are 50.1 feet</small></span>					
<b>Calculations for Determination of Z* Elevation</b>					
(G) Elevation of Water Surface (NGVD) (as read from tide board):		0.5			
(H) Elevation of the bottom of the core (NGVD): G - (B - C)		-12.2			
(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)		-10.8			
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D		-9.7			
(I <sub>1</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A		-9.9			
<small>(Note if I ≠ I<sub>1</sub>, within ±1.0 feet, discard and resample)</small>					
<b>External Description, Date:</b>					

Internal Core Description, Date:							
Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 1.1	OL	organics, silt. wet, v. soft unconsolidated gray to moist, soft, conside. Bioclast @ 0.8. visible shells.	2.5Y 2.5/1	soft	silt	PETRO	S-120-C032- 0.6-1.1
1.1 - 2.5	ML	silt. moist, firm, cohesive. Steel wash in lower unit. <del>part</del> lithoclast @ unit 2.2. Plant detritus @ 1.7.					S-120-C032- 1.1-1.6

**Comments:**  
 Archived S-120-C032-1.6.2.1







Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>LK06</u>	Latitude:	<u>41° 40.026</u>	Core Sample ID:	<u>S-120-<del>000</del> C033</u>
Collection Date:	<u>10/18/12</u>	Longitude:	<u>70° 55.085</u>	Water Depth (A):	<u>9.9</u>
Time Arrive Sta.:	<u>1424</u>	GPS Accuracy:	<u>13</u>	Length of Push Core Assembly (B):	<u>19.2</u>
Time of Collection:	<u>1431</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>6.7</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>2.6</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>0.2</u>

B - A - C + + D All measurements are ±0.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>0.2</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-12.3</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-9.8</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-9.7</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-9.7</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

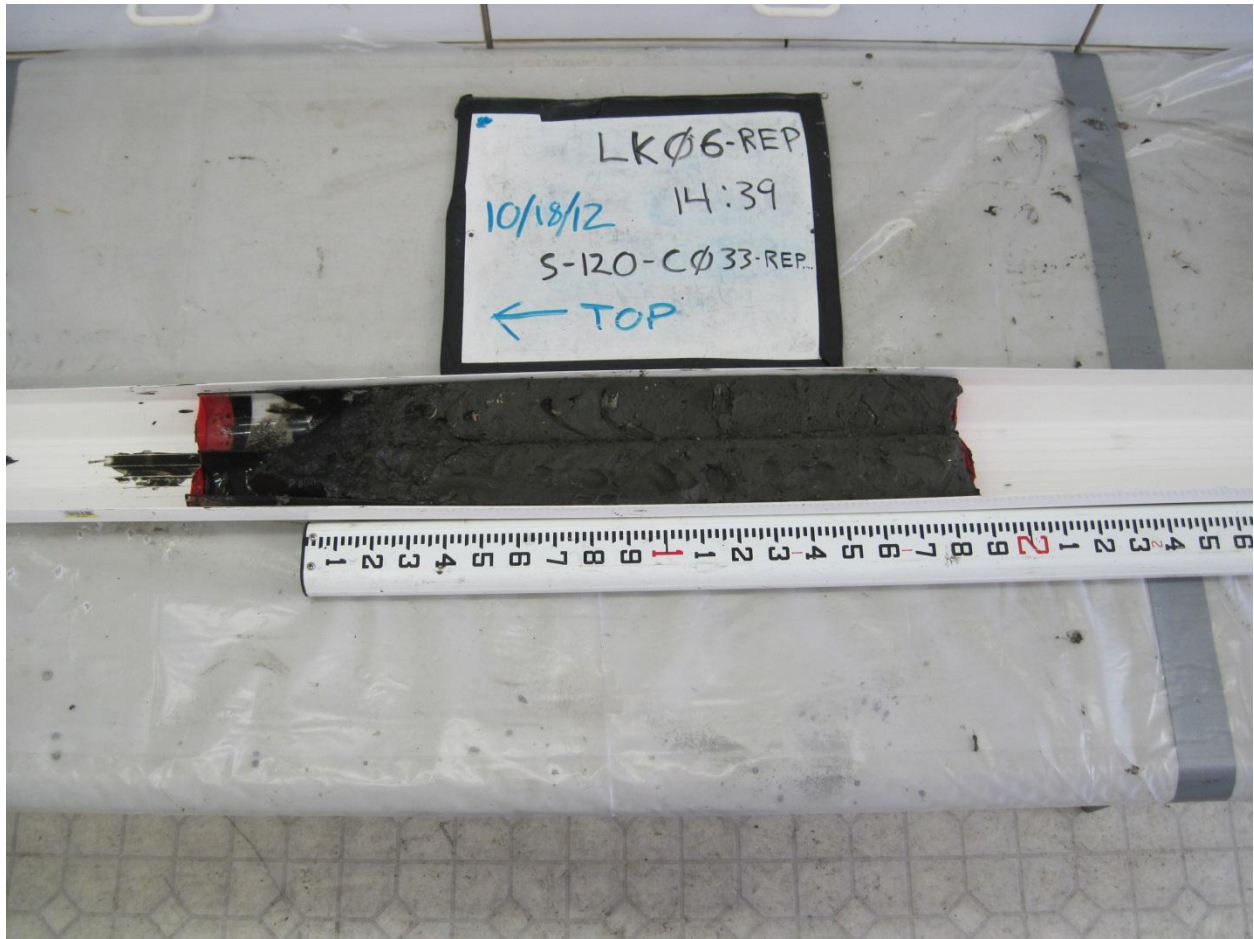
External Description, Date:

Internal Core Description, Date:

Core Length Interval (0' = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0-0.1	OL	org. res., trace med. fine sand. Wet, sl. soft, non-cohesive sharp lower contact.	2.5Y 2.5/1	v. soft	medium sand	None	S-120-C033 0.0-0.1
0.1-2.6	ML	silt w some fine sand gradng into med. fine sand. Shell hash @ 0.4, 1.0, 1.8. Bioclast @ 2.0. Moist, firm, cohesive.	2.5Y 4/1	firm	medium sand	H <sub>2</sub> S	S-120-C033 0.1-0.6

Comments:

Archive S-120-C033-  
0.6-1.1





Project Name: New Bedford Harbor Environmental Monitoring Client: USACE NAE  
 Project #: W912WJ-09-D-0001, Task Order No. 0010  
 Location: New Bedford, MA  
 Chief Scientist: Dack Stuart Vessel: R/V George Hampson

Station ID:	<u>LK06-RBP</u>	Latitude:	<u>41° 40.026</u>	Core Sample ID:	<u>S-120-<del>000</del> C033-REP</u>
Collection Date:	<u>10/18/12</u>	Longitude:	<u>70° 55.085</u>	Water Depth (A):	<u>9.9</u>
Time Arrive Sta.:	<u>1424</u>	GPS Accuracy:	<u>13</u>	Length of Push Core Assembly (B):	<u>17.2</u>
Time of Collection:	<u>1439</u>	Logged By:	<u>DS</u>	Water Surface to Top of Handle (C):	<u>5.3</u>
Time Depart Sta.:				Length of Core (from bottom) (D):	<u>1.8</u>
Collection Equip.:	<u>Push Core</u>	Attempts:	<u>1</u>	Tide Elevation (from tide board) (G):	<u>0.1</u>

B - A - C + D All measurements are 85.1 feet

Calculations for Determination of Z\* Elevation

(G) Elevation of Water Surface (NGVD) (as read from tide board):	<u>0.1</u>
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	<u>-11.8</u>
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition from bottom of core)	<u>-10.2</u>
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	<u>-10.0</u>
(I <sub>2</sub> ) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	<u>-9.8</u>

(Note if I ≠ I<sub>2</sub> within ±1.0 feet, discard and resample)

External Description, Date:

Internal Core Description, Date:

Core Length Interval (0" = core top)	Lithology (USCS Code)	Sediment Type/Description	Munsell Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.2	OL	organics, with v. soft non cohesive, gradual contact	2.5Y 2.5/1	v. soft	silt	PETRO	S-120-C033 0.0-0.2-REP
0.2 - 1.8	ML	Silt w/ little medium to coarse sand coarse down ward. Bioclast @ 0.9. Shell near trough	2.5Y 4/1	firm	coarse sand	H <sub>2</sub> S	S-120-C033- 0.2-0.7 REP

Comments:

Archiv S-120-C033-0.7-1.2-REP

**APPENDIX B. ALPHA ANALYTICAL LABORATORY REPORTS**

(See Electronic Attachment)

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## INTRODUCTION

Samples were analyzed at Alpha Analytical Laboratories. Upon receipt, samples were divided into sample delivery groups (SDGs), which were assigned a unique 7-digit number preceded by the letter L. One SDG typically consists of 20 samples. Below is a table summarizing which SDGs are associated with each sampling event (pre- vs. post-dredge) as well as the analytes reported.

SDG	Sampling Event	Analytes Reported
L1204588	Pre-Dredge	PCB Congeners (NOAA-18)
L1204594		PCB Congeners (NOAA-18)
L1204599		PCB Congeners (NOAA-18)
L1204600		PCB Congeners (NOAA-18)
L1204603		PCB Aroclors
L1207312		PCB Congeners (NOAA-18)
L1218556	Post-Dredge	PCB Congeners (NOAA-18)
L1219169		PCB Congeners (NOAA-18)
L1219170		PCB Congeners (NOAA-18)
L1219172		PCB Congeners (NOAA-18)
L1219173		PCB Homologs

A SDG is made up of three data files. The table below, using SDG L1218556 as an example, describes the contents of each SDG file.

File name	File type	Description
L1218556_coc	.PDF	Scanned copy of the chain of custody.
L1218556_nbh	.CSV	Comma-delimited spreadsheet of analytical data, formatted for the New Bedford Harbor Database.
L1218556_pdf	.PDF	SDG laboratory report.

This Appendix document includes the SDG laboratory reports only. All other data files associated with each SDG are included as electronic attachments on the accompanying CD.



## ANALYTICAL REPORT

Lab Number:	L1204588
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD HARBOR SUPERFUND
Project Number:	TO-0010-04
Report Date:	03/30/12

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1204588-01	S-12M-C001-2.8-3.4	NEW BEDFORD	03/07/12 11:01
L1204588-02	S-12M-C001-2.3-2.8	NEW BEDFORD	03/07/12 11:01
L1204588-03	S-12M-C002-0.0-0.3	NEW BEDFORD	03/07/12 11:21
L1204588-04	S-12M-C002-0.3-0.8	NEW BEDFORD	03/07/12 11:21
L1204588-05	S-12M-C003-1.7-2.2	NEW BEDFORD	03/07/12 12:03
L1204588-06	S-12M-C003-2.2-2.7	NEW BEDFORD	03/07/12 12:03
L1204588-07	S-12M-C004-0.2-0.7	NEW BEDFORD	03/07/12 11:43
L1204588-08	S-12M-C004-0.7-1.2	NEW BEDFORD	03/07/12 11:43
L1204588-09	S-12M-C005-0.1-0.6-REP	NEW BEDFORD	03/07/12 10:32
L1204588-10	S-12M-C005-0.6-1.1-REP	NEW BEDFORD	03/07/12 10:32
L1204588-11	S-12M-C006-0.7-1.2	NEW BEDFORD	03/07/12 10:19
L1204588-12	S-12M-C006-1.2-1.7	NEW BEDFORD	03/07/12 10:19
L1204588-13	S-12M-C007-2.9-3.4	NEW BEDFORD	03/09/12 10:54
L1204588-14	S-12M-C007-3.4-3.9	NEW BEDFORD	03/09/12 10:54
L1204588-15	S-12M-C008-2.0-2.5	NEW BEDFORD	03/09/12 11:10
L1204588-16	S-12M-C008-2.5-3.0	NEW BEDFORD	03/09/12 11:10
L1204588-17	S-12M-C009-2.9-3.4	NEW BEDFORD	03/09/12 10:24
L1204588-18	S-12M-C009-2.4-2.9	NEW BEDFORD	03/09/12 10:24
L1204588-19	S-12M-C010-1.9-2.4	NEW BEDFORD	03/09/12 10:38
L1204588-20	S-12M-C010-2.4-2.9	NEW BEDFORD	03/09/12 10:38



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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.

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

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### Sample Receipt

Sediment samples were received intact and frozen on March 16, 2012. The samples were placed in frozen storage and removed on March 20, 2012 for initial percent solids and then placed in refrigerated storage. Samples were removed from refrigerated storage on March 22, 2012 when they were removed to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

### Case Narrative (continued)

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

Samples L1204588-01 through 20, with the exception of sample -12 have elevated detection limits due to the dilutions required by the concentrations of target compounds in the sample.

The WG524578-3 LCS/LCSD RPD, associated with L1204588-01 through -20, is above the acceptance criteria for Cl2-BZ#8 (34%).

The WG524578-5 MSD recoveries, performed on L1204588-17, were above the acceptance criteria for Cl3-BZ#18 (171%), Cl3-BZ#28 (179%) and Cl4-BZ#52 (246%) however, the associated LCS/LCSD recoveries were within criteria. The results of the sample utilized for the MS/MSD are considered to have a potentially high bias for these compounds.

The WG524578-5 MS/MSD RPDs, performed on L1204588-17, are above the acceptance criteria for Cl3-BZ#18 (58%), Cl3-BZ#28 (35%), Cl4-BZ#52 (67%) and Cl4-BZ#44 (36%).

The WG524578-4/-5 MS/MSD samples were analyzed at a higher dilution than the native sample L1204588-17 due to the spike concentrations added.

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

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative

Date: 03/30/12

# ORGANICS

# PCBS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

Lab ID: L1204588-01  
 Client ID: S-12M-C001-2.8-3.4  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/27/12 11:18  
 Analyst: AW  
 Percent Solids: 94%

Date Collected: 03/07/12 11:01  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	949		ug/kg	279	--	200
CI3-BZ#18	1940		ug/kg	279	--	200
CI4-BZ#52	3020		ug/kg	279	--	200
CI4-BZ#66	812		ug/kg	279	--	200
CI5-BZ#118	ND		ug/kg	279	--	200
CI5-BZ#105	ND		ug/kg	279	--	200
CI6-BZ#138	ND		ug/kg	279	--	200
CI7-BZ#187	ND		ug/kg	279	--	200
CI6-BZ#128	ND		ug/kg	279	--	200
CI7-BZ#180	ND		ug/kg	279	--	200
CI7-BZ#170	ND		ug/kg	279	--	200
CI8-BZ#195	ND		ug/kg	279	--	200
CI9-BZ#206	ND		ug/kg	279	--	200
CI10-BZ#209	ND		ug/kg	279	--	200
DBOB	81			30-150		
BZ 198	85			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-01  
 Client ID: S-12M-C001-2.8-3.4  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/27/12 11:18  
 Analyst: AW  
 Percent Solids: 94%

Date Collected: 03/07/12 11:01  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	1600		ug/kg	279	--	200
CI4-BZ#44	612		ug/kg	279	--	200
CI5-BZ#101	ND		ug/kg	279	--	200
CI6-BZ#153	ND		ug/kg	279	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	85		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-02  
 Client ID: S-12M-C001-2.3-2.8  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/29/12 10:35  
 Analyst: AW  
 Percent Solids: 79%

Date Collected: 03/07/12 11:01  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	29300		ug/kg	1650	--	1000
CI5-BZ#118	3960		ug/kg	1650	--	1000
CI6-BZ#138	8230		ug/kg	1650	--	1000
CI7-BZ#187	4020		ug/kg	1650	--	1000
CI6-BZ#128	ND		ug/kg	1650	--	1000
CI7-BZ#170	1770		ug/kg	1650	--	1000
CI8-BZ#195	ND		ug/kg	1650	--	1000
CI9-BZ#206	ND		ug/kg	1650	--	1000
CI10-BZ#209	ND		ug/kg	1650	--	1000

DBOB	90	30-150
BZ 198	101	30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-02  
 Client ID: S-12M-C001-2.3-2.8  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/29/12 10:35  
 Analyst: AW  
 Percent Solids: 79%

Date Collected: 03/07/12 11:01  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI4-BZ#44	25800		ug/kg	1650	--	1000
CI5-BZ#101	6460		ug/kg	1650	--	1000
CI6-BZ#153	9220		ug/kg	1650	--	1000
CI5-BZ#105	ND		ug/kg	1650	--	1000
CI7-BZ#180	1920		ug/kg	1650	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	101		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

Lab ID: L1204588-02 D  
 Client ID: S-12M-C001-2.3-2.8  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/29/12 12:46  
 Analyst: AW  
 Percent Solids: 79%

Date Collected: 03/07/12 11:01  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	93100		ug/kg	16500	--	10000
Cl4-BZ#52	180000		ug/kg	16500	--	10000
Cl4-BZ#66	39600		ug/kg	16500	--	10000

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-02 D  
**Client ID:** S-12M-C001-2.3-2.8  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 12:46  
**Analyst:** AW  
**Percent Solids:** 79%

**Date Collected:** 03/07/12 11:01  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	56300		ug/kg	16500	--	10000

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-03  
 Client ID: S-12M-C002-0.0-0.3  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/26/12 19:26  
 Analyst: AW  
 Percent Solids: 79%

Date Collected: 03/07/12 11:21  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	17600		ug/kg	1660	--	1000
CI5-BZ#105	ND		ug/kg	1660	--	1000
CI6-BZ#138	2520		ug/kg	1660	--	1000
CI7-BZ#187	ND		ug/kg	1660	--	1000
CI6-BZ#128	ND		ug/kg	1660	--	1000
CI7-BZ#180	ND		ug/kg	1660	--	1000
CI7-BZ#170	ND		ug/kg	1660	--	1000
CI8-BZ#195	ND		ug/kg	1660	--	1000
CI9-BZ#206	ND		ug/kg	1660	--	1000
CI10-BZ#209	ND		ug/kg	1660	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	104		30-150
DBOB	91		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-03  
 Client ID: S-12M-C002-0.0-0.3  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/26/12 19:26  
 Analyst: AW  
 Percent Solids: 79%

Date Collected: 03/07/12 11:21  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI4-BZ#44	5180		ug/kg	1660	--	1000
CI4-BZ#66	4650		ug/kg	1660	--	1000
CI5-BZ#101	4200		ug/kg	1660	--	1000
CI5-BZ#118	3780		ug/kg	1660	--	1000
CI6-BZ#153	5710		ug/kg	1660	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	104		30-150
DBOB	91		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-03 D  
**Client ID:** S-12M-C002-0.0-0.3  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/28/12 16:54  
**Analyst:** AW  
**Percent Solids:** 79%

**Date Collected:** 03/07/12 11:21  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	32200		ug/kg	3330	--	2000
Cl4-BZ#52	47800		ug/kg	3330	--	2000

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

Lab ID: L1204588-03 D  
 Client ID: S-12M-C002-0.0-0.3  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 16:54  
 Analyst: AW  
 Percent Solids: 79%

Date Collected: 03/07/12 11:21  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	41600		ug/kg	3330	--	2000

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-04  
 Client ID: S-12M-C002-0.3-0.8  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/26/12 15:47  
 Analyst: AW  
 Percent Solids: 82%

Date Collected: 03/07/12 11:21  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	604		ug/kg	318	--	200
CI3-BZ#18	1380		ug/kg	318	--	200
CI4-BZ#52	2760		ug/kg	318	--	200
CI4-BZ#66	994		ug/kg	318	--	200
CI5-BZ#105	ND		ug/kg	318	--	200
CI6-BZ#138	ND		ug/kg	318	--	200
CI7-BZ#187	ND		ug/kg	318	--	200
CI6-BZ#128	ND		ug/kg	318	--	200
CI7-BZ#180	ND		ug/kg	318	--	200
CI7-BZ#170	ND		ug/kg	318	--	200
CI8-BZ#195	ND		ug/kg	318	--	200
CI9-BZ#206	ND		ug/kg	318	--	200
CI10-BZ#209	ND		ug/kg	318	--	200
DBOB	88			30-150		
BZ 198	86			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-04  
 Client ID: S-12M-C002-0.3-0.8  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/26/12 15:47  
 Analyst: AW  
 Percent Solids: 82%

Date Collected: 03/07/12 11:21  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	1490		ug/kg	318	--	200
CI4-BZ#44	839		ug/kg	318	--	200
CI5-BZ#101	666		ug/kg	318	--	200
CI5-BZ#118	561		ug/kg	318	--	200
CI6-BZ#153	557		ug/kg	318	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	86		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-05  
**Client ID:** S-12M-C003-1.7-2.2  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/26/12 16:31  
**Analyst:** AW  
**Percent Solids:** 91%

**Date Collected:** 03/07/12 12:03  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	ND		ug/kg	1800	--	500
CI3-BZ#18	3390		ug/kg	1800	--	500
CI4-BZ#52	27700		ug/kg	1800	--	500
CI4-BZ#66	13200		ug/kg	1800	--	500
CI5-BZ#118	9180		ug/kg	1800	--	500
CI6-BZ#138	8210		ug/kg	1800	--	500
CI6-BZ#128	1950		ug/kg	1800	--	500
CI7-BZ#170	ND		ug/kg	1800	--	500
CI8-BZ#195	ND		ug/kg	1800	--	500
CI9-BZ#206	ND		ug/kg	1800	--	500
CI10-BZ#209	ND		ug/kg	1800	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	106		30-150
DBOB	77		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

Lab ID: L1204588-05  
 Client ID: S-12M-C003-1.7-2.2  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/26/12 16:31  
 Analyst: AW  
 Percent Solids: 91%

Date Collected: 03/07/12 12:03  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	ND		ug/kg	1800	--	500
CI4-BZ#44	8060		ug/kg	1800	--	500
CI5-BZ#101	10400		ug/kg	1800	--	500
CI6-BZ#153	6890		ug/kg	1800	--	500
CI5-BZ#105	2250		ug/kg	1800	--	500
CI7-BZ#187	ND		ug/kg	1800	--	500
CI7-BZ#180	ND		ug/kg	1800	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	106		30-150
DBOB	77		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-06  
 Client ID: S-12M-C003-2.2-2.7  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 12:32  
 Analyst: AW  
 Percent Solids: 74%

Date Collected: 03/07/12 12:03  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	32.9		ug/kg	8.73	--	5
CI3-BZ#18	62.7		ug/kg	8.73	--	5
CI4-BZ#52	79.6		ug/kg	8.73	--	5
CI4-BZ#66	22.4		ug/kg	8.73	--	5
CI5-BZ#118	9.38		ug/kg	8.73	--	5
CI5-BZ#105	ND		ug/kg	8.73	--	5
CI6-BZ#138	10.1		ug/kg	8.73	--	5
CI6-BZ#128	ND		ug/kg	8.73	--	5
CI7-BZ#170	ND		ug/kg	8.73	--	5
CI8-BZ#195	ND		ug/kg	8.73	--	5
DBOB	94			30-150		
BZ 198	87			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-06  
 Client ID: S-12M-C003-2.2-2.7  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 12:32  
 Analyst: AW  
 Percent Solids: 74%

Date Collected: 03/07/12 12:03  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	49.3		ug/kg	8.73	--	5
CI4-BZ#44	22.2		ug/kg	8.73	--	5
CI5-BZ#101	11.8		ug/kg	8.73	--	5
CI6-BZ#153	10.8		ug/kg	8.73	--	5
CI7-BZ#187	ND		ug/kg	8.73	--	5
CI7-BZ#180	ND		ug/kg	8.73	--	5
CI9-BZ#206	45.6		ug/kg	8.73	--	5
CI10-BZ#209	28.3		ug/kg	8.73	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	94		30-150
BZ 198	87		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-07  
**Client ID:** S-12M-C004-0.2-0.7  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/26/12 20:10  
**Analyst:** AW  
**Percent Solids:** 94%

**Date Collected:** 03/07/12 11:43  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	16200		ug/kg	3460	--	1000
CI3-BZ#18	34200		ug/kg	3460	--	1000
CI4-BZ#52	46400		ug/kg	3460	--	1000
CI6-BZ#138	8490		ug/kg	3460	--	1000
CI6-BZ#128	ND		ug/kg	3460	--	1000
CI7-BZ#180	ND		ug/kg	3460	--	1000
CI7-BZ#170	ND		ug/kg	3460	--	1000
CI8-BZ#195	ND		ug/kg	3460	--	1000
CI9-BZ#206	ND		ug/kg	3460	--	1000
CI10-BZ#209	ND		ug/kg	3460	--	1000

DBOB	91	30-150
BZ 198	121	30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-07  
 Client ID: S-12M-C004-0.2-0.7  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/26/12 20:10  
 Analyst: AW  
 Percent Solids: 94%

Date Collected: 03/07/12 11:43  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	59400		ug/kg	3460	--	1000
CI4-BZ#44	33800		ug/kg	3460	--	1000
CI4-BZ#66	31400		ug/kg	3460	--	1000
CI5-BZ#101	18500		ug/kg	3460	--	1000
CI5-BZ#118	14400		ug/kg	3460	--	1000
CI6-BZ#153	10700		ug/kg	3460	--	1000
CI5-BZ#105	ND		ug/kg	3460	--	1000
CI7-BZ#187	ND		ug/kg	3460	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	121		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-08  
**Client ID:** S-12M-C004-0.7-1.2  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/26/12 17:59  
**Analyst:** AW  
**Percent Solids:** 75%

**Date Collected:** 03/07/12 11:43  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	363		ug/kg	174	--	100
CI3-BZ#18	603		ug/kg	174	--	100
CI4-BZ#52	1580		ug/kg	174	--	100
CI4-BZ#66	753		ug/kg	174	--	100
CI6-BZ#138	457		ug/kg	174	--	100
CI7-BZ#187	ND		ug/kg	174	--	100
CI6-BZ#128	ND		ug/kg	174	--	100
CI7-BZ#180	ND		ug/kg	174	--	100
CI7-BZ#170	ND		ug/kg	174	--	100
CI8-BZ#195	ND		ug/kg	174	--	100
CI9-BZ#206	ND		ug/kg	174	--	100
CI10-BZ#209	ND		ug/kg	174	--	100

DBOB 93 30-150  
 BZ 198 87 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-08  
 Client ID: S-12M-C004-0.7-1.2  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/26/12 17:59  
 Analyst: AW  
 Percent Solids: 75%

Date Collected: 03/07/12 11:43  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	1400		ug/kg	174	--	100
CI4-BZ#44	969		ug/kg	174	--	100
CI5-BZ#101	687		ug/kg	174	--	100
CI5-BZ#118	499		ug/kg	174	--	100
CI6-BZ#153	470		ug/kg	174	--	100
CI5-BZ#105	ND		ug/kg	174	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	87		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-09  
**Client ID:** S-12M-C005-0.1-0.6-REP  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/26/12 20:54  
**Analyst:** AW  
**Percent Solids:** 96%

**Date Collected:** 03/07/12 10:32  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	5350		ug/kg	1370	--	1000
CI3-BZ#18	12900		ug/kg	1370	--	1000
CI4-BZ#52	19900		ug/kg	1370	--	1000
CI5-BZ#118	9340		ug/kg	1370	--	1000
CI6-BZ#138	5270		ug/kg	1370	--	1000
CI6-BZ#128	ND		ug/kg	1370	--	1000
CI7-BZ#170	ND		ug/kg	1370	--	1000
CI8-BZ#195	ND		ug/kg	1370	--	1000
CI9-BZ#206	ND		ug/kg	1370	--	1000
CI10-BZ#209	ND		ug/kg	1370	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	112		30-150
DBOB	93		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-09  
 Client ID: S-12M-C005-0.1-0.6-REP  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/26/12 20:54  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/07/12 10:32  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	19400		ug/kg	1370	--	1000
CI4-BZ#44	11000		ug/kg	1370	--	1000
CI4-BZ#66	12800		ug/kg	1370	--	1000
CI5-BZ#101	12600		ug/kg	1370	--	1000
CI6-BZ#153	7680		ug/kg	1370	--	1000
CI5-BZ#105	1500		ug/kg	1370	--	1000
CI7-BZ#187	ND		ug/kg	1370	--	1000
CI7-BZ#180	ND		ug/kg	1370	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	112		30-150
DBOB	93		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-10  
 Client ID: S-12M-C005-0.6-1.1-REP  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/27/12 15:06  
 Analyst: AW  
 Percent Solids: 88%

Date Collected: 03/07/12 10:32  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	44.7		ug/kg	15.0	--	10
CI3-BZ#18	118		ug/kg	15.0	--	10
CI4-BZ#52	160		ug/kg	15.0	--	10
CI4-BZ#44	78.2		ug/kg	15.0	--	10
CI4-BZ#66	89.5		ug/kg	15.0	--	10
CI5-BZ#118	63.9		ug/kg	15.0	--	10
CI6-BZ#138	43.3		ug/kg	15.0	--	10
CI6-BZ#128	ND		ug/kg	15.0	--	10
CI7-BZ#170	ND		ug/kg	15.0	--	10
CI8-BZ#195	ND		ug/kg	15.0	--	10
CI9-BZ#206	ND		ug/kg	15.0	--	10
CI10-BZ#209	ND		ug/kg	15.0	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	92		30-150
DBOB	75		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-10  
**Client ID:** S-12M-C005-0.6-1.1-REP  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/27/12 15:06  
**Analyst:** AW  
**Percent Solids:** 88%

**Date Collected:** 03/07/12 10:32  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	134		ug/kg	15.0	--	10
CI5-BZ#101	82.4		ug/kg	15.0	--	10
CI6-BZ#153	58.5		ug/kg	15.0	--	10
CI5-BZ#105	ND		ug/kg	15.0	--	10
CI7-BZ#187	ND		ug/kg	15.0	--	10
CI7-BZ#180	ND		ug/kg	15.0	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	92		30-150
DBOB	75		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-11  
 Client ID: S-12M-C006-0.7-1.2  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 14:43  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/07/12 10:19  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	13.3		ug/kg	6.80	--	5
CI3-BZ#18	23.3		ug/kg	6.80	--	5
CI4-BZ#52	79.2		ug/kg	6.80	--	5
CI4-BZ#66	30.8		ug/kg	6.80	--	5
CI5-BZ#118	17.9		ug/kg	6.80	--	5
CI5-BZ#105	ND		ug/kg	6.80	--	5
CI6-BZ#138	15.7		ug/kg	6.80	--	5
CI6-BZ#128	ND		ug/kg	6.80	--	5
CI7-BZ#180	ND		ug/kg	6.80	--	5
CI7-BZ#170	ND		ug/kg	6.80	--	5
CI8-BZ#195	ND		ug/kg	6.80	--	5
CI9-BZ#206	ND		ug/kg	6.80	--	5
CI10-BZ#209	ND		ug/kg	6.80	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	109		30-150
DBOB	88		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-11  
 Client ID: S-12M-C006-0.7-1.2  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 14:43  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/07/12 10:19  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	40.9		ug/kg	6.80	--	5
CI4-BZ#44	32.9		ug/kg	6.80	--	5
CI5-BZ#101	21.9		ug/kg	6.80	--	5
CI6-BZ#153	17.0		ug/kg	6.80	--	5
CI7-BZ#187	ND		ug/kg	6.80	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	109		30-150
DBOB	88		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-12  
 Client ID: S-12M-C006-1.2-1.7  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 13:15  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/07/12 10:19  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	4.55		ug/kg	1.38	--	1
CI3-BZ#18	6.84		ug/kg	1.38	--	1
CI4-BZ#52	9.96		ug/kg	1.38	--	1
CI4-BZ#44	ND		ug/kg	1.38	--	1
CI5-BZ#105	ND		ug/kg	1.38	--	1
CI6-BZ#138	ND		ug/kg	1.38	--	1
CI7-BZ#187	ND		ug/kg	1.38	--	1
CI6-BZ#128	ND		ug/kg	1.38	--	1
CI7-BZ#180	ND		ug/kg	1.38	--	1
CI7-BZ#170	ND		ug/kg	1.38	--	1
CI8-BZ#195	ND		ug/kg	1.38	--	1
CI9-BZ#206	ND		ug/kg	1.38	--	1
CI10-BZ#209	ND		ug/kg	1.38	--	1

DBOB 75 30-150  
 BZ 198 93 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-12  
 Client ID: S-12M-C006-1.2-1.7  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 13:15  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/07/12 10:19  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	7.07		ug/kg	1.38	--	1
CI4-BZ#66	ND		ug/kg	1.38	--	1
CI5-BZ#101	ND		ug/kg	1.38	--	1
CI5-BZ#118	ND		ug/kg	1.38	--	1
CI6-BZ#153	ND		ug/kg	1.38	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	93		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-13  
 Client ID: S-12M-C007-2.9-3.4  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 11:48  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 10:54  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	28.8		ug/kg	6.97	--	5
CI3-BZ#18	55.3		ug/kg	6.97	--	5
CI4-BZ#52	70.8		ug/kg	6.97	--	5
CI5-BZ#118	11.2		ug/kg	6.97	--	5
CI5-BZ#105	ND		ug/kg	6.97	--	5
CI6-BZ#138	10.9		ug/kg	6.97	--	5
CI7-BZ#187	ND		ug/kg	6.97	--	5
CI6-BZ#128	ND		ug/kg	6.97	--	5
CI7-BZ#170	ND		ug/kg	6.97	--	5
CI8-BZ#195	ND		ug/kg	6.97	--	5
DBOB	84			30-150		
BZ 198	93			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-13  
 Client ID: S-12M-C007-2.9-3.4  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 11:48  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 10:54  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	53.5		ug/kg	6.97	--	5
CI4-BZ#44	24.4		ug/kg	6.97	--	5
CI4-BZ#66	33.9		ug/kg	6.97	--	5
CI5-BZ#101	10.3		ug/kg	6.97	--	5
CI6-BZ#153	12.1		ug/kg	6.97	--	5
CI7-BZ#180	7.36		ug/kg	6.97	--	5
CI9-BZ#206	28.3		ug/kg	6.97	--	5
CI10-BZ#209	16.6		ug/kg	6.97	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	93		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-14  
 Client ID: S-12M-C007-3.4-3.9  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 13:59  
 Analyst: AW  
 Percent Solids: 91%

Date Collected: 03/09/12 10:54  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	7.31		ug/kg	2.88	--	2
CI3-BZ#18	14.9		ug/kg	2.88	--	2
CI4-BZ#52	22.4		ug/kg	2.88	--	2
CI4-BZ#66	5.73		ug/kg	2.88	--	2
CI5-BZ#118	ND		ug/kg	2.88	--	2
CI5-BZ#105	ND		ug/kg	2.88	--	2
CI6-BZ#138	ND		ug/kg	2.88	--	2
CI7-BZ#187	ND		ug/kg	2.88	--	2
CI6-BZ#128	ND		ug/kg	2.88	--	2
CI7-BZ#180	ND		ug/kg	2.88	--	2
CI7-BZ#170	ND		ug/kg	2.88	--	2
CI8-BZ#195	ND		ug/kg	2.88	--	2
CI9-BZ#206	ND		ug/kg	2.88	--	2
CI10-BZ#209	ND		ug/kg	2.88	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	76		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-14  
 Client ID: S-12M-C007-3.4-3.9  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 13:59  
 Analyst: AW  
 Percent Solids: 91%

Date Collected: 03/09/12 10:54  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	10.9		ug/kg	2.88	--	2
CI4-BZ#44	6.35		ug/kg	2.88	--	2
CI5-BZ#101	ND		ug/kg	2.88	--	2
CI6-BZ#153	ND		ug/kg	2.88	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	76		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-15  
**Client ID:** S-12M-C008-2.0-2.5  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/27/12 02:00  
**Analyst:** AW  
**Percent Solids:** 83%

**Date Collected:** 03/09/12 11:10  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	44200		ug/kg	3990	--	1000
CI5-BZ#118	8370		ug/kg	3990	--	1000
CI5-BZ#105	ND		ug/kg	3990	--	1000
CI6-BZ#138	12700		ug/kg	3990	--	1000
CI7-BZ#187	4900		ug/kg	3990	--	1000
CI6-BZ#128	ND		ug/kg	3990	--	1000
CI7-BZ#180	ND		ug/kg	3990	--	1000
CI7-BZ#170	ND		ug/kg	3990	--	1000
CI8-BZ#195	ND		ug/kg	3990	--	1000
CI9-BZ#206	ND		ug/kg	3990	--	1000
CI10-BZ#209	ND		ug/kg	3990	--	1000

DBOB 76 30-150  
 BZ 198 121 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-15  
 Client ID: S-12M-C008-2.0-2.5  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/27/12 02:00  
 Analyst: AW  
 Percent Solids: 83%

Date Collected: 03/09/12 11:10  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#44	48600		ug/kg	3990	--	1000
Cl4-BZ#66	38900		ug/kg	3990	--	1000
Cl5-BZ#101	11700		ug/kg	3990	--	1000
Cl6-BZ#153	12500		ug/kg	3990	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	121		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-15 D  
 Client ID: S-12M-C008-2.0-2.5  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/27/12 19:28  
 Analyst: AW  
 Percent Solids: 83%

Date Collected: 03/09/12 11:10  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	96900		ug/kg	16000	--	4000
Cl4-BZ#52	177000		ug/kg	16000	--	4000

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-15 D  
**Client ID:** S-12M-C008-2.0-2.5  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/27/12 19:28  
**Analyst:** AW  
**Percent Solids:** 83%

**Date Collected:** 03/09/12 11:10  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	76100		ug/kg	16000	--	4000



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-16  
 Client ID: S-12M-C008-2.5-3.0  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 16:10  
 Analyst: AW  
 Percent Solids: 84%

Date Collected: 03/09/12 11:10  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	360		ug/kg	315	--	200
CI3-BZ#18	647		ug/kg	315	--	200
CI4-BZ#52	3130		ug/kg	315	--	200
CI6-BZ#138	565		ug/kg	315	--	200
CI6-BZ#128	ND		ug/kg	315	--	200
CI7-BZ#180	ND		ug/kg	315	--	200
CI7-BZ#170	ND		ug/kg	315	--	200
CI8-BZ#195	ND		ug/kg	315	--	200
CI9-BZ#206	ND		ug/kg	315	--	200
CI10-BZ#209	ND		ug/kg	315	--	200
DBOB	92			30-150		
BZ 198	83			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-16  
 Client ID: S-12M-C008-2.5-3.0  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 16:10  
 Analyst: AW  
 Percent Solids: 84%

Date Collected: 03/09/12 11:10  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	591		ug/kg	315	--	200
CI4-BZ#44	1260		ug/kg	315	--	200
CI4-BZ#66	1040		ug/kg	315	--	200
CI5-BZ#101	734		ug/kg	315	--	200
CI5-BZ#118	537		ug/kg	315	--	200
CI6-BZ#153	438		ug/kg	315	--	200
CI5-BZ#105	ND		ug/kg	315	--	200
CI7-BZ#187	ND		ug/kg	315	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	83		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

Lab ID: L1204588-17  
 Client ID: S-12M-C009-2.9-3.4  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 15:27  
 Analyst: AW  
 Percent Solids: 91%

Date Collected: 03/09/12 10:24  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	116		ug/kg	28.9	--	20
CI3-BZ#18	250		ug/kg	28.9	--	20
CI4-BZ#66	100		ug/kg	28.9	--	20
CI5-BZ#118	ND		ug/kg	28.9	--	20
CI5-BZ#105	ND		ug/kg	28.9	--	20
CI6-BZ#138	47.8		ug/kg	28.9	--	20
CI7-BZ#187	ND		ug/kg	28.9	--	20
CI6-BZ#128	ND		ug/kg	28.9	--	20
CI7-BZ#180	ND		ug/kg	28.9	--	20
CI7-BZ#170	ND		ug/kg	28.9	--	20
CI8-BZ#195	ND		ug/kg	28.9	--	20
CI9-BZ#206	30.2		ug/kg	28.9	--	20
CI10-BZ#209	ND		ug/kg	28.9	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	99		30-150
DBOB	95		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-17  
 Client ID: S-12M-C009-2.9-3.4  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 15:27  
 Analyst: AW  
 Percent Solids: 91%

Date Collected: 03/09/12 10:24  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	209		ug/kg	28.9	--	20
CI4-BZ#52	411		ug/kg	28.9	--	20
CI4-BZ#44	118		ug/kg	28.9	--	20
CI5-BZ#101	39.3		ug/kg	28.9	--	20
CI6-BZ#153	36.9		ug/kg	28.9	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	99		30-150
DBOB	95		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

Lab ID: L1204588-18  
 Client ID: S-12M-C009-2.4-2.9  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/27/12 05:39  
 Analyst: AW  
 Percent Solids: 87%

Date Collected: 03/09/12 10:24  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	3780	--	1000
CI3-BZ#18	14000		ug/kg	3780	--	1000
CI3-BZ#28	ND		ug/kg	3780	--	1000
CI4-BZ#66	25600		ug/kg	3780	--	1000
CI5-BZ#118	5660		ug/kg	3780	--	1000
CI5-BZ#105	ND		ug/kg	3780	--	1000
CI6-BZ#138	12200		ug/kg	3780	--	1000
CI7-BZ#187	ND		ug/kg	3780	--	1000
CI6-BZ#128	ND		ug/kg	3780	--	1000
CI7-BZ#180	ND		ug/kg	3780	--	1000
CI7-BZ#170	ND		ug/kg	3780	--	1000
CI8-BZ#195	ND		ug/kg	3780	--	1000
CI9-BZ#206	ND		ug/kg	3780	--	1000
CI10-BZ#209	ND		ug/kg	3780	--	1000

DBOB 82 30-150  
 BZ 198 130 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-18  
 Client ID: S-12M-C009-2.4-2.9  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/27/12 05:39  
 Analyst: AW  
 Percent Solids: 87%

Date Collected: 03/09/12 10:24  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#44	33000		ug/kg	3780	--	1000
Cl5-BZ#101	9170		ug/kg	3780	--	1000
Cl6-BZ#153	9420		ug/kg	3780	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	130		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-18 D  
**Client ID:** S-12M-C009-2.4-2.9  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/28/12 02:45  
**Analyst:** AW  
**Percent Solids:** 87%

**Date Collected:** 03/09/12 10:24  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	106000		ug/kg	7550	--	2000

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

Lab ID: L1204588-19  
 Client ID: S-12M-C010-1.9-2.4  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 02:02  
 Analyst: AW  
 Percent Solids: 91%

Date Collected: 03/09/12 10:38  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	50800		ug/kg	14500	--	4000
CI3-BZ#18	81400		ug/kg	14500	--	4000
CI4-BZ#52	197000		ug/kg	14500	--	4000
CI5-BZ#105	ND		ug/kg	14500	--	4000
CI6-BZ#138	15400		ug/kg	14500	--	4000
CI7-BZ#187	ND		ug/kg	14500	--	4000
CI6-BZ#128	ND		ug/kg	14500	--	4000
CI7-BZ#180	ND		ug/kg	14500	--	4000
CI7-BZ#170	ND		ug/kg	14500	--	4000
CI8-BZ#195	ND		ug/kg	14500	--	4000
CI9-BZ#206	ND		ug/kg	14500	--	4000
CI10-BZ#209	ND		ug/kg	14500	--	4000

DBOB 79 30-150  
 BZ 198 126 30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

Lab ID: L1204588-19  
 Client ID: S-12M-C010-1.9-2.4  
 Sample Location: NEW BEDFORD  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/28/12 02:02  
 Analyst: AW  
 Percent Solids: 91%

Date Collected: 03/09/12 10:38  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	85700		ug/kg	14500	--	4000
CI4-BZ#44	69500		ug/kg	14500	--	4000
CI4-BZ#66	53200		ug/kg	14500	--	4000
CI5-BZ#101	16000		ug/kg	14500	--	4000
CI5-BZ#118	ND		ug/kg	14500	--	4000
CI6-BZ#153	15300		ug/kg	14500	--	4000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	126		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-20  
**Client ID:** S-12M-C010-2.4-2.9  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/28/12 01:18  
**Analyst:** AW  
**Percent Solids:** 93%

**Date Collected:** 03/09/12 10:38  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	321		ug/kg	142	--	100
CI3-BZ#18	636		ug/kg	142	--	100
CI4-BZ#52	1040		ug/kg	142	--	100
CI4-BZ#66	336		ug/kg	142	--	100
CI5-BZ#118	ND		ug/kg	142	--	100
CI5-BZ#105	ND		ug/kg	142	--	100
CI6-BZ#138	ND		ug/kg	142	--	100
CI7-BZ#187	ND		ug/kg	142	--	100
CI6-BZ#128	ND		ug/kg	142	--	100
CI7-BZ#180	ND		ug/kg	142	--	100
CI7-BZ#170	ND		ug/kg	142	--	100
CI8-BZ#195	ND		ug/kg	142	--	100
CI9-BZ#206	ND		ug/kg	142	--	100
CI10-BZ#209	ND		ug/kg	142	--	100

DBOB 84 30-150  
 BZ 198 85 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204588**Project Number:** TO-0010-04**Report Date:** 03/30/12**SAMPLE RESULTS**

**Lab ID:** L1204588-20  
**Client ID:** S-12M-C010-2.4-2.9  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/28/12 01:18  
**Analyst:** AW  
**Percent Solids:** 93%

**Date Collected:** 03/09/12 10:38  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/22/12 14:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	578		ug/kg	142	--	100
CI4-BZ#44	355		ug/kg	142	--	100
CI5-BZ#101	142		ug/kg	142	--	100
CI6-BZ#153	ND		ug/kg	142	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	85		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
 Analytical Date: 03/26/12 12:52  
 Analyst: AW

Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG524578-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	95		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
 Analytical Date: 03/26/12 12:52  
 Analyst: AW

Extraction Method: EPA 3540C  
 Extraction Date: 03/22/12 14:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/26/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG524578-1					
C16-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	95		30-150

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG524578-4 WG524578-5 QC Sample: L1204588-17 Client ID: S-12M-C009-2.9-3.4												
Cl2-BZ#8	116	1800	1940	101		2560	136		40-140	28		30
Cl3-BZ#18	250	1800	1830	88		3330	171	Q	40-140	58	Q	30
Cl4-BZ#66	100	1800	1830	96		2430	130		40-140	28		30
Cl5-BZ#118	ND	1800	1660	92		1880	105		40-140	12		30
Cl5-BZ#105	ND	1800	1540	86		1650	92		40-140	7		30
Cl6-BZ#138	47.8	1800	1600	86		1920	104		40-140	18		30
Cl7-BZ#187	ND	1800	1490	83		1660	92		40-140	11		30
Cl6-BZ#128	ND	1800	1510	84		1590	88		40-140	5		30
Cl7-BZ#180	ND	1800	1340	74		1390	77		40-140	4		30
Cl7-BZ#170	ND	1800	1500	83		1610	90		40-140	7		30
Cl8-BZ#195	ND	1800	1410	78		1460	81		40-140	3		30
Cl9-BZ#206	30.2	1800	1520	83		1570	86		40-140	3		30
Cl10-BZ#209	ND	1800	1350	75		1390	77		40-140	3		30
Cl3-BZ#28	209	1800	2400	122		3430	179	Q	40-140	35	Q	30
Cl4-BZ#52	411	1800	2410	111		4840	246	Q	40-140	67	Q	30
Cl4-BZ#44	118	1800	1830	95		2630	140		40-140	36	Q	30
Cl5-BZ#101	39.3	1800	1700	92		2000	109		40-140	16		30
Cl6-BZ#153	36.9	1800	1620	88		1880	102		40-140	15		30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20    QC Batch ID: WG524578-4    WG524578-5    QC Sample: L1204588-17    Client ID: S-12M-C009-2.9-3.4

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	82		85		30-150
DBOB	100		99		30-150

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Lab Number:** L1204588

**Project Number:** TO-0010-04

**Report Date:** 03/30/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG524578-2 WG524578-3								
CI2-BZ#8	127		90		40-140	34	Q	30
CI3-BZ#18	113		100		40-140	12		30
CI3-BZ#28	116		101		40-140	14		30
CI4-BZ#52	119		113		40-140	5		30
CI4-BZ#44	99		96		40-140	3		30
CI4-BZ#66	95		92		40-140	3		30
CI5-BZ#101	99		95		40-140	4		30
CI5-BZ#118	93		92		40-140	1		30
CI5-BZ#105	86		87		40-140	1		30
CI6-BZ#138	99		94		40-140	5		30
CI7-BZ#187	92		97		40-140	5		30
CI6-BZ#128	90		87		40-140	3		30
CI7-BZ#180	83		78		40-140	6		30
CI7-BZ#170	87		84		40-140	4		30
CI8-BZ#195	82		81		40-140	1		30
CI9-BZ#206	91		92		40-140	1		30
CI10-BZ#209	86		88		40-140	2		30



### Lab Control Sample Analysis

#### Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Lab Number:** L1204588

**Project Number:** TO-0010-04

**Report Date:** 03/30/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG524578-2 WG524578-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	93		95		30-150
DBOB	94		84		30-150

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG524578-2 WG524578-3

Cl6-BZ#153	92		90		40-140	2		30
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Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	93		95		30-150
DBOB	94		84		30-150

# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-01  
**Client ID:** S-12M-C001-2.8-3.4  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 11:01  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.4		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	49.8		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-02  
**Client ID:** S-12M-C001-2.3-2.8  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 11:01  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	79.0		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	43.0		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-03  
**Client ID:** S-12M-C002-0.0-0.3  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 11:21  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	79.3		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	36.0		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-04  
**Client ID:** S-12M-C002-0.3-0.8  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 11:21  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	81.8		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	41.8		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-05  
**Client ID:** S-12M-C003-1.7-2.2  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 12:03  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	91.0		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	29.4		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-06  
**Client ID:** S-12M-C003-2.2-2.7  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 12:03  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	74.3		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	44.7		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-07  
**Client ID:** S-12M-C004-0.2-0.7  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 11:43  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.8		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	36.9		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-08  
**Client ID:** S-12M-C004-0.7-1.2  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 11:43  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	74.7		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	49.2		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-09  
**Client ID:** S-12M-C005-0.1-0.6-REP  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 10:32  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.6		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	46.4		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-10  
**Client ID:** S-12M-C005-0.6-1.1-REP  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 10:32  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	87.8		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	48.2		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-11  
**Client ID:** S-12M-C006-0.7-1.2  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 10:19  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.6		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	47.6		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-12  
**Client ID:** S-12M-C006-1.2-1.7  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/07/12 10:19  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.2		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	45.9		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-13  
**Client ID:** S-12M-C007-2.9-3.4  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:54  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.8		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	41.0		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

### SAMPLE RESULTS

**Lab ID:** L1204588-14  
**Client ID:** S-12M-C007-3.4-3.9  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:54  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	91.4		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	48.3		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-15  
**Client ID:** S-12M-C008-2.0-2.5  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/09/12 11:10  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	82.5		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	38.1		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-16  
**Client ID:** S-12M-C008-2.5-3.0  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/09/12 11:10  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	83.6		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	44.7		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-17  
**Client ID:** S-12M-C009-2.9-3.4  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:24  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	91.1		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	44.5		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-18  
**Client ID:** S-12M-C009-2.4-2.9  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:24  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	87.1		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	32.4		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-19  
**Client ID:** S-12M-C010-1.9-2.4  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:38  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	90.8		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	33.6		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**SAMPLE RESULTS**

**Lab ID:** L1204588-20  
**Client ID:** S-12M-C010-2.4-2.9  
**Sample Location:** NEW BEDFORD  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:38  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.1		%	0.100	--	1	-	03/22/12 09:30	30,2540G	KB
Solids, Total (Pre-Dried)	45.3		%	0.100	NA	1	-	03/20/12 08:06	30,2540G	KB



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Project Number:** TO-0010-04

**Lab Number:** L1204588

**Report Date:** 03/30/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG524491-1 QC Sample: L1204588-17 Client ID: S-12M-C009-2.9-3.4						
Solids, Total	91.1	90.9	%	0		20

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

### 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
D	Absent
B	Absent
C	Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204588-01A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-02A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-03A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-04A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-05A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-06A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-07A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-08A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-09A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-10A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-11A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-12A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-13A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-14A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-15A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-16A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)



Project Name: NEW BEDFORD HARBOR SUPERFUND

Lab Number: L1204588

Project Number: TO-0010-04

Report Date: 03/30/12

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204588-17A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-17B	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1204588-18A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-19A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204588-20A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

## GLOSSARY

### Acronyms

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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value 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.

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

**Data Qualifiers**

- 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.
- 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

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**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204588  
**Report Date:** 03/30/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### **Connecticut Department of Public Health Certificate/Lab ID: PH-0141.**

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### **Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### **Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### **New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

### **New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

*Atmospheric Organic Parameters* (EPA TO-15)

*Biological Tissue* (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

*Air & Emissions* (EPA TO-15.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to LA-DEQ Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID: 460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 3020A, 6020A, 245.7, 9040B, SM4500H-B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A, 7470A, 7471B, 9040B, 9045C, 3050B, 3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Air & Emissions* (EPA TO-15.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.



# MANSFIELD CHAIN OF CUSTODY

PAGE 1 OF 13

WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-998-9193

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

### Client Information

Client: **Woods Hole Group**

Address: **81 Technology Park Drive  
East Falmouth, MA 01936**

Phone: **508-540-8680**

Fax: **508-540-1001**

Email: **dwalsh@whgrp.com**

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

*Homogenize Samples before analysis*

**PLEASE NOTE - Project - Specific EDD**

MS/MSD (at unit cost) will be omitted unless you check here:

### Project Information

Project Name: **New Bedford Harbor  
Superfund Site**

Project Location: **New Bedford**

Project #: **TD-0010-04**

Project Manager: **Dave Walsh**

ALPHA Quote #:

### Turn-Around Time

Standard

RUSH (only confirmed if pre-approved)

Date Due:

Time:

Date Rec'd in Lab:

### Report Information - Data Deliverables

FAX

EMAIL

ADEX

Add'l Deliverables

### Regulatory Requirements/Report Limits

State/Fed Program

Criteria

### Billing Information

Same as Client info

PO #:

ALPHA Job #: **11204588**

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials				
		Date	Time						
01588	D1	5-12M-C001-2.8-3.4	3/7/12	11:01	SED	DS	1	PH2	
	D2	5-12M-C001-2.3-2.8	3/7/12	11:01	SED	DS	1	PH2	
	D3	5-12M-C001-3.4-3.9	3/7/12	11:01	SED	DS	1	Archive PH2	
	D4	5-12M-C002-0.0-0.3		11:21			1	PP2	
	D4	5-12M-C002-0.3-0.8		11:21			1	PP2	
	D5	5-12M-C002-0.8-1.3		11:21			1	Archive PP2	
	D5	5-12M-C003-1.7-2.2		12:03			1	PA16	
	D6	5-12M-C003-2.2-2.7		12:03			1	Archive PA16	
	D7	5-12M-C003-2.7-3.2		12:03			1	PA16	
	D7	5-12M-C004-0.2-0.7		11:43			1	PA18	

Sample Specific Comments (Please specify below)	SAMPLE HANDLING	
	Filtration	Other
PH2	<input type="checkbox"/> Done	<input type="checkbox"/> Not needed
PH2	<input type="checkbox"/> Lab to do	<input type="checkbox"/> Preservation
PH2	<input type="checkbox"/> Lab to do	<input type="checkbox"/> Lab to do

Relinquished By: **Dave Walsh** Date/Time: **3/16/12 09:15**

Received By: **MS Walsh** Date/Time: **3/16/12 16:05**

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







# MANSFIELD CHAIN OF CUSTODY

PAGE 3 OF 13

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

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

### Client Information

Client: Woods Hole Group  
Address: 81 Technology Park Dr.  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: dwalsh@whgrp.com

Project Name: New Bedford Harbor

Project Location: New Bedford, MA

Project #: TO-0010-04

Project Manager: Dave Walsh

ALPHA Quote #:

Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)

Date Due: Time:

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE - Project-Specific EBD MS/MSD (at unit cost) will be omitted unless you check here:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
0458615	S-12M-C007-3.9-4.4	3/9/12	10:52	SED	D5
	S-12M-C008-2.0-2.5	3/9/12	11:10	SED	D5
	S-12M-C008-2.5-3.0	3/9/12	11:10	SED	D5
	S-12M-C008-3.0-3.5	3/9/12	11:10	SED	D5
	S-12M-C009-2.9-3.4	3/9/12	10:24	SED	D5
	S-12M-C009-3.4-3.9	3/9/12	10:24	SED	D5
	S-12M-C009-3.9-4.4	3/9/12	10:24	SED	D5
(17)	S-12M-C009-2.9-3.4	3/9/12	10:24	SED	D5
	S-12M-C009-2.4-2.9	3/9/12	10:24	SED	D5
	S-12M-C010-1.9-2.4	3/9/12	10:38	SED	D5

Container Type	Preservative
A	A

Relinquished By: Dave Walsh  
MSW

Date/Time: 3/16/12 0815  
3/16/12 1505

Received By: MSW  
[Signature]

Date/Time: 3/16/12 0815  
3/16/12 1610

Report Information - Data Deliverables  
 FAX  EMAIL  
 ADEX  Add'l Deliverables  
Regulatory Requirements/Report Limits  
State / Fed Program MSW Criteria

Billing Information  
 Same as Client Info  
ALPHA Job #: L1204588  
PO #:

ANALYSIS	DATE RECEIVED	DATE DELIVERED	STATUS
PCB Congeners			

SAMPLE HANDLING  
Filtration  Done  
 Not needed  
 Lab to do  
 Preservation  
 Lab to do  
(Please specify below)  
Sample Specific Comments

PLEASE PRINT CLEARLY, LEGIBLY, and COMPLETELY. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



# MANSFIELD CHAIN OF CUSTODY

PAGE 4 OF 13

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

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

### Client Information

Client: Woods Hole Group

Address: 81 Technology Park Dr  
East Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: [dwatson@whgrp.com](mailto:dwatson@whgrp.com)

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:  
Homogenize Samples before analysis

PLEASE NOTE: Project - Spectar EDD

MS/MSD (at unit cost) will be omitted unless you check here:

### Project Information

Project Name: New Bedford Harbor

Project Location: New Bedford, MA

Project #: TO-0910-04

Project Manager: Dave Watson

ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)

Date Due: Time:

Date Rec'd in Lab:

### Report Information - Data Deliverables

FAX  EMAIL

ADEX  Add'l Deliverables

### Regulatory Requirements/Report Limits

State/Fed Program Criteria

ALPHA Job #: L1204588

### Billing Information

Same as Client Info PO #:

### ANALYSIS

Sample ID	Collection Date	Sample Matrix	Sample's Initials	Container Type	Preservative	Received By:	Date/Time	Sample Specific Comments
04588-2D	3/9/12	SED	DS	A	A	3/16/12 0915	PS-9 Archive	
S-12M-CO10-2.4-2.9	10:38						PS-9 Archive	
S-12M-CO10-2.9-3.4	10:38						PS-9 Archive	
S-12M-CO11-2.2-2.7	09:34						PS-6 Archive	
S-12M-CO11-2.7-3.2	09:34						PS-6 Archive	
S-12M-CO11-3.2-3.7	09:34						PS-9 Archive	
S-12M-CO12-2.2-2.7	10:07						PS-9 Archive	
S-12M-CO12-2.7-3.2	10:07						PS-9 Archive	
S-12M-CO12-3.2-3.7	10:07						PS-9 Archive	
S-12M-CO13-2.0-2.5	09:51						PS-6	

### SAMPLE HANDLING

- Filtration
- Done
- Not needed
- Lab to do
- Preservation
- Lab to do

Sample Specific Comments (Please specify below)

Relinquished By: *Dave Watson*

Date/Time: 3/16/12 0915

Received By: *Y. S. Y.*

Date/Time: 3/16/12 0915

Y. S. Y.

3/16/12 1205

*Y. S. Y.*

3/16/12 1605

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

Kevin LaPlante &lt;klaplante@alphalab.com&gt;

**M Fwd: New Bedford Sediment samples**

**Peter Henriksen** <phenriks@alphalab.com>  
To: Kevin LaPlante <klaplante@alphalab.com>

Mon, Mar 19, 2012 at 12:40 PM

Please include this email as part of the COC.

Thanks

----- Forwarded message -----

From: **Dack Stuart** <dstuart@whgrp.com>  
Date: Mon, Mar 19, 2012 at 12:31 PM  
Subject: RE: New Bedford Sediment samples  
To: Peter Henriksen <phenriks@alphalab.com>

Pete,

I forgot to say that in all other situations where there was a discrepancy between the sample label and the chain, the chain should be followed. Sorry about that

Thanks,

Dack

---

**From:** Dack Stuart [mailto:dstuart@whgrp.com]  
**Sent:** Monday, March 19, 2012 12:25 PM  
**To:** 'Peter Henriksen'

**Cc:** 'David Walsh'; 'Mike Walsh'; 'Emerson Hasbrouck'  
**Subject:** RE: New Bedford Sediment samples

Pete,

As per our phone conversation, here is the chain of custody page that required a change. After further investigation, the following entries must be modified:

Page 6/13, old entry "S-12M-C018-3.4-3.9" should be changed to "S-12M-C018-2.9-3.4"; old entry "S-12M-C018-2.9-3.4" should be changed to "S-12M-C018-3.4-3.9" and should be archived. The deepest sample (3.4-3.9) is the one that should be archived, not the middle one (2.9-3.4).

Let me know if you have any more questions.

Dack



## ANALYTICAL REPORT

Lab Number:	L1204594
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD HARBOR SUPERFUND
Project Number:	TO-0010-04
Report Date:	04/09/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1204594-01	S-12M-C011-2.2-2.7	NEW BEDFORD, MA	03/09/12 09:34
L1204594-02	S-12M-C011-2.7-3.2	NEW BEDFORD, MA	03/09/12 09:34
L1204594-03	S-12M-C012-2.2-2.7	NEW BEDFORD, MA	03/09/12 10:07
L1204594-04	S-12M-C012-2.7-3.2	NEW BEDFORD, MA	03/09/12 10:07
L1204594-05	S-12M-C012-2.7-3.2-REP	NEW BEDFORD, MA	03/09/12 10:07
L1204594-06	S-12M-C013-2.0-2.5	NEW BEDFORD, MA	03/09/12 09:51
L1204594-07	S-12M-C013-2.5-3.0	NEW BEDFORD, MA	03/09/12 09:51
L1204594-08	S-12M-C014-1.9-2.4	NEW BEDFORD, MA	03/12/12 09:08
L1204594-09	S-12M-C014-2.4-2.9	NEW BEDFORD, MA	03/12/12 09:08
L1204594-10	S-12M-C015-1.8-2.3	NEW BEDFORD, MA	03/12/12 10:04
L1204594-11	S-12M-C015-1.8-2.3-REP	NEW BEDFORD, MA	03/12/12 10:04
L1204594-12	S-12M-C015-2.3-2.8	NEW BEDFORD, MA	03/12/12 10:04
L1204594-13	S-12M-C016-0.0-0.2	NEW BEDFORD, MA	03/07/12 10:00
L1204594-14	S-12M-C016-0.2-0.7	NEW BEDFORD, MA	03/07/12 10:00
L1204594-15	S-12M-C017-0.0-0.5	NEW BEDFORD, MA	03/07/12 09:39
L1204594-16	S-12M-C017-0.5-1.0	NEW BEDFORD, MA	03/07/12 09:39
L1204594-17	S-12M-C018-2.4-2.9	NEW BEDFORD, MA	03/12/12 09:26
L1204594-18	S-12M-C018-2.9-3.4	NEW BEDFORD, MA	03/12/12 09:26
L1204594-19	S-12M-C019-1.9-2.4	NEW BEDFORD, MA	03/12/12 09:46
L1204594-20	S-12M-C021-0.2-0.7	NEW BEDFORD, MA	03/12/12 10:39

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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.

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

---

### Sample Receipt

Sediment samples were received intact and frozen on March 16, 2012. The samples were placed in refrigerated storage and removed on March 23, 2012 for initial percent solids and air dried and then placed in refrigerated storage. Samples were removed from refrigerated storage on March 26, 2012 when they were removed to analyze for air-dried percent solids and on March 27, 2012 to extract samples for PCB Congener

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

### Case Narrative (continued)

analysis.

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

Samples L1204594-01 through 20 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG525261-4/-5 MS/MSD samples were analyzed at a higher dilution than the native sample L1204594-07 due to the spike concentrations added.

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

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative

Date: 04/09/12



# ORGANICS

# PCBS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-01  
 Client ID: S-12M-C011-2.2-2.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/31/12 08:42  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 09:34  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	36000		ug/kg	3410	--	1000
CI5-BZ#105	ND		ug/kg	3410	--	1000
CI6-BZ#138	11400		ug/kg	3410	--	1000
CI7-BZ#187	4880		ug/kg	3410	--	1000
CI6-BZ#128	ND		ug/kg	3410	--	1000
CI7-BZ#170	ND		ug/kg	3410	--	1000
CI8-BZ#195	ND		ug/kg	3410	--	1000
CI9-BZ#206	ND		ug/kg	3410	--	1000
CI10-BZ#209	ND		ug/kg	3410	--	1000

DBOB 86 30-150  
 BZ 198 132 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204594**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

Lab ID: L1204594-01  
 Client ID: S-12M-C011-2.2-2.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/31/12 08:42  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 09:34  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	62600		ug/kg	3410	--	1000
CI4-BZ#44	56500		ug/kg	3410	--	1000
CI4-BZ#66	39100		ug/kg	3410	--	1000
CI5-BZ#101	10400		ug/kg	3410	--	1000
CI5-BZ#118	4460		ug/kg	3410	--	1000
CI6-BZ#153	9820		ug/kg	3410	--	1000
CI7-BZ#180	ND		ug/kg	3410	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	132		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-01 D  
 Client ID: S-12M-C011-2.2-2.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 18:50  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 09:34  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#18	60900		ug/kg	13600	--	4000
CI4-BZ#52	163000		ug/kg	13600	--	4000

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-02  
 Client ID: S-12M-C011-2.7-3.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 17:22  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/09/12 09:34  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	134		ug/kg	67.7	--	50
CI3-BZ#18	253		ug/kg	67.7	--	50
CI4-BZ#66	162		ug/kg	67.7	--	50
CI5-BZ#105	ND		ug/kg	67.7	--	50
CI6-BZ#138	81.3		ug/kg	67.7	--	50
CI7-BZ#187	ND		ug/kg	67.7	--	50
CI6-BZ#128	ND		ug/kg	67.7	--	50
CI7-BZ#180	ND		ug/kg	67.7	--	50
CI7-BZ#170	ND		ug/kg	67.7	--	50
CI8-BZ#195	ND		ug/kg	67.7	--	50
CI9-BZ#206	ND		ug/kg	67.7	--	50
CI10-BZ#209	ND		ug/kg	67.7	--	50

DBOB 82 30-150  
 BZ 198 77 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-02  
 Client ID: S-12M-C011-2.7-3.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 17:22  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/09/12 09:34  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	217		ug/kg	67.7	--	50
CI4-BZ#52	553		ug/kg	67.7	--	50
CI4-BZ#44	193		ug/kg	67.7	--	50
CI5-BZ#101	104		ug/kg	67.7	--	50
CI5-BZ#118	76.3		ug/kg	67.7	--	50
CI6-BZ#153	ND		ug/kg	67.7	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	77		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-03  
 Client ID: S-12M-C012-2.2-2.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/31/12 10:09  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 10:07  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	1710		ug/kg	1380	--	1000
CI3-BZ#18	4740		ug/kg	1380	--	1000
CI4-BZ#52	19000		ug/kg	1380	--	1000
CI4-BZ#66	12000		ug/kg	1380	--	1000
CI5-BZ#118	10900		ug/kg	1380	--	1000
CI6-BZ#138	9490		ug/kg	1380	--	1000
CI6-BZ#128	2370		ug/kg	1380	--	1000
CI7-BZ#180	ND		ug/kg	1380	--	1000
CI7-BZ#170	ND		ug/kg	1380	--	1000
CI8-BZ#195	ND		ug/kg	1380	--	1000
CI9-BZ#206	ND		ug/kg	1380	--	1000
CI10-BZ#209	ND		ug/kg	1380	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	75		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-03  
 Client ID: S-12M-C012-2.2-2.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/31/12 10:09  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 10:07  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	2640		ug/kg	1380	--	1000
CI4-BZ#44	6570		ug/kg	1380	--	1000
CI5-BZ#101	10600		ug/kg	1380	--	1000
CI6-BZ#153	7300		ug/kg	1380	--	1000
CI5-BZ#105	3350		ug/kg	1380	--	1000
CI7-BZ#187	ND		ug/kg	1380	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	75		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-04  
 Client ID: S-12M-C012-2.7-3.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 16:38  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/09/12 10:07  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	38.7		ug/kg	26.9	--	20
CI3-BZ#18	113		ug/kg	26.9	--	20
CI4-BZ#52	332		ug/kg	26.9	--	20
CI4-BZ#66	91.3		ug/kg	26.9	--	20
CI5-BZ#105	ND		ug/kg	26.9	--	20
CI6-BZ#138	56.0		ug/kg	26.9	--	20
CI6-BZ#128	ND		ug/kg	26.9	--	20
CI7-BZ#180	ND		ug/kg	26.9	--	20
CI8-BZ#195	ND		ug/kg	26.9	--	20
CI9-BZ#206	60.6		ug/kg	26.9	--	20
DBOB	88			30-150		
BZ 198	85			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-04  
 Client ID: S-12M-C012-2.7-3.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 16:38  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/09/12 10:07  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	52.5		ug/kg	26.9	--	20
CI4-BZ#44	103		ug/kg	26.9	--	20
CI5-BZ#101	59.4		ug/kg	26.9	--	20
CI5-BZ#118	39.9		ug/kg	26.9	--	20
CI6-BZ#153	54.9		ug/kg	26.9	--	20
CI7-BZ#187	ND		ug/kg	26.9	--	20
CI7-BZ#170	27.0		ug/kg	26.9	--	20
CI10-BZ#209	56.6		ug/kg	26.9	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	85		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-05  
 Client ID: S-12M-C012-2.7-3.2-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 11:59  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/09/12 10:07  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	30.0		ug/kg	13.8	--	10
CI3-BZ#18	67.2		ug/kg	13.8	--	10
CI4-BZ#52	148		ug/kg	13.8	--	10
CI4-BZ#66	38.0		ug/kg	13.8	--	10
CI5-BZ#118	18.5		ug/kg	13.8	--	10
CI6-BZ#138	27.2		ug/kg	13.8	--	10
CI7-BZ#187	ND		ug/kg	13.8	--	10
CI6-BZ#128	ND		ug/kg	13.8	--	10
CI7-BZ#170	ND		ug/kg	13.8	--	10
CI8-BZ#195	ND		ug/kg	13.8	--	10
CI10-BZ#209	30.3		ug/kg	13.8	--	10
DBOB	85			30-150		
BZ 198	82			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-05  
 Client ID: S-12M-C012-2.7-3.2-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 11:59  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/09/12 10:07  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	37.7		ug/kg	13.8	--	10
CI4-BZ#44	39.0		ug/kg	13.8	--	10
CI5-BZ#101	23.9		ug/kg	13.8	--	10
CI6-BZ#153	24.5		ug/kg	13.8	--	10
CI5-BZ#105	ND		ug/kg	13.8	--	10
CI7-BZ#180	ND		ug/kg	13.8	--	10
CI9-BZ#206	47.7		ug/kg	13.8	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	82		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-06  
 Client ID: S-12M-C013-2.0-2.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 18:06  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 09:51  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	2850		ug/kg	1720	--	500
CI3-BZ#18	4820		ug/kg	1720	--	500
CI4-BZ#52	19300		ug/kg	1720	--	500
CI4-BZ#66	14300		ug/kg	1720	--	500
CI5-BZ#118	12700		ug/kg	1720	--	500
CI6-BZ#138	10200		ug/kg	1720	--	500
CI6-BZ#128	2430		ug/kg	1720	--	500
CI7-BZ#170	ND		ug/kg	1720	--	500
CI8-BZ#195	ND		ug/kg	1720	--	500
CI9-BZ#206	ND		ug/kg	1720	--	500
CI10-BZ#209	ND		ug/kg	1720	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	93		30-150
DBOB	78		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-06  
 Client ID: S-12M-C013-2.0-2.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 18:06  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/09/12 09:51  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	3840		ug/kg	1720	--	500
CI4-BZ#44	6660		ug/kg	1720	--	500
CI5-BZ#101	14600		ug/kg	1720	--	500
CI6-BZ#153	8460		ug/kg	1720	--	500
CI5-BZ#105	3840		ug/kg	1720	--	500
CI7-BZ#187	ND		ug/kg	1720	--	500
CI7-BZ#180	ND		ug/kg	1720	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	93		30-150
DBOB	78		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-07  
 Client ID: S-12M-C013-2.5-3.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 12:43  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/09/12 09:51  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	15.2		ug/kg	13.3	--	10
CI3-BZ#18	33.5		ug/kg	13.3	--	10
CI4-BZ#52	126		ug/kg	13.3	--	10
CI4-BZ#66	43.7		ug/kg	13.3	--	10
CI5-BZ#118	25.6		ug/kg	13.3	--	10
CI5-BZ#105	ND		ug/kg	13.3	--	10
CI6-BZ#138	27.0		ug/kg	13.3	--	10
CI6-BZ#128	ND		ug/kg	13.3	--	10
CI7-BZ#180	ND		ug/kg	13.3	--	10
CI7-BZ#170	ND		ug/kg	13.3	--	10
CI8-BZ#195	ND		ug/kg	13.3	--	10
DBOB	94			30-150		
BZ 198	87			30-150		



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-07  
 Client ID: S-12M-C013-2.5-3.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 12:43  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/09/12 09:51  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	35.7		ug/kg	13.3	--	10
CI4-BZ#44	36.4		ug/kg	13.3	--	10
CI5-BZ#101	30.9		ug/kg	13.3	--	10
CI6-BZ#153	26.7		ug/kg	13.3	--	10
CI7-BZ#187	ND		ug/kg	13.3	--	10
CI9-BZ#206	23.6		ug/kg	13.3	--	10
CI10-BZ#209	14.3		ug/kg	13.3	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	94		30-150
BZ 198	87		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-08  
 Client ID: S-12M-C014-1.9-2.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 19:33  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/12/12 09:08  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	19800		ug/kg	5570	--	4000
CI3-BZ#18	40400		ug/kg	5570	--	4000
CI4-BZ#52	102000		ug/kg	5570	--	4000
CI5-BZ#105	ND		ug/kg	5570	--	4000
CI6-BZ#138	13200		ug/kg	5570	--	4000
CI7-BZ#187	ND		ug/kg	5570	--	4000
CI6-BZ#128	ND		ug/kg	5570	--	4000
CI7-BZ#180	ND		ug/kg	5570	--	4000
CI7-BZ#170	ND		ug/kg	5570	--	4000
CI8-BZ#195	ND		ug/kg	5570	--	4000
CI9-BZ#206	ND		ug/kg	5570	--	4000
CI10-BZ#209	ND		ug/kg	5570	--	4000

DBOB 63 30-150  
 BZ 198 84 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-08  
 Client ID: S-12M-C014-1.9-2.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 19:33  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/12/12 09:08  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	30400		ug/kg	5570	--	4000
CI4-BZ#44	38700		ug/kg	5570	--	4000
CI4-BZ#66	29800		ug/kg	5570	--	4000
CI5-BZ#101	15400		ug/kg	5570	--	4000
CI5-BZ#118	8800		ug/kg	5570	--	4000
CI6-BZ#153	14100		ug/kg	5570	--	4000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	63		30-150
BZ 198	84		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204594**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

Lab ID: L1204594-09  
 Client ID: S-12M-C014-2.4-2.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 14:11  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/12/12 09:08  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	54.2	--	40
CI4-BZ#52	888		ug/kg	54.2	--	40
CI4-BZ#66	675		ug/kg	54.2	--	40
CI5-BZ#101	942		ug/kg	54.2	--	40
CI5-BZ#118	715		ug/kg	54.2	--	40
CI6-BZ#138	552		ug/kg	54.2	--	40
CI6-BZ#128	135		ug/kg	54.2	--	40
CI7-BZ#170	72.9		ug/kg	54.2	--	40
CI8-BZ#195	ND		ug/kg	54.2	--	40
CI9-BZ#206	60.6		ug/kg	54.2	--	40
CI10-BZ#209	ND		ug/kg	54.2	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	98		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-09  
 Client ID: S-12M-C014-2.4-2.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 14:11  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/12/12 09:08  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#18	118		ug/kg	54.2	--	40
CI3-BZ#28	ND		ug/kg	54.2	--	40
CI4-BZ#44	306		ug/kg	54.2	--	40
CI6-BZ#153	426		ug/kg	54.2	--	40
CI5-BZ#105	201		ug/kg	54.2	--	40
CI7-BZ#187	84.1		ug/kg	54.2	--	40
CI7-BZ#180	81.7		ug/kg	54.2	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	98		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-10  
 Client ID: S-12M-C015-1.8-2.3  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 01:23  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/12/12 10:04  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	9790		ug/kg	2710	--	2000
CI3-BZ#18	13300		ug/kg	2710	--	2000
CI5-BZ#118	3460		ug/kg	2710	--	2000
CI5-BZ#105	ND		ug/kg	2710	--	2000
CI6-BZ#138	4410		ug/kg	2710	--	2000
CI6-BZ#128	ND		ug/kg	2710	--	2000
CI7-BZ#180	ND		ug/kg	2710	--	2000
CI7-BZ#170	ND		ug/kg	2710	--	2000
CI8-BZ#195	ND		ug/kg	2710	--	2000
CI9-BZ#206	ND		ug/kg	2710	--	2000
CI10-BZ#209	ND		ug/kg	2710	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	93		30-150
DBOB	83		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-10  
 Client ID: S-12M-C015-1.8-2.3  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 01:23  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/12/12 10:04  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	21100		ug/kg	2710	--	2000
CI4-BZ#52	36600		ug/kg	2710	--	2000
CI4-BZ#44	15500		ug/kg	2710	--	2000
CI4-BZ#66	12000		ug/kg	2710	--	2000
CI5-BZ#101	6690		ug/kg	2710	--	2000
CI6-BZ#153	5980		ug/kg	2710	--	2000
CI7-BZ#187	ND		ug/kg	2710	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	93		30-150
DBOB	83		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-11  
 Client ID: S-12M-C015-1.8-2.3-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 02:07  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/12/12 10:04  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:22  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	11400		ug/kg	2780	--	2000
CI3-BZ#18	21100		ug/kg	2780	--	2000
CI5-BZ#105	ND		ug/kg	2780	--	2000
CI6-BZ#138	5160		ug/kg	2780	--	2000
CI6-BZ#128	ND		ug/kg	2780	--	2000
CI7-BZ#180	ND		ug/kg	2780	--	2000
CI7-BZ#170	ND		ug/kg	2780	--	2000
CI8-BZ#195	ND		ug/kg	2780	--	2000
CI9-BZ#206	ND		ug/kg	2780	--	2000
CI10-BZ#209	ND		ug/kg	2780	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	83		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-11  
 Client ID: S-12M-C015-1.8-2.3-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 02:07  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/12/12 10:04  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:22  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	22300		ug/kg	2780	--	2000
CI4-BZ#52	39900		ug/kg	2780	--	2000
CI4-BZ#44	16600		ug/kg	2780	--	2000
CI4-BZ#66	13400		ug/kg	2780	--	2000
CI5-BZ#101	7970		ug/kg	2780	--	2000
CI5-BZ#118	4630		ug/kg	2780	--	2000
CI6-BZ#153	7170		ug/kg	2780	--	2000
CI7-BZ#187	ND		ug/kg	2780	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	83		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-12  
 Client ID: S-12M-C015-2.3-2.8  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 00:39  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/12/12 10:04  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:24  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	225		ug/kg	53.0	--	40
CI3-BZ#18	280		ug/kg	53.0	--	40
CI5-BZ#105	ND		ug/kg	53.0	--	40
CI6-BZ#138	84.6		ug/kg	53.0	--	40
CI6-BZ#128	ND		ug/kg	53.0	--	40
CI7-BZ#180	ND		ug/kg	53.0	--	40
CI7-BZ#170	ND		ug/kg	53.0	--	40
CI8-BZ#195	ND		ug/kg	53.0	--	40
CI9-BZ#206	ND		ug/kg	53.0	--	40
CI10-BZ#209	ND		ug/kg	53.0	--	40
DBOB	124			30-150		
BZ 198	101			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-12  
 Client ID: S-12M-C015-2.3-2.8  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 00:39  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/12/12 10:04  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:24  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	497		ug/kg	53.0	--	40
CI4-BZ#52	745		ug/kg	53.0	--	40
CI4-BZ#44	322		ug/kg	53.0	--	40
CI4-BZ#66	284		ug/kg	53.0	--	40
CI5-BZ#101	144		ug/kg	53.0	--	40
CI5-BZ#118	79.0		ug/kg	53.0	--	40
CI6-BZ#153	125		ug/kg	53.0	--	40
CI7-BZ#187	ND		ug/kg	53.0	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	124		30-150
BZ 198	101		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-13  
 Client ID: S-12M-C016-0.0-0.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/31/12 19:38  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/07/12 10:00  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:25  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	2370		ug/kg	1350	--	1000
CI3-BZ#18	4180		ug/kg	1350	--	1000
CI4-BZ#52	11000		ug/kg	1350	--	1000
CI4-BZ#66	6200		ug/kg	1350	--	1000
CI5-BZ#118	4330		ug/kg	1350	--	1000
CI6-BZ#138	3160		ug/kg	1350	--	1000
CI7-BZ#187	ND		ug/kg	1350	--	1000
CI6-BZ#128	ND		ug/kg	1350	--	1000
CI7-BZ#180	ND		ug/kg	1350	--	1000
CI7-BZ#170	ND		ug/kg	1350	--	1000
CI8-BZ#195	ND		ug/kg	1350	--	1000
CI9-BZ#206	ND		ug/kg	1350	--	1000
CI10-BZ#209	ND		ug/kg	1350	--	1000
DBOB	76			30-150		
BZ 198	92			30-150		

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-13  
 Client ID: S-12M-C016-0.0-0.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/31/12 19:38  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/07/12 10:00  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:25  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	9090		ug/kg	1350	--	1000
CI4-BZ#44	5710		ug/kg	1350	--	1000
CI5-BZ#101	4980		ug/kg	1350	--	1000
CI6-BZ#153	3910		ug/kg	1350	--	1000
CI5-BZ#105	1380		ug/kg	1350	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	92		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-14  
 Client ID: S-12M-C016-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 13:27  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/07/12 10:00  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:26  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#18	276		ug/kg	54.1	--	40
CI6-BZ#138	134		ug/kg	54.1	--	40
CI8-BZ#195	ND		ug/kg	54.1	--	40
CI9-BZ#206	ND		ug/kg	54.1	--	40
CI10-BZ#209	ND		ug/kg	54.1	--	40

DBOB	127	30-150
BZ 198	106	30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-14  
 Client ID: S-12M-C016-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 13:27  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/07/12 10:00  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:26  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	112		ug/kg	54.1	--	40
CI3-BZ#28	590		ug/kg	54.1	--	40
CI4-BZ#52	712		ug/kg	54.1	--	40
CI4-BZ#44	357		ug/kg	54.1	--	40
CI4-BZ#66	279		ug/kg	54.1	--	40
CI5-BZ#101	281		ug/kg	54.1	--	40
CI5-BZ#118	161		ug/kg	54.1	--	40
CI6-BZ#153	191		ug/kg	54.1	--	40
CI5-BZ#105	ND		ug/kg	54.1	--	40
CI7-BZ#187	ND		ug/kg	54.1	--	40
CI6-BZ#128	ND		ug/kg	54.1	--	40
CI7-BZ#180	ND		ug/kg	54.1	--	40
CI7-BZ#170	ND		ug/kg	54.1	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	127		30-150
BZ 198	106		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204594**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204594-15  
**Client ID:** S-12M-C017-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/03/12 02:50  
**Analyst:** AW  
**Percent Solids:** 97%

**Date Collected:** 03/07/12 09:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/27/12 08:28  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	19200		ug/kg	2700	--	2000
CI3-BZ#18	27100		ug/kg	2700	--	2000
CI5-BZ#105	ND		ug/kg	2700	--	2000
CI6-BZ#138	5220		ug/kg	2700	--	2000
CI7-BZ#187	ND		ug/kg	2700	--	2000
CI6-BZ#128	ND		ug/kg	2700	--	2000
CI7-BZ#180	ND		ug/kg	2700	--	2000
CI7-BZ#170	ND		ug/kg	2700	--	2000
CI8-BZ#195	ND		ug/kg	2700	--	2000
CI9-BZ#206	ND		ug/kg	2700	--	2000
CI10-BZ#209	ND		ug/kg	2700	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	98		30-150
DBOB	81		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204594**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204594-15  
**Client ID:** S-12M-C017-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/03/12 02:50  
**Analyst:** AW  
**Percent Solids:** 97%

**Date Collected:** 03/07/12 09:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/27/12 08:28  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	46400		ug/kg	2700	--	2000
CI4-BZ#52	46400		ug/kg	2700	--	2000
CI4-BZ#44	22400		ug/kg	2700	--	2000
CI4-BZ#66	14700		ug/kg	2700	--	2000
CI5-BZ#101	8730		ug/kg	2700	--	2000
CI5-BZ#118	5920		ug/kg	2700	--	2000
CI6-BZ#153	7550		ug/kg	2700	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	98		30-150
DBOB	81		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-16  
 Client ID: S-12M-C017-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 23:12  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/07/12 09:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:31  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	188		ug/kg	53.1	--	40
CI3-BZ#18	370		ug/kg	53.1	--	40
CI4-BZ#52	571		ug/kg	53.1	--	40
CI4-BZ#66	774		ug/kg	53.1	--	40
CI5-BZ#118	743		ug/kg	53.1	--	40
CI6-BZ#138	507		ug/kg	53.1	--	40
CI6-BZ#128	119		ug/kg	53.1	--	40
CI7-BZ#170	63.2		ug/kg	53.1	--	40
CI8-BZ#195	ND		ug/kg	53.1	--	40
CI9-BZ#206	ND		ug/kg	53.1	--	40
CI10-BZ#209	ND		ug/kg	53.1	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	130		30-150
DBOB	133		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-16  
 Client ID: S-12M-C017-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/02/12 23:12  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/07/12 09:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:31  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	353		ug/kg	53.1	--	40
CI4-BZ#44	300		ug/kg	53.1	--	40
CI5-BZ#101	772		ug/kg	53.1	--	40
CI6-BZ#153	402		ug/kg	53.1	--	40
CI5-BZ#105	205		ug/kg	53.1	--	40
CI7-BZ#187	72.7		ug/kg	53.1	--	40
CI7-BZ#180	68.5		ug/kg	53.1	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	130		30-150
DBOB	133		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-17  
 Client ID: S-12M-C018-2.4-2.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 03:34  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/12/12 09:26  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:32  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	6760		ug/kg	2760	--	2000
CI3-BZ#18	14900		ug/kg	2760	--	2000
CI4-BZ#66	12400		ug/kg	2760	--	2000
CI5-BZ#118	3500		ug/kg	2760	--	2000
CI5-BZ#105	ND		ug/kg	2760	--	2000
CI6-BZ#138	5130		ug/kg	2760	--	2000
CI7-BZ#187	ND		ug/kg	2760	--	2000
CI6-BZ#128	ND		ug/kg	2760	--	2000
CI7-BZ#180	ND		ug/kg	2760	--	2000
CI7-BZ#170	ND		ug/kg	2760	--	2000
CI8-BZ#195	ND		ug/kg	2760	--	2000
CI9-BZ#206	ND		ug/kg	2760	--	2000
CI10-BZ#209	ND		ug/kg	2760	--	2000

DBOB 68 30-150  
 BZ 198 102 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204594**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204594-17  
**Client ID:** S-12M-C018-2.4-2.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/03/12 03:34  
**Analyst:** AW  
**Percent Solids:** 95%

**Date Collected:** 03/12/12 09:26  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/27/12 08:32  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	7450		ug/kg	2760	--	2000
CI4-BZ#44	16400		ug/kg	2760	--	2000
CI5-BZ#101	6390		ug/kg	2760	--	2000
CI6-BZ#153	5890		ug/kg	2760	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	68		30-150
BZ 198	102		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204594**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204594-17 D  
**Client ID:** S-12M-C018-2.4-2.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/03/12 14:54  
**Analyst:** AW  
**Percent Solids:** 95%

**Date Collected:** 03/12/12 09:26  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/27/12 08:32  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	62200		ug/kg	5520	--	4000

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-18  
 Client ID: S-12M-C018-2.9-3.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 11:16  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/12/12 09:26  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:33  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	10.4		ug/kg	5.42	--	4
CI3-BZ#18	36.2		ug/kg	5.42	--	4
CI4-BZ#52	79.6		ug/kg	5.42	--	4
CI4-BZ#66	23.7		ug/kg	5.42	--	4
CI5-BZ#118	18.0		ug/kg	5.42	--	4
CI6-BZ#138	25.8		ug/kg	5.42	--	4
CI7-BZ#187	8.62		ug/kg	5.42	--	4
CI6-BZ#128	5.70		ug/kg	5.42	--	4
CI8-BZ#195	ND		ug/kg	5.42	--	4
CI10-BZ#209	23.4		ug/kg	5.42	--	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	82		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-18  
 Client ID: S-12M-C018-2.9-3.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 11:16  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/12/12 09:26  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:33  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	8.93		ug/kg	5.42	--	4
CI4-BZ#44	22.7		ug/kg	5.42	--	4
CI5-BZ#101	17.6		ug/kg	5.42	--	4
CI6-BZ#153	18.7		ug/kg	5.42	--	4
CI5-BZ#105	10.5		ug/kg	5.42	--	4
CI7-BZ#180	10.6		ug/kg	5.42	--	4
CI7-BZ#170	18.4		ug/kg	5.42	--	4
CI9-BZ#206	34.7		ug/kg	5.42	--	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	82		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-19  
 Client ID: S-12M-C019-1.9-2.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 04:18  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/12/12 09:46  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:35  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	16800		ug/kg	2760	--	2000
CI3-BZ#18	21800		ug/kg	2760	--	2000
CI5-BZ#118	6360		ug/kg	2760	--	2000
CI5-BZ#105	ND		ug/kg	2760	--	2000
CI6-BZ#138	4410		ug/kg	2760	--	2000
CI7-BZ#187	ND		ug/kg	2760	--	2000
CI6-BZ#128	ND		ug/kg	2760	--	2000
CI7-BZ#180	ND		ug/kg	2760	--	2000
CI7-BZ#170	ND		ug/kg	2760	--	2000
CI8-BZ#195	ND		ug/kg	2760	--	2000
CI9-BZ#206	ND		ug/kg	2760	--	2000
CI10-BZ#209	ND		ug/kg	2760	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	81		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-19  
 Client ID: S-12M-C019-1.9-2.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/03/12 04:18  
 Analyst: AW  
 Percent Solids: 95%

Date Collected: 03/12/12 09:46  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:35  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	26300		ug/kg	2760	--	2000
CI4-BZ#52	43700		ug/kg	2760	--	2000
CI4-BZ#44	15700		ug/kg	2760	--	2000
CI4-BZ#66	15200		ug/kg	2760	--	2000
CI5-BZ#101	10400		ug/kg	2760	--	2000
CI6-BZ#153	7250		ug/kg	2760	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	81		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204594**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

Lab ID: L1204594-20  
 Client ID: S-12M-C021-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/01/12 00:44  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/12/12 10:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:36  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	21000		ug/kg	3430	--	1000
CI3-BZ#18	34200		ug/kg	3430	--	1000
CI4-BZ#52	38400		ug/kg	3430	--	1000
CI5-BZ#118	15100		ug/kg	3430	--	1000
CI6-BZ#138	10100		ug/kg	3430	--	1000
CI6-BZ#128	ND		ug/kg	3430	--	1000
CI7-BZ#180	ND		ug/kg	3430	--	1000
CI7-BZ#170	ND		ug/kg	3430	--	1000
CI8-BZ#195	ND		ug/kg	3430	--	1000
CI9-BZ#206	ND		ug/kg	3430	--	1000
CI10-BZ#209	ND		ug/kg	3430	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	101		30-150
DBOB	84		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204594-20  
 Client ID: S-12M-C021-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 04/01/12 00:44  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/12/12 10:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 08:36  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	42100		ug/kg	3430	--	1000
CI4-BZ#44	19700		ug/kg	3430	--	1000
CI4-BZ#66	26200		ug/kg	3430	--	1000
CI5-BZ#101	17900		ug/kg	3430	--	1000
CI6-BZ#153	11700		ug/kg	3430	--	1000
CI5-BZ#105	4050		ug/kg	3430	--	1000
CI7-BZ#187	ND		ug/kg	3430	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	101		30-150
DBOB	84		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
 Analytical Date: 03/30/12 13:01  
 Analyst: AW

Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG525261-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	86		30-150

Project Name: NEW BEDFORD HARBOR SUPERFUND

Lab Number: L1204594

Project Number: TO-0010-04

Report Date: 04/09/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
 Analytical Date: 03/30/12 13:01  
 Analyst: AW

Extraction Method: EPA 3540C  
 Extraction Date: 03/27/12 07:55  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/29/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG525261-1					
C16-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	86		30-150

## Matrix Spike Analysis

### Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG525261-4 WG525261-5 QC Sample: L1204594-07 Client ID: S-12M-C013-2.5-3.0												
Cl2-BZ#8	15.2	1670	1300	77		1250	74		40-140	4		30
Cl3-BZ#18	33.5	1670	1340	78		1240	73		40-140	8		30
Cl4-BZ#52	126	1670	1500	82		1410	77		40-140	6		30
Cl4-BZ#66	43.7	1670	1420	83		1330	77		40-140	7		30
Cl5-BZ#118	25.6	1670	1480	87		1340	79		40-140	10		30
Cl5-BZ#105	ND	1670	1410	85		1290	78		40-140	9		30
Cl6-BZ#138	27.0	1670	1460	86		1310	77		40-140	11		30
Cl6-BZ#128	ND	1670	1410	85		1250	75		40-140	12		30
Cl7-BZ#180	ND	1670	1240	74		1120	67		40-140	10		30
Cl7-BZ#170	ND	1670	1400	84		1260	76		40-140	11		30
Cl8-BZ#195	ND	1670	1300	78		1200	72		40-140	8		30
Cl3-BZ#28	35.7	1670	1460	85		1390	82		40-140	5		30
Cl4-BZ#44	36.4	1670	1330	78		1270	74		40-140	5		30
Cl5-BZ#101	30.9	1670	1390	81		1310	77		40-140	6		30
Cl6-BZ#153	26.7	1670	1410	83		1310	77		40-140	7		30
Cl7-BZ#187	ND	1670	1380	83		1270	76		40-140	8		30
Cl9-BZ#206	23.6	1670	1520	90		1350	80		40-140	12		30
Cl10-BZ#209	14.3	1670	1360	81		1210	72		40-140	12		30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20    QC Batch ID: WG525261-4    WG525261-5    QC Sample: L1204594-07    Client ID: S-12M-C013-2.5-3.0

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	85		75		30-150
DBOB	88		83		30-150



## Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG525261-2 WG525261-3								
CI2-BZ#8	98		86		40-140	13		30
CI3-BZ#18	110		89		40-140	21		30
CI3-BZ#28	100		85		40-140	16		30
CI4-BZ#52	132		104		40-140	24		30
CI4-BZ#44	98		89		40-140	10		30
CI4-BZ#66	98		91		40-140	7		30
CI5-BZ#101	102		94		40-140	8		30
CI5-BZ#118	104		93		40-140	11		30
CI5-BZ#105	94		85		40-140	10		30
CI6-BZ#138	103		95		40-140	8		30
CI7-BZ#187	99		94		40-140	5		30
CI6-BZ#128	96		91		40-140	5		30
CI7-BZ#180	83		78		40-140	6		30
CI7-BZ#170	92		87		40-140	6		30
CI8-BZ#195	84		80		40-140	5		30
CI9-BZ#206	88		87		40-140	1		30
CI10-BZ#209	81		82		40-140	1		30

### Lab Control Sample Analysis

#### Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Lab Number:** L1204594

**Project Number:** TO-0010-04

**Report Date:** 04/09/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG525261-2 WG525261-3								

DBOB	84		89		30-150			
BZ 198	93		86		30-150			

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG525261-2 WG525261-3								
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Cl6-BZ#153	101		95		40-140	6		30
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Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	84		89		30-150
BZ 198	93		86		30-150

# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-01  
**Client ID:** S-12M-C011-2.2-2.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/09/12 09:34  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.3		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	34.9		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-02  
**Client ID:** S-12M-C011-2.7-3.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/09/12 09:34  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.6		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	44.9		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-03  
**Client ID:** S-12M-C012-2.2-2.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:07  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.1		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	29.1		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-04  
**Client ID:** S-12M-C012-2.7-3.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:07  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.1		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	43.9		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-05  
**Client ID:** S-12M-C012-2.7-3.2-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/09/12 10:07  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.6		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	40.2		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-06  
**Client ID:** S-12M-C013-2.0-2.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/09/12 09:51  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.4		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	29.7		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-07  
**Client ID:** S-12M-C013-2.5-3.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/09/12 09:51  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.7		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	45.0		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-08  
**Client ID:** S-12M-C014-1.9-2.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 09:08  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.8		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	36.4		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-09  
**Client ID:** S-12M-C014-2.4-2.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 09:08  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.6		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	41.1		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-10  
**Client ID:** S-12M-C015-1.8-2.3  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 10:04  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.0		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	42.4		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-11  
**Client ID:** S-12M-C015-1.8-2.3-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 10:04  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.0		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	42.6		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-12  
**Client ID:** S-12M-C015-2.3-2.8  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 10:04  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.2		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	55.4		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-13  
**Client ID:** S-12M-C016-0.0-0.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/07/12 10:00  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.3		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	42.2		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-14  
**Client ID:** S-12M-C016-0.2-0.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/07/12 10:00  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.5		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	45.3		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

### SAMPLE RESULTS

**Lab ID:** L1204594-15  
**Client ID:** S-12M-C017-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/07/12 09:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.6		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	43.1		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-16  
**Client ID:** S-12M-C017-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/07/12 09:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.0		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	63.6		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-17  
**Client ID:** S-12M-C018-2.4-2.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 09:26  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.4		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	33.6		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-18  
**Client ID:** S-12M-C018-2.9-3.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 09:26  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.9		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	41.9		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-19  
**Client ID:** S-12M-C019-1.9-2.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 09:46  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.2		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	43.1		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204594-20  
**Client ID:** S-12M-C021-0.2-0.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/12/12 10:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.0		%	0.100	--	1	-	03/23/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	34.6		%	0.100	NA	1	-	03/23/12 10:30	30,2540G	KB



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Project Number:** TO-0010-04

**Lab Number:** L1204594

**Report Date:** 04/09/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG524833-1 QC Sample: L1204594-07 Client ID: S-12M-C013-2.5-3.0						
Solids, Total	97.7	97.6	%	0		20



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

### 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
D	Absent
B	Absent
C	Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204594-01A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-02A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-03A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-04A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-05A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-06A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-07A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-07B	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1204594-08A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-09A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-10A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-11A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-12A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-13A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-14A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-15A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204594-16A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-17A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-18A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-19A	Glass 250ml unpreserved	B	N/A	2.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204594-20A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

## GLOSSARY

### Acronyms

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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value 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.

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

**Data Qualifiers**

- 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.
- 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

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**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204594  
**Report Date:** 04/09/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### **Connecticut Department of Public Health Certificate/Lab ID: PH-0141.**

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### **Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### **Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### **New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

### **New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

*Atmospheric Organic Parameters* (EPA TO-15)

*Biological Tissue* (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

*Air & Emissions* (EPA TO-15.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to LA-DEQ Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID: 460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 3020A, 6020A, 245.7, 9040B, SM4500H-B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A, 7470A, 7471B, 9040B, 9045C, 3050B, 3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Air & Emissions* (EPA TO-15.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.







# MANSFIELD CHAIN OF CUSTODY

PAGE 5 OF 13

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

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

### Client Information

Client: Woods Hole Group  
Address: 81 Technology Park Dr.  
East Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: dwalsh@whgrp.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

*Homogenize samples before analysis*

**PLEASE NOTE** • Project - *specific EDD*

MS/MSD (at unit cost) will be omitted unless you check here:

**Project Information**  
Project Name: New Bedford Harbor  
Project Location: New Bedford, MA  
Project #: T0-0010-04  
Project Manager: Dave Walsh

ALPHA Quote #:  
**Turn-Around Time**

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

Date Rec'd in Lab: \_\_\_\_\_

**Report Information - Data Deliverables**

FAX  EMAIL

ADEX  Add'l Deliverables

**Regulatory Requirements/Report Limits**

State/Fed Program: \_\_\_\_\_

Criteria

ALPHA Job #: L1204594

**Billing Information**

Same as Client info

PO #:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	Container Type	Preservative	State/Fed Program	Criteria	Sample Specific Comments
04594-07*	S-12M-CO13-2.5-3.0	3/9/12	09:51	SED	DS	DS	1			PV-6
	S-12M-CO13-3.0-3.5	3/9/12	09:51	SED	DS	DS	1			PV-6 Archive
(07)	S-12M-CO13-2.5-3.0-MS/MSD	3/9/12	09:51	SED	DS	DS	1			PV-6 MS/MSD
	S-12M-CO14-1.9-2.4	3/12/12	09:08	SED	DS	DS	1			PV-18
	S-12M-CO14-2.4-2.9	3/12/12	09:08	SED	DS	DS	1			PV-18
	S-12M-CO14-2.9-3.4	3/12/12	09:08	SED	DS	DS	1			PV-18 Archive
	S-12M-CO15-1.8-2.3	3/12/12	10:04	SED	DS	DS	1			LE02
	S-12M-CO15-1.8-2.3-REP	3/12/12	10:04	SED	DS	DS	1			LE02 REP
	S-12M-CO15-2.3-2.8	3/12/12	10:04	SED	DS	DS	1			LE02
	S-12M-CO15-2.8-3.3	3/12/12	10:04	SED	DS	DS	1			LE02 Archive

### SAMPLE HANDLING

Filtration \_\_\_\_\_

Done

Not needed

Lab to do

Preservation

Lab to do

(Please specify below)

Relinquished By: Dave Walsh

Date/Time: 3/16/12 0915

Received By: M. C. Walsh

Date/Time: 3/14/12 0515

Container Type: A

Preservative: A

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



# MANSFIELD CHAIN OF CUSTODY

PAGE 6 OF 13

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

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

### Client Information

Client: Woods Hole Group

Address: 81 Technology Park Dr.  
East Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: [amw@whgrp.com](mailto:amw@whgrp.com)

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize samples before analysis

PLEASE NOTE - Project Specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

### Project Information

Project Name: New Bedford Harbor

Project Location: New Bedford, MA

Project #: TV-0616-04

Project Manager: Dave Welsh

ALPHA Quote #:

Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)

Date Due: Time:

Date Rec'd in Lab:

### Report Information - Data Deliverables

FAX  EMAIL

ADEX  Add'l Deliverables

Regulatory/Requirements/Report Limits

State/Fed Program

Criteria

ALPHA Job #: L1204594

### Billing Information

Same as Client Info

PO #:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Samplers Initials	Container Type	Preservative	Relinquished By:	Date/Time	Received By:	Date/Time	Sample Specific Comments
04594-13	S-12M-CO16-0.0-0.2	3/7/12	10:00	SED	DS	A	A	Paul Brown	3/14/12 0915	MSM	3/14/12 0915	PB-13
-14	S-12M-CO16-0.2-0.7	3/7/12	10:00	SED	DS	A	A					PB-13
-15	S-12M-CO16-0.7-1.2	3/7/12	10:00	SED	DS	A	A					PB-13
-16	S-12M-CO17-0.0-0.5	3/7/12	09:39	SED	DS	A	A					PV-5
-17	S-12M-CO17-0.5-1.0	3/7/12	09:39	SED	DS	A	A					PV-5
-18	S-12M-CO18-2.9-3.9	3/12/12	09:26	SED	DS	A	A					PV-5
	S-12M-CO18-3.9-4.9	3/12/12	09:26	SED	DS	A	A					PV-5
	S-12M-CO18-4.9-5.9	3/12/12	09:26	SED	DS	A	A					PV-5
	S-12M-CO19-1.4-1.9	3/12/12	09:46	SED	DS	A	A					PV-5

ANALYSIS

P/B Congruency

SAMPLE HANDLING

Filtration \_\_\_\_\_

Done

Not needed

Lab to do

Preservation

Lab to do

(Please specify below)

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

FORM NO: 101-09 (r)

EP-10



Kevin LaPlante &lt;klaplante@alphalab.com&gt;

 **Fwd: New Bedford Sediment samples**

**Peter Henriksen** <phenriks@alphalab.com>  
To: Kevin LaPlante <klaplante@alphalab.com>

Mon, Mar 19, 2012 at 12:40 PM

Please include this email as part of the COC.

Thanks

----- Forwarded message -----

From: **Dack Stuart** <dstuart@whgrp.com>  
Date: Mon, Mar 19, 2012 at 12:31 PM  
Subject: RE: New Bedford Sediment samples  
To: Peter Henriksen <phenriks@alphalab.com>

Pete,

I forgot to say that in all other situations where there was a discrepancy between the sample label and the chain, the chain should be followed. Sorry about that

Thanks,

Dack

---

**From:** Dack Stuart [mailto:dstuart@whgrp.com]  
**Sent:** Monday, March 19, 2012 12:25 PM  
**To:** 'Peter Henriksen'

**Cc:** 'David Walsh'; 'Mike Walsh'; 'Emerson Hasbrouck'  
**Subject:** RE: New Bedford Sediment samples

Pete,

As per our phone conversation, here is the chain of custody page that required a change. After further investigation, the following entries must be modified:

Page 6/13, old entry "S-12M-C018-3.4-3.9" should be changed to "S-12M-C018-2.9-3.4"; old entry "S-12M-C018-2.9-3.4" should be changed to "S-12M-C018-3.4-3.9" and should be archived. The deepest sample (3.4-3.9) is the one that should be archived, not the middle one (2.9-3.4).

Let me know if you have any more questions.

Dack



## ANALYTICAL REPORT

Lab Number:	L1204599
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD HARBOR SUPERFUND
Project Number:	TO-0010-04
Report Date:	04/09/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1204599-01	S-12M-C020-1.2-1.7	NEW BEDFORD, MA	03/12/12 10:53
L1204599-02	S-12M-C021-0.7-1.2	NEW BEDFORD, MA	03/12/12 10:39
L1204599-03	S-12M-C022-0.0-0.5	NEW BEDFORD, MA	03/13/12 09:14
L1204599-04	S-12M-C022-0.5-0.8	NEW BEDFORD, MA	03/13/12 09:14
L1204599-05	S-12M-C023-0.1-0.6	NEW BEDFORD, MA	03/13/12 10:21
L1204599-06	S-12M-C024-0.4-0.9	NEW BEDFORD, MA	03/13/12 10:36
L1204599-07	S-12M-C025-0.5-1.0	NEW BEDFORD, MA	03/13/12 10:08
L1204599-08	S-12M-C025-0.5-1.0-REP	NEW BEDFORD, MA	03/13/12 10:08
L1204599-09	S-12M-C025-1.0-1.5	NEW BEDFORD, MA	03/13/12 10:08
L1204599-10	S-12M-C026-1.1-1.6	NEW BEDFORD, MA	03/13/12 09:50
L1204599-11	S-12M-C026-1.6-2.1	NEW BEDFORD, MA	03/13/12 09:50
L1204599-12	S-12M-C027-0.2-0.7	NEW BEDFORD, MA	03/13/12 11:43
L1204599-13	S-12M-C028-0.1-0.6	NEW BEDFORD, MA	03/13/12 09:37
L1204599-14	S-12M-C028-0.6-1.1	NEW BEDFORD, MA	03/13/12 09:37
L1204599-15	S-12M-C029-0.8-1.3	NEW BEDFORD, MA	03/13/12 11:55
L1204599-16	S-12M-C030-0.1-0.6	NEW BEDFORD, MA	03/13/12 11:31
L1204599-17	S-12M-C030-0.6-1.1	NEW BEDFORD, MA	03/13/12 11:31
L1204599-19	S-12M-C031-0.1-0.6	NEW BEDFORD, MA	03/13/12 11:20
L1204599-20	S-12M-C031-0.6-1.1	NEW BEDFORD, MA	03/13/12 11:20

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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.

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

---

### Sample Receipt

Sediment samples were received intact and frozen on March 16, 2012. The samples were placed in refrigerated storage and removed on March 27, 2012 for initial percent solids and air dried and then placed in refrigerated storage. Samples were removed from refrigerated storage on March 29, 2012 when they were removed to analyze for air-dried percent solids and to extract samples for PCB Congener analysis.



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

### Case Narrative (continued)

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

Samples L1204599-01 through -20 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG525899-4/-5 MS/MSD recoveries, performed on L1204599-01, were above the acceptance criteria for several compounds; however, the associated LCS/LCSD recoveries were within criteria. The results of the sample utilized for the MS/MSD are considered to have a potentially high bias for these compounds.

CI8-BZ#195, CI9-BZ #206 and CI10-BZ #209 are 0% recovery due to the dilution required. The WG525899-5 MS/MSD RPDs, performed on L1204599-01, are above the acceptance criteria for several compounds.

The WG525899-6/-7 MS/MSD recoveries, performed on L1204599-20, are outside the acceptance criteria for CI2-BZ#8 (MS 35%) and CI3-BZ#18 (35%)/(36%) ; however, the associated LCS/LCSD recoveries are within criteria. No further action was required.

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: 04/09/12

# ORGANICS

# PCBS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-01  
 Client ID: S-12M-C020-1.2-1.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 12:47  
 Analyst: AW  
 Percent Solids: 94%

Date Collected: 03/12/12 10:53  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	3000		ug/kg	1740	--	500
CI3-BZ#18	6720		ug/kg	1740	--	500
CI4-BZ#52	12600		ug/kg	1740	--	500
CI4-BZ#66	4800		ug/kg	1740	--	500
CI5-BZ#118	2750		ug/kg	1740	--	500
CI5-BZ#105	ND		ug/kg	1740	--	500
CI6-BZ#138	2310		ug/kg	1740	--	500
CI7-BZ#187	ND		ug/kg	1740	--	500
CI6-BZ#128	ND		ug/kg	1740	--	500
CI7-BZ#180	ND		ug/kg	1740	--	500
CI7-BZ#170	ND		ug/kg	1740	--	500
CI8-BZ#195	ND		ug/kg	1740	--	500
CI9-BZ#206	ND		ug/kg	1740	--	500
CI10-BZ#209	ND		ug/kg	1740	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	81		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-01  
**Client ID:** S-12M-C020-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 12:47  
**Analyst:** AW  
**Percent Solids:** 94%

**Date Collected:** 03/12/12 10:53  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:20  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	9980		ug/kg	1740	--	500
CI4-BZ#44	4920		ug/kg	1740	--	500
CI5-BZ#101	3670		ug/kg	1740	--	500
CI6-BZ#153	3250		ug/kg	1740	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	81		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-02  
 Client ID: S-12M-C021-0.7-1.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 14:58  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/12/12 10:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	3180		ug/kg	681	--	200
CI3-BZ#18	4430		ug/kg	681	--	200
CI4-BZ#52	6580		ug/kg	681	--	200
CI6-BZ#138	1810		ug/kg	681	--	200
CI7-BZ#187	ND		ug/kg	681	--	200
CI6-BZ#128	ND		ug/kg	681	--	200
CI7-BZ#180	ND		ug/kg	681	--	200
CI7-BZ#170	ND		ug/kg	681	--	200
CI8-BZ#195	ND		ug/kg	681	--	200
CI9-BZ#206	ND		ug/kg	681	--	200
CI10-BZ#209	ND		ug/kg	681	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	82		30-150
DBOB	74		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-02  
 Client ID: S-12M-C021-0.7-1.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 14:58  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/12/12 10:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	6590		ug/kg	681	--	200
CI4-BZ#44	2920		ug/kg	681	--	200
CI4-BZ#66	3980		ug/kg	681	--	200
CI5-BZ#101	2820		ug/kg	681	--	200
CI5-BZ#118	2500		ug/kg	681	--	200
CI6-BZ#153	2120		ug/kg	681	--	200
CI5-BZ#105	ND		ug/kg	681	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	82		30-150
DBOB	74		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-03  
 Client ID: S-12M-C022-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 15:42  
 Analyst: AW  
 Percent Solids: 100%

Date Collected: 03/13/12 09:14  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	1760		ug/kg	326	--	100
CI3-BZ#18	3080		ug/kg	326	--	100
CI4-BZ#52	2450		ug/kg	326	--	100
CI4-BZ#66	942		ug/kg	326	--	100
CI5-BZ#105	ND		ug/kg	326	--	100
CI6-BZ#138	418		ug/kg	326	--	100
CI7-BZ#187	ND		ug/kg	326	--	100
CI6-BZ#128	ND		ug/kg	326	--	100
CI7-BZ#180	ND		ug/kg	326	--	100
CI7-BZ#170	ND		ug/kg	326	--	100
CI8-BZ#195	ND		ug/kg	326	--	100
CI9-BZ#206	ND		ug/kg	326	--	100
CI10-BZ#209	ND		ug/kg	326	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	75		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-03  
 Client ID: S-12M-C022-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 15:42  
 Analyst: AW  
 Percent Solids: 100%

Date Collected: 03/13/12 09:14  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	3150		ug/kg	326	--	100
CI4-BZ#44	961		ug/kg	326	--	100
CI5-BZ#101	634		ug/kg	326	--	100
CI5-BZ#118	573		ug/kg	326	--	100
CI6-BZ#153	520		ug/kg	326	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	75		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-04  
 Client ID: S-12M-C022-0.5-0.8  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 16:25  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/13/12 09:14  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	1810		ug/kg	330	--	100
CI3-BZ#18	3900		ug/kg	330	--	100
CI4-BZ#52	3640		ug/kg	330	--	100
CI4-BZ#44	1110		ug/kg	330	--	100
CI4-BZ#66	1920		ug/kg	330	--	100
CI6-BZ#138	1080		ug/kg	330	--	100
CI6-BZ#128	ND		ug/kg	330	--	100
CI7-BZ#180	ND		ug/kg	330	--	100
CI7-BZ#170	ND		ug/kg	330	--	100
CI8-BZ#195	ND		ug/kg	330	--	100
CI9-BZ#206	ND		ug/kg	330	--	100
CI10-BZ#209	ND		ug/kg	330	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	71		30-150
DBOB	64		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-04  
**Client ID:** S-12M-C022-0.5-0.8  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 16:25  
**Analyst:** AW  
**Percent Solids:** 99%

**Date Collected:** 03/13/12 09:14  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:20  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	2950		ug/kg	330	--	100
CI5-BZ#101	1400		ug/kg	330	--	100
CI5-BZ#118	1500		ug/kg	330	--	100
CI6-BZ#153	1120		ug/kg	330	--	100
CI5-BZ#105	523		ug/kg	330	--	100
CI7-BZ#187	ND		ug/kg	330	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	71		30-150
DBOB	64		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

Lab ID: L1204599-05  
 Client ID: S-12M-C023-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 17:53  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/13/12 10:21  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	248		ug/kg	66.0	--	50
CI3-BZ#18	418		ug/kg	66.0	--	50
CI4-BZ#52	553		ug/kg	66.0	--	50
CI4-BZ#66	77.6		ug/kg	66.0	--	50
CI5-BZ#118	ND		ug/kg	66.0	--	50
CI5-BZ#105	ND		ug/kg	66.0	--	50
CI6-BZ#138	ND		ug/kg	66.0	--	50
CI7-BZ#187	ND		ug/kg	66.0	--	50
CI6-BZ#128	ND		ug/kg	66.0	--	50
CI7-BZ#180	ND		ug/kg	66.0	--	50
CI7-BZ#170	ND		ug/kg	66.0	--	50
CI8-BZ#195	ND		ug/kg	66.0	--	50
CI9-BZ#206	ND		ug/kg	66.0	--	50
CI10-BZ#209	ND		ug/kg	66.0	--	50

DBOB 86 30-150  
 BZ 198 69 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-05  
**Client ID:** S-12M-C023-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 17:53  
**Analyst:** AW  
**Percent Solids:** 99%

**Date Collected:** 03/13/12 10:21  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:20  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	472		ug/kg	66.0	--	50
CI4-BZ#44	84.1		ug/kg	66.0	--	50
CI5-BZ#101	ND		ug/kg	66.0	--	50
CI6-BZ#153	82.4		ug/kg	66.0	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	69		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-06  
 Client ID: S-12M-C024-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 17:09  
 Analyst: AW  
 Percent Solids: 94%

Date Collected: 03/13/12 10:36  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	1980		ug/kg	281	--	200
CI3-BZ#18	2810		ug/kg	281	--	200
CI4-BZ#52	4500		ug/kg	281	--	200
CI5-BZ#105	ND		ug/kg	281	--	200
CI6-BZ#138	452		ug/kg	281	--	200
CI7-BZ#187	ND		ug/kg	281	--	200
CI6-BZ#128	ND		ug/kg	281	--	200
CI7-BZ#180	ND		ug/kg	281	--	200
CI7-BZ#170	ND		ug/kg	281	--	200
CI8-BZ#195	ND		ug/kg	281	--	200
CI9-BZ#206	ND		ug/kg	281	--	200
CI10-BZ#209	ND		ug/kg	281	--	200

DBOB 72 30-150  
 BZ 198 72 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-06  
**Client ID:** S-12M-C024-0.4-0.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 17:09  
**Analyst:** AW  
**Percent Solids:** 94%

**Date Collected:** 03/13/12 10:36  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:20  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	3220		ug/kg	281	--	200
CI4-BZ#44	1700		ug/kg	281	--	200
CI4-BZ#66	1310		ug/kg	281	--	200
CI5-BZ#101	637		ug/kg	281	--	200
CI5-BZ#118	353		ug/kg	281	--	200
CI6-BZ#153	626		ug/kg	281	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	72		30-150
BZ 198	72		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-07  
 Client ID: S-12M-C025-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/05/12 00:26  
 Analyst: AW  
 Percent Solids: 94%

Date Collected: 03/13/12 10:08  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	4000		ug/kg	1760	--	500
CI3-BZ#18	11500		ug/kg	1760	--	500
CI4-BZ#52	19400		ug/kg	1760	--	500
CI5-BZ#105	ND		ug/kg	1760	--	500
CI6-BZ#138	3330		ug/kg	1760	--	500
CI6-BZ#128	ND		ug/kg	1760	--	500
CI7-BZ#180	ND		ug/kg	1760	--	500
CI7-BZ#170	ND		ug/kg	1760	--	500
CI8-BZ#195	ND		ug/kg	1760	--	500
CI9-BZ#206	ND		ug/kg	1760	--	500
CI10-BZ#209	ND		ug/kg	1760	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	72		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-07  
 Client ID: S-12M-C025-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/05/12 00:26  
 Analyst: AW  
 Percent Solids: 94%

Date Collected: 03/13/12 10:08  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	16300		ug/kg	1760	--	500
CI4-BZ#44	7440		ug/kg	1760	--	500
CI4-BZ#66	6490		ug/kg	1760	--	500
CI5-BZ#101	4800		ug/kg	1760	--	500
CI5-BZ#118	3670		ug/kg	1760	--	500
CI6-BZ#153	4690		ug/kg	1760	--	500
CI7-BZ#187	ND		ug/kg	1760	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	72		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-08  
 Client ID: S-12M-C025-0.5-1.0-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/05/12 01:10  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/13/12 10:08  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	4080		ug/kg	1680	--	500
CI3-BZ#18	12000		ug/kg	1680	--	500
CI4-BZ#52	20600		ug/kg	1680	--	500
CI4-BZ#66	7700		ug/kg	1680	--	500
CI5-BZ#118	4300		ug/kg	1680	--	500
CI6-BZ#138	3770		ug/kg	1680	--	500
CI6-BZ#128	ND		ug/kg	1680	--	500
CI7-BZ#180	ND		ug/kg	1680	--	500
CI7-BZ#170	ND		ug/kg	1680	--	500
CI8-BZ#195	ND		ug/kg	1680	--	500
CI9-BZ#206	ND		ug/kg	1680	--	500
CI10-BZ#209	ND		ug/kg	1680	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	89		30-150
DBOB	72		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-08  
**Client ID:** S-12M-C025-0.5-1.0-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/05/12 01:10  
**Analyst:** AW  
**Percent Solids:** 97%

**Date Collected:** 03/13/12 10:08  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:20  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	17300		ug/kg	1680	--	500
CI4-BZ#44	8090		ug/kg	1680	--	500
CI5-BZ#101	5650		ug/kg	1680	--	500
CI6-BZ#153	5380		ug/kg	1680	--	500
CI5-BZ#105	ND		ug/kg	1680	--	500
CI7-BZ#187	ND		ug/kg	1680	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	89		30-150
DBOB	72		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-09  
 Client ID: S-12M-C025-1.0-1.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 22:59  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/13/12 10:08  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	270	--	200
CI3-BZ#18	706		ug/kg	270	--	200
CI4-BZ#52	2120		ug/kg	270	--	200
CI5-BZ#118	ND		ug/kg	270	--	200
CI5-BZ#105	ND		ug/kg	270	--	200
CI6-BZ#138	ND		ug/kg	270	--	200
CI7-BZ#187	ND		ug/kg	270	--	200
CI6-BZ#128	ND		ug/kg	270	--	200
CI7-BZ#180	ND		ug/kg	270	--	200
CI7-BZ#170	ND		ug/kg	270	--	200
CI8-BZ#195	ND		ug/kg	270	--	200
CI9-BZ#206	ND		ug/kg	270	--	200
CI10-BZ#209	ND		ug/kg	270	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	74		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-09  
**Client ID:** S-12M-C025-1.0-1.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 22:59  
**Analyst:** AW  
**Percent Solids:** 97%

**Date Collected:** 03/13/12 10:08  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:21  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	328		ug/kg	270	--	200
CI4-BZ#44	411		ug/kg	270	--	200
CI4-BZ#66	510		ug/kg	270	--	200
CI5-BZ#101	ND		ug/kg	270	--	200
CI6-BZ#153	ND		ug/kg	270	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	74		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-10  
 Client ID: S-12M-C026-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 02:34  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/13/12 09:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	8670		ug/kg	1350	--	1000
CI3-BZ#18	11800		ug/kg	1350	--	1000
CI4-BZ#52	16700		ug/kg	1350	--	1000
CI5-BZ#105	ND		ug/kg	1350	--	1000
CI6-BZ#138	2300		ug/kg	1350	--	1000
CI7-BZ#187	ND		ug/kg	1350	--	1000
CI6-BZ#128	ND		ug/kg	1350	--	1000
CI7-BZ#180	ND		ug/kg	1350	--	1000
CI7-BZ#170	ND		ug/kg	1350	--	1000
CI8-BZ#195	ND		ug/kg	1350	--	1000
CI9-BZ#206	ND		ug/kg	1350	--	1000
CI10-BZ#209	ND		ug/kg	1350	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	87		30-150
DBOB	77		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

Lab ID: L1204599-10  
 Client ID: S-12M-C026-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 02:34  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/13/12 09:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	20800		ug/kg	1350	--	1000
CI4-BZ#44	11100		ug/kg	1350	--	1000
CI4-BZ#66	7230		ug/kg	1350	--	1000
CI5-BZ#101	5720		ug/kg	1350	--	1000
CI5-BZ#118	3180		ug/kg	1350	--	1000
CI6-BZ#153	3400		ug/kg	1350	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	87		30-150
DBOB	77		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-11  
 Client ID: S-12M-C026-1.6-2.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 23:42  
 Analyst: AW  
 Percent Solids: 91%

Date Collected: 03/13/12 09:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	1080		ug/kg	290	--	200
CI3-BZ#18	1640		ug/kg	290	--	200
CI4-BZ#52	2100		ug/kg	290	--	200
CI4-BZ#66	966		ug/kg	290	--	200
CI5-BZ#105	ND		ug/kg	290	--	200
CI6-BZ#138	344		ug/kg	290	--	200
CI7-BZ#187	ND		ug/kg	290	--	200
CI6-BZ#128	ND		ug/kg	290	--	200
CI7-BZ#180	ND		ug/kg	290	--	200
CI7-BZ#170	ND		ug/kg	290	--	200
CI8-BZ#195	ND		ug/kg	290	--	200
CI9-BZ#206	ND		ug/kg	290	--	200
CI10-BZ#209	ND		ug/kg	290	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	71		30-150
DBOB	64		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-11  
**Client ID:** S-12M-C026-1.6-2.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 23:42  
**Analyst:** AW  
**Percent Solids:** 91%

**Date Collected:** 03/13/12 09:50  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:21  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	2500		ug/kg	290	--	200
CI4-BZ#44	1380		ug/kg	290	--	200
CI5-BZ#101	834		ug/kg	290	--	200
CI5-BZ#118	494		ug/kg	290	--	200
CI6-BZ#153	524		ug/kg	290	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	71		30-150
DBOB	64		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-12  
 Client ID: S-12M-C027-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 19:20  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/13/12 11:43  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	414		ug/kg	136	--	100
CI3-BZ#18	701		ug/kg	136	--	100
CI4-BZ#52	1220		ug/kg	136	--	100
CI5-BZ#105	ND		ug/kg	136	--	100
CI6-BZ#138	ND		ug/kg	136	--	100
CI7-BZ#187	ND		ug/kg	136	--	100
CI6-BZ#128	ND		ug/kg	136	--	100
CI7-BZ#180	ND		ug/kg	136	--	100
CI7-BZ#170	ND		ug/kg	136	--	100
CI8-BZ#195	ND		ug/kg	136	--	100
CI9-BZ#206	ND		ug/kg	136	--	100
CI10-BZ#209	ND		ug/kg	136	--	100

DBOB 85 30-150  
 BZ 198 75 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-12  
**Client ID:** S-12M-C027-0.2-0.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 19:20  
**Analyst:** AW  
**Percent Solids:** 97%

**Date Collected:** 03/13/12 11:43  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:21  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	977		ug/kg	136	--	100
CI4-BZ#44	284		ug/kg	136	--	100
CI4-BZ#66	253		ug/kg	136	--	100
CI5-BZ#101	217		ug/kg	136	--	100
CI5-BZ#118	158		ug/kg	136	--	100
CI6-BZ#153	235		ug/kg	136	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	75		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-13  
 Client ID: S-12M-C028-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 04:45  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/13/12 09:37  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	6000		ug/kg	1370	--	1000
CI3-BZ#18	8810		ug/kg	1370	--	1000
CI4-BZ#52	16700		ug/kg	1370	--	1000
CI4-BZ#66	4900		ug/kg	1370	--	1000
CI5-BZ#118	2630		ug/kg	1370	--	1000
CI5-BZ#105	ND		ug/kg	1370	--	1000
CI6-BZ#138	2270		ug/kg	1370	--	1000
CI7-BZ#187	ND		ug/kg	1370	--	1000
CI6-BZ#128	ND		ug/kg	1370	--	1000
CI7-BZ#180	ND		ug/kg	1370	--	1000
CI7-BZ#170	ND		ug/kg	1370	--	1000
CI8-BZ#195	ND		ug/kg	1370	--	1000
CI9-BZ#206	ND		ug/kg	1370	--	1000
CI10-BZ#209	ND		ug/kg	1370	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	95		30-150
DBOB	82		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-13  
**Client ID:** S-12M-C028-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 04:45  
**Analyst:** AW  
**Percent Solids:** 96%

**Date Collected:** 03/13/12 09:37  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:21  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	15200		ug/kg	1370	--	1000
CI4-BZ#44	5850		ug/kg	1370	--	1000
CI5-BZ#101	3430		ug/kg	1370	--	1000
CI6-BZ#153	3290		ug/kg	1370	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	95		30-150
DBOB	82		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-14  
 Client ID: S-12M-C028-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/05/12 01:54  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/13/12 09:37  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	2550		ug/kg	675	--	500
CI3-BZ#18	3930		ug/kg	675	--	500
CI4-BZ#52	7520		ug/kg	675	--	500
CI4-BZ#66	2790		ug/kg	675	--	500
CI5-BZ#105	ND		ug/kg	675	--	500
CI6-BZ#138	1140		ug/kg	675	--	500
CI7-BZ#187	ND		ug/kg	675	--	500
CI6-BZ#128	ND		ug/kg	675	--	500
CI7-BZ#180	ND		ug/kg	675	--	500
CI7-BZ#170	ND		ug/kg	675	--	500
CI8-BZ#195	ND		ug/kg	675	--	500
CI9-BZ#206	ND		ug/kg	675	--	500
CI10-BZ#209	ND		ug/kg	675	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	76		30-150
DBOB	67		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-14  
**Client ID:** S-12M-C028-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/05/12 01:54  
**Analyst:** AW  
**Percent Solids:** 97%

**Date Collected:** 03/13/12 09:37  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:21  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	7020		ug/kg	675	--	500
CI4-BZ#44	3730		ug/kg	675	--	500
CI5-BZ#101	1660		ug/kg	675	--	500
CI5-BZ#118	1310		ug/kg	675	--	500
CI6-BZ#153	1600		ug/kg	675	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	76		30-150
DBOB	67		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-15  
 Client ID: S-12M-C029-0.8-1.3  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/05/12 02:37  
 Analyst: AW  
 Percent Solids: 93%

Date Collected: 03/13/12 11:55  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	3150		ug/kg	706	--	500
CI3-BZ#18	5050		ug/kg	706	--	500
CI4-BZ#52	5480		ug/kg	706	--	500
CI4-BZ#66	2300		ug/kg	706	--	500
CI5-BZ#105	ND		ug/kg	706	--	500
CI6-BZ#138	ND		ug/kg	706	--	500
CI7-BZ#187	ND		ug/kg	706	--	500
CI6-BZ#128	ND		ug/kg	706	--	500
CI7-BZ#180	ND		ug/kg	706	--	500
CI7-BZ#170	ND		ug/kg	706	--	500
CI8-BZ#195	ND		ug/kg	706	--	500
CI9-BZ#206	ND		ug/kg	706	--	500
CI10-BZ#209	ND		ug/kg	706	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	74		30-150
DBOB	69		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-15  
 Client ID: S-12M-C029-0.8-1.3  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/05/12 02:37  
 Analyst: AW  
 Percent Solids: 93%

Date Collected: 03/13/12 11:55  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	6330		ug/kg	706	--	500
CI4-BZ#44	2800		ug/kg	706	--	500
CI5-BZ#101	1560		ug/kg	706	--	500
CI5-BZ#118	1110		ug/kg	706	--	500
CI6-BZ#153	1110		ug/kg	706	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	74		30-150
DBOB	69		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-16  
 Client ID: S-12M-C030-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 06:57  
 Analyst: AW  
 Percent Solids: 97%

Date Collected: 03/13/12 11:31  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	7640		ug/kg	1350	--	1000
CI3-BZ#18	17300		ug/kg	1350	--	1000
CI4-BZ#52	20700		ug/kg	1350	--	1000
CI4-BZ#66	5750		ug/kg	1350	--	1000
CI5-BZ#105	ND		ug/kg	1350	--	1000
CI6-BZ#138	2430		ug/kg	1350	--	1000
CI7-BZ#187	ND		ug/kg	1350	--	1000
CI6-BZ#128	ND		ug/kg	1350	--	1000
CI7-BZ#180	ND		ug/kg	1350	--	1000
CI7-BZ#170	ND		ug/kg	1350	--	1000
CI8-BZ#195	ND		ug/kg	1350	--	1000
CI9-BZ#206	ND		ug/kg	1350	--	1000
CI10-BZ#209	ND		ug/kg	1350	--	1000

DBOB 76 30-150  
 BZ 198 94 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204599**Project Number:** TO-0010-04**Report Date:** 04/09/12**SAMPLE RESULTS**

**Lab ID:** L1204599-16  
**Client ID:** S-12M-C030-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 04/04/12 06:57  
**Analyst:** AW  
**Percent Solids:** 97%

**Date Collected:** 03/13/12 11:31  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 03/29/12 16:21  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	19000		ug/kg	1350	--	1000
CI4-BZ#44	7440		ug/kg	1350	--	1000
CI5-BZ#101	3990		ug/kg	1350	--	1000
CI5-BZ#118	2530		ug/kg	1350	--	1000
CI6-BZ#153	3660		ug/kg	1350	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	94		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-17  
 Client ID: S-12M-C030-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 20:04  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/13/12 11:31  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	688		ug/kg	132	--	100
CI3-BZ#18	918		ug/kg	132	--	100
CI4-BZ#52	1460		ug/kg	132	--	100
CI5-BZ#118	ND		ug/kg	132	--	100
CI5-BZ#105	ND		ug/kg	132	--	100
CI6-BZ#138	ND		ug/kg	132	--	100
CI7-BZ#187	ND		ug/kg	132	--	100
CI6-BZ#128	ND		ug/kg	132	--	100
CI7-BZ#180	ND		ug/kg	132	--	100
CI7-BZ#170	ND		ug/kg	132	--	100
CI8-BZ#195	ND		ug/kg	132	--	100
CI9-BZ#206	ND		ug/kg	132	--	100
CI10-BZ#209	ND		ug/kg	132	--	100

DBOB 90 30-150  
 BZ 198 80 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-17  
 Client ID: S-12M-C030-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 20:04  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/13/12 11:31  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	1360		ug/kg	132	--	100
CI4-BZ#44	318		ug/kg	132	--	100
CI4-BZ#66	241		ug/kg	132	--	100
CI5-BZ#101	178		ug/kg	132	--	100
CI6-BZ#153	200		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	80		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-19  
 Client ID: S-12M-C031-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/05/12 03:21  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/13/12 11:20  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	13900		ug/kg	2720	--	2000
CI3-BZ#18	23600		ug/kg	2720	--	2000
CI4-BZ#52	27000		ug/kg	2720	--	2000
CI5-BZ#105	ND		ug/kg	2720	--	2000
CI6-BZ#138	ND		ug/kg	2720	--	2000
CI7-BZ#187	ND		ug/kg	2720	--	2000
CI6-BZ#128	ND		ug/kg	2720	--	2000
CI7-BZ#180	ND		ug/kg	2720	--	2000
CI7-BZ#170	ND		ug/kg	2720	--	2000
CI8-BZ#195	ND		ug/kg	2720	--	2000
CI9-BZ#206	ND		ug/kg	2720	--	2000
CI10-BZ#209	ND		ug/kg	2720	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	81		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-19  
 Client ID: S-12M-C031-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/05/12 03:21  
 Analyst: AW  
 Percent Solids: 96%

Date Collected: 03/13/12 11:20  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	25500		ug/kg	2720	--	2000
CI4-BZ#44	6580		ug/kg	2720	--	2000
CI4-BZ#66	4520		ug/kg	2720	--	2000
CI5-BZ#101	3850		ug/kg	2720	--	2000
CI5-BZ#118	ND		ug/kg	2720	--	2000
CI6-BZ#153	4050		ug/kg	2720	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	94		30-150
DBOB	81		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-20  
 Client ID: S-12M-C031-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 20:48  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/13/12 11:20  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	2130		ug/kg	266	--	200
CI3-BZ#18	3670		ug/kg	266	--	200
CI4-BZ#52	3230		ug/kg	266	--	200
CI5-BZ#118	298		ug/kg	266	--	200
CI5-BZ#105	ND		ug/kg	266	--	200
CI6-BZ#138	ND		ug/kg	266	--	200
CI7-BZ#187	ND		ug/kg	266	--	200
CI6-BZ#128	ND		ug/kg	266	--	200
CI7-BZ#180	ND		ug/kg	266	--	200
CI7-BZ#170	ND		ug/kg	266	--	200
CI8-BZ#195	ND		ug/kg	266	--	200
CI9-BZ#206	ND		ug/kg	266	--	200
CI10-BZ#209	ND		ug/kg	266	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	78		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

Lab ID: L1204599-20  
 Client ID: S-12M-C031-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/04/12 20:48  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/13/12 11:20  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:21  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	3080		ug/kg	266	--	200
CI4-BZ#44	656		ug/kg	266	--	200
CI4-BZ#66	563		ug/kg	266	--	200
CI5-BZ#101	413		ug/kg	266	--	200
CI6-BZ#153	418		ug/kg	266	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	78		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082  
Analytical Date: 04/03/12 09:48  
Analyst: AW

Extraction Method: EPA 3540C  
Extraction Date: 03/29/12 16:20  
Cleanup Method1: EPA 3630  
Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-17,19-20 Batch: WG525899-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	89		30-150

Project Name: NEW BEDFORD HARBOR SUPERFUND

Lab Number: L1204599

Project Number: TO-0010-04

Report Date: 04/09/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
 Analytical Date: 04/03/12 09:48  
 Analyst: AW

Extraction Method: EPA 3540C  
 Extraction Date: 03/29/12 16:20  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/02/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-17,19-20 Batch: WG525899-1					
C16-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	89		30-150

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-17,19-20 QC Batch ID: WG525899-4 WG525899-5 QC Sample: L1204599-01												
Client ID: S-12M-C020-1.2-1.7												
CI2-BZ#8	3000	1730	4380	80		6140	180	Q	40-140	33	Q	30
CI3-BZ#18	6720	1730	8240	88		11800	291	Q	40-140	36	Q	30
CI4-BZ#52	12600	1730	13600	58		19800	412	Q	40-140	37	Q	30
CI4-BZ#66	4800	1730	5990	69		8720	225	Q	40-140	37	Q	30
CI5-BZ#118	2750	1730	4130	80		5360	149	Q	40-140	26		30
CI5-BZ#105	ND	1730	2030	117		2500	143	Q	40-140	21		30
CI6-BZ#138	2310	1730	3770	84		5160	163	Q	40-140	31	Q	30
CI7-BZ#187	ND	1730	2110	122		2510	144	Q	40-140	17		30
CI6-BZ#128	ND	1730	2050	118		2370	136		40-140	14		30
CI7-BZ#180	ND	1730	1780	103		2110	121		40-140	17		30
CI7-BZ#170	ND	1730	1800	104		2090	120		40-140	15		30
CI8-BZ#195	ND	1730	ND	0	Q	ND	0	Q	40-140	NC		30
CI9-BZ#206	ND	1730	ND	0	Q	ND	0	Q	40-140	NC		30
CI10-BZ#209	ND	1730	ND	0	Q	ND	0	Q	40-140	NC		30
CI3-BZ#28	9980	1730	11000	59		17700	442	Q	40-140	47	Q	30
CI4-BZ#44	4920	1730	6270	78		9330	253	Q	40-140	39	Q	30
CI5-BZ#101	3670	1730	5010	77		7210	203	Q	40-140	36	Q	30
CI6-BZ#153	3250	1730	4670	82		6420	182	Q	40-140	32	Q	30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-17,19-20    QC Batch ID: WG525899-4 WG525899-5    QC Sample: L1204599-01  
Client ID: S-12M-C020-1.2-1.7

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	86		93		30-150
DBOB	70		77		30-150

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-17,19-20 QC Batch ID: WG525899-6 WG525899-7 QC Sample: L1204599-20 Client ID: S-12M-C031-0.6-1.1												
Cl2-BZ#8	2130	1680	2720	35	Q	2810	41		40-140	3		30
Cl3-BZ#18	3670	1680	4250	35	Q	4280	36	Q	40-140	1		30
Cl4-BZ#52	3230	1680	4170	56		4260	61		40-140	2		30
Cl5-BZ#118	298	1680	1700	84		1700	84		40-140	0		30
Cl5-BZ#105	ND	1680	1430	85		1370	82		40-140	4		30
Cl6-BZ#138	ND	1680	1650	98		1590	95		40-140	4		30
Cl7-BZ#187	ND	1680	1500	90		1460	87		40-140	3		30
Cl6-BZ#128	ND	1680	1460	87		1400	83		40-140	4		30
Cl7-BZ#180	ND	1680	1310	78		1220	73		40-140	7		30
Cl7-BZ#170	ND	1680	1430	85		1320	79		40-140	8		30
Cl8-BZ#195	ND	1680	1290	77		1180	70		40-140	9		30
Cl9-BZ#206	ND	1680	1360	81		1220	73		40-140	11		30
Cl10-BZ#209	ND	1680	1220	73		1100	66		40-140	10		30
Cl3-BZ#28	3080	1680	4210	67		4170	65		40-140	1		30
Cl4-BZ#44	656	1680	1840	71		1860	72		40-140	1		30
Cl4-BZ#66	563	1680	1850	77		1870	78		40-140	1		30
Cl5-BZ#101	413	1680	1670	75		1680	76		40-140	1		30
Cl6-BZ#153	418	1680	1810	83		1770	81		40-140	2		30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-17,19-20    QC Batch ID: WG525899-6 WG525899-7    QC Sample: L1204599-20  
Client ID: S-12M-C031-0.6-1.1

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	83		76		30-150
DBOB	73		73		30-150

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD HARBOR SUPERFUND

Lab Number: L1204599

Project Number: TO-0010-04

Report Date: 04/09/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-17,19-20 Batch: WG525899-2 WG525899-3								
CI2-BZ#8	94		82		40-140	14		30
CI3-BZ#18	93		86		40-140	8		30
CI3-BZ#28	88		82		40-140	7		30
CI4-BZ#52	111		97		40-140	13		30
CI4-BZ#44	94		85		40-140	10		30
CI4-BZ#66	92		86		40-140	7		30
CI5-BZ#101	98		90		40-140	9		30
CI5-BZ#118	94		89		40-140	5		30
CI5-BZ#105	86		80		40-140	7		30
CI6-BZ#138	95		92		40-140	3		30
CI7-BZ#187	91		89		40-140	2		30
CI6-BZ#128	87		84		40-140	4		30
CI7-BZ#180	76		73		40-140	4		30
CI7-BZ#170	84		82		40-140	2		30
CI8-BZ#195	79		77		40-140	3		30
CI9-BZ#206	83		84		40-140	1		30
CI10-BZ#209	76		83		40-140	9		30



### Lab Control Sample Analysis

#### Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Lab Number:** L1204599

**Project Number:** TO-0010-04

**Report Date:** 04/09/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-17,19-20 Batch: WG525899-2 WG525899-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	88		82		30-150
DBOB	96		84		30-150

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-17,19-20 Batch: WG525899-2 WG525899-3								
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Cl6-BZ#153	95		92		40-140	3		30
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Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	88		82		30-150
DBOB	96		84		30-150

# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-01  
**Client ID:** S-12M-C020-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 10:53  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.3		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	42.3		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-02  
**Client ID:** S-12M-C021-0.7-1.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 10:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.6		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	45.3		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-03  
**Client ID:** S-12M-C022-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 09:14  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.5		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	81.8		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-04  
**Client ID:** S-12M-C022-0.5-0.8  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 09:14  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.0		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	83.3		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-05  
**Client ID:** S-12M-C023-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 10:21  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.5		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	47.1		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-06  
**Client ID:** S-12M-C024-0.4-0.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 10:36  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.0		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	41.2		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-07  
**Client ID:** S-12M-C025-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 10:08  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.5		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	35.1		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-08  
**Client ID:** S-12M-C025-0.5-1.0-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 10:08  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.9		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	35.4		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-09  
**Client ID:** S-12M-C025-1.0-1.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 10:08  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.4		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	52.4		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-10  
**Client ID:** S-12M-C026-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 09:50  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.8		%	0.100	--	1	-	03/29/12 10:06	30,2540G	KB
Solids, Total (Pre-Dried)	54.7		%	0.100	NA	1	-	03/27/12 15:00	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-11  
**Client ID:** S-12M-C026-1.6-2.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 09:50  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	91.1		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	56.0		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-12  
**Client ID:** S-12M-C027-0.2-0.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 11:43  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.0		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	48.0		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-13  
**Client ID:** S-12M-C028-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 09:37  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.2		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	44.6		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-14  
**Client ID:** S-12M-C028-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 09:37  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.1		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	43.5		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-15  
**Client ID:** S-12M-C029-0.8-1.3  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 11:55  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.0		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	45.4		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-16  
**Client ID:** S-12M-C030-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 11:31  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.2		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	40.6		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-17  
**Client ID:** S-12M-C030-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 11:31  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.6		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	66.9		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-19  
**Client ID:** S-12M-C031-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 11:20  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.4		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	41.0		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**SAMPLE RESULTS**

**Lab ID:** L1204599-20  
**Client ID:** S-12M-C031-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 11:20  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.1		%	0.100	--	1	-	03/29/12 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	58.9		%	0.100	NA	1	-	03/27/12 15:20	30,2540G	KB



### Lab Duplicate Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG525396-1 QC Sample: L1204599-01 Client ID: S-12M-C020-1.2-1.7						
Solids, Total	94.3	94.8	%	1		20
General Chemistry - Mansfield Lab Associated sample(s): 11-17,19-20 QC Batch ID: WG525403-1 QC Sample: L1204599-20 Client ID: S-12M-C031-0.6-1.1						
Solids, Total	98.1	97.9	%	0		20
General Chemistry - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG525835-1 QC Sample: L1204599-01 Client ID: S-12M-C020-1.2-1.7						
Solids, Total (Pre-Dried)	42.3	42.8	%	1		20
General Chemistry - Mansfield Lab Associated sample(s): 11-17,19-20 QC Batch ID: WG525841-1 QC Sample: L1204599-20 Client ID: S-12M-C031-0.6-1.1						
Solids, Total (Pre-Dried)	58.9	58.5	%	1		20

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

### 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
D	Absent
B	Absent
C	Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204599-01A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-01B	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1204599-02A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-03A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-04A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-05A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-06A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-07A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-08A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-09A	Glass 250ml unpreserved	C	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-10A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-11A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-12A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-13A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-14A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-15A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Project Number:** TO-0010-04**Lab Number:** L1204599**Report Date:** 04/09/12**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204599-16A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-17A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-19A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-20A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204599-20B	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA(14)

\*Values in parentheses indicate holding time in days



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

## GLOSSARY

### Acronyms

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

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

- |           |   |
|-----------|---|
| <b>A</b>  | - Spectra identified as "Aldol Condensation Product".   |
| <b>B</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 five times (5x) 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. |
| <b>C</b>  | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.  |
| <b>D</b>  | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.   |
| <b>E</b>  | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.  |
| <b>G</b>  | - 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.  |
| <b>H</b>  | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.  |
| <b>I</b>  | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.  |
| <b>M</b>  | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.  |
| <b>NJ</b> | - 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.  |

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

**Data Qualifiers**

- 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.
- 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

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**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204599  
**Report Date:** 04/09/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### **Connecticut Department of Public Health Certificate/Lab ID: PH-0141.**

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### **Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### **Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### **New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

### **New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

*Atmospheric Organic Parameters* (EPA TO-15)

*Biological Tissue* (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

*Air & Emissions* (EPA TO-15.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to LA-DEQ Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID: 460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 3020A, 6020A, 245.7, 9040B, SM4500H-B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A, 7470A, 7471B, 9040B, 9045C, 3050B, 3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Air & Emissions* (EPA TO-15.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.



# MANSFIELD CHAIN OF CUSTODY

PAGE 7 OF 13

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

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

### Client Information

Client: Woods Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 01936

Phone: 767-508-540-5085  
Fax: 508-540-1021

Email: dwalsh@whgrp.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize samples before analysis  
**PLEASE NOTE** Project-Specific EDD  
MS/MSD (at unit cost) will be omitted unless you check here:

### Project Information

Project Name: New Bedford Harbor

Project Location: New Bedford, MA

Project #: TD-0010-04

Project Manager: Dave Walsh

ALPHA Quote #:

Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)

Date Due: Time:

Date Rec'd in Lab:

### Report Information - Data Deliverables

FAX  EMAIL

XADex  Add'l Deliverables

### Regulatory Requirements/Report Limits

State / Fed Program

Criteria

ALPHA Job #: L1204599

### Billing Information

Same as Client info PO #:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		

	5-12M-CO19-1.9-2.4	3/12/12	09:46	SED	DS	1
	5-12M-CO19-2.4-2.9	3/12/12	09:46	SED	DS	1
	5-12M-CO19-3.7-3.9	3/12/12	09:46	SED	DS	1
	5-12M-CO20-0.7-1.2	3/12/12	10:53	SED	DS	1
	5-12M-CO20-1.2-1.7	3/12/12	10:53	SED	DS	1
	5-12M-CO20-1.7-2.2	3/12/12	10:53	SED	DS	1
	5-12M-CO21-0.2-0.7	3/12/12	10:39	SED	DS	1
	5-12M-CO21-0.7-1.2	3/12/12	10:39	SED	DS	1
	5-12M-CO21-1.2-1.7	3/12/12	10:39	SED	DS	1

ANALYSIS	PCB Congeners	Sample Specific Comments
		LH08
		LH08 Archive
		LH08 Archive
		LG13 Archive
		LG13 us/msd
		LG13 Archive
		LG17
		LG17 Archive

### SAMPLE HANDLING

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

Container Type	Preservative
A	A

Relinquished By:

Received By:

Date/Time

Dave Walsh  
MSW

3/16/12 0915

MSW  
3/16/12 1005

3/16/12 0915  
3/16/12 1005

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



# MANSFIELD CHAIN OF CUSTODY

PAGE 8 OF 13

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

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

### Client Information

Client: WOODS Hole Group  
Address: 81 Technology Park  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Serial: 004091  
Email: DWALSH@WHGRP.COM

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:  
Homogenize samples before analysis  
**PLEASE NOTE - Project Specific EDD**  
**MS/MSD (at unit cost) will be omitted unless you check here:**

### Project Information

Project Name: New Bedford Harbor  
Project Location: New Bedford, MA  
Project #: TO-C010-04  
Project Manager: Dave Walsh  
ALPHA Quote #:  
**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved)  
Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

### Report Information - Data Deliverables

Date Rec'd in Lab: \_\_\_\_\_  
 FAX  EMAIL  
 ADEX  Add'l Deliverables  
Regulatory Requirements/Report Limits  
State Fed Program Criteria

### Billing Information

ALPHA Job #: 1204599  
 Same as Client info PO #:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
04599-03	S-12M-C022-0.0-0.5	3/13/12	0914	SED	DS
04	S-12M-C022-0.5-0.8	3/13/12	0914		
05	S-12M-C023-0.1-0.6	3/13/12	1021		
06	S-12M-C023-0.6-1.1	3/13/12	1021		
07	S-12M-C024-0.4-0.9	3/13/12	1036		
08	S-12M-C025-0.5-1.0	3/13/12	1008		
09	S-12M-C025-1.0-1.5	3/13/12	1008		
	S-12M-C025-1.5-2.0	3/13/12	1008		

### PCB CONGENERS ANALYSIS

Sample Specific Comments	Filteration
PB2	<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)
PB2	
LA13	
LA13 Archive	
LL14	
LL14 Archive	
LU15	
LU15 REP	
LU15 Archive	
LU15 Archive	

Container Type  
Preservative

Container Type	Preservative
A	A
A	A
X	X
X	X
X	X
X	X
X	X
X	X

Relinquished By:	Date/Time	Received By:	Date/Time
<u>Dave Walsh</u>	<u>3/16/12 0915</u>	<u>MS Walsh</u>	<u>3/15/12 0915</u>
<u>MS Walsh</u>	<u>3/16/12 1605</u>	<u>MS Walsh</u>	<u>3/16/12 1605</u>

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







# MANSFIELD CHAIN OF CUSTODY

PAGE 10 OF 13

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

MANSFIELD, MA  
TEL: 508-822-3300  
FAX: 508-822-3288

### Client Information

Client: Woods Hole Group  
Address: 81 Technology Park  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DWALSH@WHGRP.COM

Project Name: New Bedford Harbor  
Project Location: New Bedford, MA  
Project #: TO-CO10-04  
Project Manager: Dave Walsh  
ALPHA Quote #:  
Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)  
Date Due: Time:  
Other Project Specific Requirements/Comments/Detection Limits:  
**PLEASE NOTE: Project Specific EDD Homogenize samples before analysis MS/MSD (at unit cost) will be omitted unless you check here:**

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Container Type Preservative	Date/Time	Received By:	Date/Time	Sample Specific Comments
		Date	Time							
04599-16	S-12M-CO35-0.1-0.6	3/13/12	1131	SBD	DS	A	3/12/12			LVO7 - REP Field Rep
71	S-12M-CO30-0.6-1.1	3/13/12	1131			A				LVO7 - REP Field Rep
18	S-12M-CO30-1.1-1.6	3/13/12	1131			A				LVO7 - REP Field Rep
19	S-12M-CO31-0.1-0.6	3/13/12	1120			A				LVO7 Field RSP
20*	S-12M-CO31-0.6-1.1	3/13/12	1120			A				LVO7
(20)	S-12M-CO31-0.6-1.1 MS/MSD	3/13/12	1120			A				LVO7 MS/MSD
	S-12M-CO31-1.1-1.6	3/13/12	1120			A				LVO7 Archive
	S-12M-CO32-0.0-0.5	3/13/12	1252			A				27FF
	S-12M-CO32-0.5-1.0	3/13/12	1252			A				27FF
	S-12M-CO33-0.0-0.2	3/13/12	1129			A				LZ02

Date Rec'd in Lab:  
Report Information - Data Deliverables  
 FAX  EMAIL  
 ADEX  Add'l Deliverables  
Regulatory Requirements/Report Limits  
State/Fed Program Criteria

ALPHA Job # L1204599  
Billing Information  
 Same as Client Info  
PO #:  
010-07  
May 2013

ANALYSIS  
PCB Cong. (NAA-902)  
PCB Aroclors  
SAMPLE HANDLING  
Filtration  Done  
 Not needed  
 Lab to do  
 Lab to do  
(Please specify below)

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



## ANALYTICAL REPORT

Lab Number:	L1204600
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD HARBOR SUPERFUND
Project Number:	TO-0010-04
Report Date:	04/11/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1204600-01	S-12M-C033-0.0-0.2	NEW BEDFORD, MA	03/12/12 11:29
L1204600-02	S-12M-C033-0.2-0.7	NEW BEDFORD, MA	03/12/12 11:29
L1204600-03	S-12M-C034-01-0.6	NEW BEDFORD, MA	03/12/12 11:05
L1204600-04	S-12M-C034-0.6-1.1	NEW BEDFORD, MA	03/12/12 11:05
L1204600-05	S-12M-C035-1.1-1.6	NEW BEDFORD, MA	03/12/12 10:50
L1204600-06	S-12M-C035-1.1-1.6-REP	NEW BEDFORD, MA	03/12/12 10:50
L1204600-07	S-12M-C035-1.6-2.1	NEW BEDFORD, MA	03/12/12 10:50
L1204600-08	S-12M-C036-0.0-0.4	NEW BEDFORD, MA	03/12/12 11:47
L1204600-09	S-12M-C036-0.4-0.9	NEW BEDFORD, MA	03/12/12 11:47

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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.

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

---

### Sample Receipt

Sediment samples were received intact and frozen on March 16, 2012. The samples were placed in frozen storage and removed on April 2, 2012 for initial percent solids and air drying and then placed in refrigerated storage. Samples were removed from refrigerated storage on April 4, 2012 when they were removed to analyze for air-dried percent solids and to extract samples for PCB Congener analysis.

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

### Case Narrative (continued)

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

Samples L1204600-01 through -09, with the exception of sample -07 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

The WG527048-4/-5 MS/MSD samples were analyzed at a higher dilution than the native sample L1204600-04 due to the spike concentrations added.

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

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative

Date: 04/11/12

# ORGANICS

# PCBS



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-01  
 Client ID: S-12M-C033-0.0-0.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 16:02  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 11:29  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	1550		ug/kg	662	--	500
CI3-BZ#18	4950		ug/kg	662	--	500
CI4-BZ#52	7970		ug/kg	662	--	500
CI5-BZ#105	ND		ug/kg	662	--	500
CI6-BZ#138	1070		ug/kg	662	--	500
CI7-BZ#187	ND		ug/kg	662	--	500
CI6-BZ#128	ND		ug/kg	662	--	500
CI7-BZ#180	ND		ug/kg	662	--	500
CI7-BZ#170	ND		ug/kg	662	--	500
CI8-BZ#195	ND		ug/kg	662	--	500
CI9-BZ#206	ND		ug/kg	662	--	500
CI10-BZ#209	ND		ug/kg	662	--	500

DBOB 64 30-150  
 BZ 198 77 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-01  
 Client ID: S-12M-C033-0.0-0.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 16:02  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 11:29  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	4850		ug/kg	662	--	500
CI4-BZ#44	1430		ug/kg	662	--	500
CI4-BZ#66	1550		ug/kg	662	--	500
CI5-BZ#101	1100		ug/kg	662	--	500
CI5-BZ#118	986		ug/kg	662	--	500
CI6-BZ#153	1240		ug/kg	662	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	64		30-150
BZ 198	77		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-02  
 Client ID: S-12M-C033-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 13:50  
 Analyst: AW  
 Percent Solids: 100%

Date Collected: 03/12/12 11:29  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	6.60	--	5
CI3-BZ#18	ND		ug/kg	6.60	--	5
CI4-BZ#52	26.6		ug/kg	6.60	--	5
CI4-BZ#44	11.4		ug/kg	6.60	--	5
CI4-BZ#66	55.4		ug/kg	6.60	--	5
CI5-BZ#118	76.8		ug/kg	6.60	--	5
CI6-BZ#138	80.6		ug/kg	6.60	--	5
CI6-BZ#128	20.7		ug/kg	6.60	--	5
CI7-BZ#180	11.8		ug/kg	6.60	--	5
CI7-BZ#170	11.1		ug/kg	6.60	--	5
CI8-BZ#195	ND		ug/kg	6.60	--	5
CI9-BZ#206	ND		ug/kg	6.60	--	5
CI10-BZ#209	ND		ug/kg	6.60	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	76		30-150
DBOB	82		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-02  
 Client ID: S-12M-C033-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 13:50  
 Analyst: AW  
 Percent Solids: 100%

Date Collected: 03/12/12 11:29  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	11.9		ug/kg	6.60	--	5
CI5-BZ#101	52.8		ug/kg	6.60	--	5
CI6-BZ#153	43.2		ug/kg	6.60	--	5
CI5-BZ#105	36.1		ug/kg	6.60	--	5
CI7-BZ#187	9.52		ug/kg	6.60	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	76		30-150
DBOB	82		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-03  
 Client ID: S-12M-C034-01-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/09/12 14:29  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 11:05  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	4720		ug/kg	1320	--	1000
CI3-BZ#18	8740		ug/kg	1320	--	1000
CI4-BZ#52	9420		ug/kg	1320	--	1000
CI5-BZ#118	3370		ug/kg	1320	--	1000
CI6-BZ#138	2130		ug/kg	1320	--	1000
CI7-BZ#187	ND		ug/kg	1320	--	1000
CI6-BZ#128	ND		ug/kg	1320	--	1000
CI7-BZ#180	ND		ug/kg	1320	--	1000
CI7-BZ#170	ND		ug/kg	1320	--	1000
CI8-BZ#195	ND		ug/kg	1320	--	1000
CI9-BZ#206	ND		ug/kg	1320	--	1000
CI10-BZ#209	ND		ug/kg	1320	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	78		30-150
DBOB	66		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-03  
 Client ID: S-12M-C034-01-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/09/12 14:29  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 11:05  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	11600		ug/kg	1320	--	1000
CI4-BZ#44	4480		ug/kg	1320	--	1000
CI4-BZ#66	6350		ug/kg	1320	--	1000
CI5-BZ#101	3390		ug/kg	1320	--	1000
CI6-BZ#153	2440		ug/kg	1320	--	1000
CI5-BZ#105	ND		ug/kg	1320	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	78		30-150
DBOB	66		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-04  
 Client ID: S-12M-C034-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 14:34  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 11:05  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	232		ug/kg	66.2	--	50
CI3-BZ#18	327		ug/kg	66.2	--	50
CI4-BZ#52	752		ug/kg	66.2	--	50
CI4-BZ#66	311		ug/kg	66.2	--	50
CI5-BZ#118	255		ug/kg	66.2	--	50
CI6-BZ#138	197		ug/kg	66.2	--	50
CI6-BZ#128	ND		ug/kg	66.2	--	50
CI7-BZ#180	ND		ug/kg	66.2	--	50
CI7-BZ#170	ND		ug/kg	66.2	--	50
CI8-BZ#195	ND		ug/kg	66.2	--	50
CI9-BZ#206	ND		ug/kg	66.2	--	50
CI10-BZ#209	ND		ug/kg	66.2	--	50

DBOB 82 30-150  
 BZ 198 72 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-04  
 Client ID: S-12M-C034-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 14:34  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 11:05  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	632		ug/kg	66.2	--	50
CI4-BZ#44	218		ug/kg	66.2	--	50
CI5-BZ#101	252		ug/kg	66.2	--	50
CI6-BZ#153	218		ug/kg	66.2	--	50
CI5-BZ#105	75.8		ug/kg	66.2	--	50
CI7-BZ#187	ND		ug/kg	66.2	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	72		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-05  
 Client ID: S-12M-C035-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 16:45  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/12/12 10:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	672	--	500
CI3-BZ#18	ND		ug/kg	672	--	500
CI3-BZ#28	ND		ug/kg	672	--	500
CI4-BZ#52	4420		ug/kg	672	--	500
CI4-BZ#44	1690		ug/kg	672	--	500
CI4-BZ#66	6500		ug/kg	672	--	500
CI5-BZ#118	7300		ug/kg	672	--	500
CI6-BZ#138	3360		ug/kg	672	--	500
CI6-BZ#128	835		ug/kg	672	--	500
CI7-BZ#180	ND		ug/kg	672	--	500
CI7-BZ#170	ND		ug/kg	672	--	500
CI8-BZ#195	ND		ug/kg	672	--	500
CI9-BZ#206	ND		ug/kg	672	--	500
CI10-BZ#209	ND		ug/kg	672	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	62		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-05  
 Client ID: S-12M-C035-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 16:45  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/12/12 10:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI5-BZ#101	6860		ug/kg	672	--	500
CI6-BZ#153	4390		ug/kg	672	--	500
CI5-BZ#105	1180		ug/kg	672	--	500
CI7-BZ#187	ND		ug/kg	672	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	62		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-06  
 Client ID: S-12M-C035-1.1-1.6-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 17:29  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/12/12 10:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	671	--	500
CI3-BZ#18	ND		ug/kg	671	--	500
CI3-BZ#28	ND		ug/kg	671	--	500
CI4-BZ#52	4600		ug/kg	671	--	500
CI4-BZ#44	1860		ug/kg	671	--	500
CI4-BZ#66	7190		ug/kg	671	--	500
CI5-BZ#118	8270		ug/kg	671	--	500
CI6-BZ#138	3890		ug/kg	671	--	500
CI6-BZ#128	915		ug/kg	671	--	500
CI7-BZ#180	ND		ug/kg	671	--	500
CI7-BZ#170	ND		ug/kg	671	--	500
CI8-BZ#195	ND		ug/kg	671	--	500
CI9-BZ#206	ND		ug/kg	671	--	500
CI10-BZ#209	ND		ug/kg	671	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	60		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-06  
 Client ID: S-12M-C035-1.1-1.6-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 17:29  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/12/12 10:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI5-BZ#101	7810		ug/kg	671	--	500
CI6-BZ#153	4850		ug/kg	671	--	500
CI5-BZ#105	1350		ug/kg	671	--	500
CI7-BZ#187	ND		ug/kg	671	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	60		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-07  
 Client ID: S-12M-C035-1.6-2.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 13:07  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 10:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	1.34	--	1
CI3-BZ#18	2.92		ug/kg	1.34	--	1
CI3-BZ#28	ND		ug/kg	1.34	--	1
CI4-BZ#52	8.43		ug/kg	1.34	--	1
CI4-BZ#66	9.58		ug/kg	1.34	--	1
CI5-BZ#118	14.7		ug/kg	1.34	--	1
CI6-BZ#138	16.0		ug/kg	1.34	--	1
CI6-BZ#128	4.05		ug/kg	1.34	--	1
CI7-BZ#180	3.16		ug/kg	1.34	--	1
CI8-BZ#195	ND		ug/kg	1.34	--	1
CI9-BZ#206	2.76		ug/kg	1.34	--	1
CI10-BZ#209	1.97		ug/kg	1.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	78		30-150
DBOB	78		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-07  
 Client ID: S-12M-C035-1.6-2.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 13:07  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 10:50  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI4-BZ#44	3.24		ug/kg	1.34	--	1
CI5-BZ#101	10.8		ug/kg	1.34	--	1
CI6-BZ#153	8.14		ug/kg	1.34	--	1
CI5-BZ#105	7.99		ug/kg	1.34	--	1
CI7-BZ#187	2.50		ug/kg	1.34	--	1
CI7-BZ#170	3.61		ug/kg	1.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	78		30-150
DBOB	78		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-08  
 Client ID: S-12M-C036-0.0-0.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 15:18  
 Analyst: AW  
 Percent Solids: 100%

Date Collected: 03/12/12 11:47  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	140		ug/kg	66.0	--	50
CI3-BZ#18	276		ug/kg	66.0	--	50
CI4-BZ#52	612		ug/kg	66.0	--	50
CI4-BZ#66	332		ug/kg	66.0	--	50
CI6-BZ#138	169		ug/kg	66.0	--	50
CI6-BZ#128	ND		ug/kg	66.0	--	50
CI7-BZ#180	ND		ug/kg	66.0	--	50
CI7-BZ#170	ND		ug/kg	66.0	--	50
CI8-BZ#195	ND		ug/kg	66.0	--	50
CI9-BZ#206	ND		ug/kg	66.0	--	50
CI10-BZ#209	ND		ug/kg	66.0	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	75		30-150
DBOB	77		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204600**Project Number:** TO-0010-04**Report Date:** 04/11/12**SAMPLE RESULTS**

Lab ID: L1204600-08  
 Client ID: S-12M-C036-0.0-0.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 15:18  
 Analyst: AW  
 Percent Solids: 100%

Date Collected: 03/12/12 11:47  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	527		ug/kg	66.0	--	50
CI4-BZ#44	213		ug/kg	66.0	--	50
CI5-BZ#101	262		ug/kg	66.0	--	50
CI5-BZ#118	261		ug/kg	66.0	--	50
CI6-BZ#153	230		ug/kg	66.0	--	50
CI5-BZ#105	ND		ug/kg	66.0	--	50
CI7-BZ#187	ND		ug/kg	66.0	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	75		30-150
DBOB	77		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204600**Project Number:** TO-0010-04**Report Date:** 04/11/12**SAMPLE RESULTS**

Lab ID: L1204600-09  
 Client ID: S-12M-C036-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 12:23  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 11:47  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	25.3		ug/kg	13.2	--	10
CI3-BZ#18	70.4		ug/kg	13.2	--	10
CI4-BZ#52	122		ug/kg	13.2	--	10
CI4-BZ#66	64.3		ug/kg	13.2	--	10
CI5-BZ#101	67.2		ug/kg	13.2	--	10
CI5-BZ#118	53.3		ug/kg	13.2	--	10
CI6-BZ#138	34.1		ug/kg	13.2	--	10
CI6-BZ#128	ND		ug/kg	13.2	--	10
CI7-BZ#170	ND		ug/kg	13.2	--	10
CI8-BZ#195	ND		ug/kg	13.2	--	10
CI9-BZ#206	ND		ug/kg	13.2	--	10
CI10-BZ#209	ND		ug/kg	13.2	--	10

DBOB 76 30-150  
 BZ 198 80 30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

Lab ID: L1204600-09  
 Client ID: S-12M-C036-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 04/10/12 12:23  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 11:47  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	94.5		ug/kg	13.2	--	10
CI4-BZ#44	39.4		ug/kg	13.2	--	10
CI6-BZ#153	43.3		ug/kg	13.2	--	10
CI5-BZ#105	ND		ug/kg	13.2	--	10
CI7-BZ#187	ND		ug/kg	13.2	--	10
CI7-BZ#180	ND		ug/kg	13.2	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	80		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
 Analytical Date: 04/09/12 10:50  
 Analyst: AW

Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-09 Batch: WG527048-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	72		30-150
BZ 198	99		30-150

Project Name: NEW BEDFORD HARBOR SUPERFUND

Lab Number: L1204600

Project Number: TO-0010-04

Report Date: 04/11/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
 Analytical Date: 04/09/12 10:50  
 Analyst: AW

Extraction Method: EPA 3540C  
 Extraction Date: 04/04/12 16:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 04/06/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-09 Batch: WG527048-1					
C16-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	72		30-150
BZ 198	99		30-150

## Matrix Spike Analysis

### Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG527048-4 WG527048-5 QC Sample: L1204600-04 Client ID: S-12M-C034-0.6-1.1												
Cl2-BZ#8	232	1660	1240	61		1220	60		40-140	2		30
Cl3-BZ#18	327	1660	1420	66		1480	70		40-140	4		30
Cl4-BZ#52	752	1660	1710	58		1740	60		40-140	2		30
Cl4-BZ#66	311	1660	1360	63		1380	65		40-140	1		30
Cl5-BZ#118	255	1660	1410	70		1530	77		40-140	8		30
Cl6-BZ#138	197	1660	1400	73		1450	76		40-140	4		30
Cl6-BZ#128	ND	1660	1240	75		1290	78		40-140	4		30
Cl7-BZ#180	ND	1660	1080	65		1140	69		40-140	5		30
Cl7-BZ#170	ND	1660	1190	72		1270	77		40-140	7		30
Cl8-BZ#195	ND	1660	1070	65		1150	70		40-140	7		30
Cl9-BZ#206	ND	1660	1080	65		1220	74		40-140	12		30
Cl10-BZ#209	ND	1660	959	58		1080	65		40-140	12		30
Cl3-BZ#28	632	1660	1680	63		1680	64		40-140	0		30
Cl4-BZ#44	218	1660	1290	65		1280	64		40-140	1		30
Cl5-BZ#101	252	1660	1340	66		1350	67		40-140	1		30
Cl6-BZ#153	218	1660	1420	73		1460	75		40-140	3		30
Cl5-BZ#105	75.8	1660	1480	85		1510	87		40-140	2		30
Cl7-BZ#187	ND	1660	1250	75		1300	79		40-140	4		30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-09    QC Batch ID: WG527048-4    WG527048-5    QC Sample: L1204600-04    Client ID: S-12M-C034-0.6-1.1

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	68		72		30-150
DBOB	70		68		30-150

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Lab Number:** L1204600

**Project Number:** TO-0010-04

**Report Date:** 04/11/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-09 Batch: WG527048-2 WG527048-3								
CI2-BZ#8	83		88		40-140	6		30
CI3-BZ#18	85		91		40-140	7		30
CI3-BZ#28	92		97		40-140	5		30
CI4-BZ#52	104		111		40-140	7		30
CI4-BZ#44	88		91		40-140	3		30
CI4-BZ#66	88		91		40-140	3		30
CI5-BZ#101	94		97		40-140	3		30
CI5-BZ#118	96		96		40-140	0		30
CI5-BZ#105	92		94		40-140	2		30
CI6-BZ#138	101		108		40-140	7		30
CI7-BZ#187	98		101		40-140	3		30
CI6-BZ#128	96		98		40-140	2		30
CI7-BZ#180	85		86		40-140	1		30
CI7-BZ#170	91		91		40-140	0		30
CI8-BZ#195	83		82		40-140	1		30
CI9-BZ#206	89		86		40-140	3		30
CI10-BZ#209	81		78		40-140	4		30

### Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Lab Number:** L1204600

**Project Number:** TO-0010-04

**Report Date:** 04/11/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-09 Batch: WG527048-2 WG527048-3								

DBOB	75		79		30-150			
BZ 198	95		91		30-150			

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-09 Batch: WG527048-2 WG527048-3								
Cl6-BZ#153	98		101		40-140	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	75		79		30-150
BZ 198	95		91		30-150



# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-01  
**Client ID:** S-12M-C033-0.0-0.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 11:29  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.9		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	57.6		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-02  
**Client ID:** S-12M-C033-0.2-0.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 11:29  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.8		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	84.0		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-03  
**Client ID:** S-12M-C034-01-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 11:05  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.2		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	73.3		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-04  
**Client ID:** S-12M-C034-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 11:05  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.4		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	75.1		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-05  
**Client ID:** S-12M-C035-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 10:50  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.0		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	55.9		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-06  
**Client ID:** S-12M-C035-1.1-1.6-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 10:50  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.3		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	47.5		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-07  
**Client ID:** S-12M-C035-1.6-2.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 10:50  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.5		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	51.8		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-08  
**Client ID:** S-12M-C036-0.0-0.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 11:47  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.6		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	79.3		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**SAMPLE RESULTS**

**Lab ID:** L1204600-09  
**Client ID:** S-12M-C036-0.4-0.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 11:47  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.4		%	0.100	--	1	-	04/04/12 08:10	30,2540G	KB
Solids, Total (Pre-Dried)	74.2		%	0.100	NA	1	-	04/02/12 13:15	30,2540G	KB



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Project Number:** TO-0010-04

**Lab Number:** L1204600

**Report Date:** 04/11/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG526965-1 QC Sample: L1204600-04 Client ID: S-12M-C034-0.6-1.1						
Solids, Total	99.4	99.4	%	0		20

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

### 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
D	Absent
B	Absent
C	Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204600-01A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204600-02A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204600-03A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204600-04A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204600-04B	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1204600-05A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204600-06A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204600-07A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204600-08A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1204600-09A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

## GLOSSARY

### Acronyms

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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value 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.

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

**Data Qualifiers**

- 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.
- 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

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**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204600  
**Report Date:** 04/11/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### **Connecticut Department of Public Health Certificate/Lab ID: PH-0141.**

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### **Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### **Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### **New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

### **New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)



*Solid & Chemical Materials* (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

*Atmospheric Organic Parameters* (EPA TO-15)

*Biological Tissue* (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

*Air & Emissions* (EPA TO-15.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to LA-DEQ Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID: 460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 3020A, 6020A, 245.7, 9040B, SM4500H-B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A, 7470A, 7471B, 9040B, 9045C, 3050B, 3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Air & Emissions* (EPA TO-15.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.





# MANSFIELD CHAIN OF CUSTODY

PAGE 11 OF 13

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

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3298

### Client Information

Client: **Woods Hole Group**

Project Name: **New Bedford Harbor**

Address: **81 Technology Park**

Project Location: **New Bedford, MA**

Phone: **508-540-8080**

Project Manager: **Dave Walsh**

Fax: **508-540-1001**

ALPHA Quote #: **Turrn-Around Time**

Email: **DWALSH@WHGRP.COM**

Project Information  
Project Name: **New Bedford Harbor**  
Project Location: **New Bedford, MA**  
Project Manager: **Dave Walsh**  
ALPHA Quote #: **Turrn-Around Time**

Report Information - Data Deliverables  
 FAX  
 EMAIL  
 Add'l Deliverables

Regulatory Requirements/Report Limits  
State/Fed Program: **MADEX**  
Criteria:

Billing Information  
 Same as Client info  
PO #:

Other Project Specific Requirements/Comments/Detection Limits:  
**Homogenize Samples before analysis**  
**PLEASE NOTE - Project - SPECIAR EDD**  
MS/MSD (at unit cost) will be omitted unless you check here:

These samples have been previously analyzed by Alpha  
 Standard  RUSH (only confirmed if pre-approved)  
Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

ANALYSIS  
PCB Congeners (NAA 8082)

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	Time	Sample Matrix	Sampler's Initials	Container Type	Preservative	Relinquished By:	Date/Time	Received By:	Date/Time	Sample Specific Comments
04600-02	S-12M-C033-0.2-0.7	3/12/12	1129	SED	DS	A		<i>Dad Shaw</i>	3/16/12 0915	<i>MSM</i>	3/16/12 0915	LZ02
	S-12M-C035-0.7-1.2	3/12/12	1129	SED		A		<i>MSM</i>	3/16/12 1015	<i>MSM</i>	3/16/12 1015	LZ02 Archive
	S-12M-C034-0.1-0.6	3/13/12	1105			A		<i>MSM</i>	3/16/12 1015	<i>MSM</i>	3/16/12 1015	LBB07
	S-12M-C034-0.6-1.1	3/13/12	1105			A		<i>MSM</i>	3/16/12 1015	<i>MSM</i>	3/16/12 1015	LBB07 MSMSD
	S-12M-C034-1.1-1.6	3/13/12	1105			A		<i>MSM</i>	3/16/12 1015	<i>MSM</i>	3/16/12 1015	LBB07 Archive
	S-12M-C035-1.1-1.6	3/13/12	1050			A		<i>MSM</i>	3/16/12 1015	<i>MSM</i>	3/16/12 1015	LY12
	S-12M-C035-1.1-1.6-REP	3/13/12	1050			A		<i>MSM</i>	3/16/12 1015	<i>MSM</i>	3/16/12 1015	LY12-REP
	S-12M-C035-1.6-2.1	3/13/12	1050			A		<i>MSM</i>	3/16/12 1015	<i>MSM</i>	3/16/12 1015	LY12
	S-12M-C036	3/13/12	1050			A		<i>MSM</i>	3/16/12 1015	<i>MSM</i>	3/16/12 1015	<del>LY12</del>

Relinquished By: *Dad Shaw*  
Date/Time: 3/16/12 0915  
Received By: *MSM*  
Date/Time: 3/16/12 1015

Container Type: A  
Preservative: A

Sample Specific Comments:  
LZ02  
LZ02 Archive  
LBB07  
LBB07 MSMSD  
LBB07 Archive  
LY12  
LY12-REP  
LY12  
~~LY12~~

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



# MANSFIELD CHAIN OF CUSTODY

PAGE 12 OF 13

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

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

Client: **WOODS Hole Group**

Project Name: **New Bedford Harbor**

Address: **81 Technology Park**

Project Location: **New Bedford, MA**

Phone: **508-540-8080**

Project Manager: **Dave Walsh**

Fax: **508-540-1001**

ALPHA Quote #:

Email: **DWALSH@WHGRP.COM**

Turn-Around Time

These samples have been previously analyzed by Alpha

Standard  RUSH (only confirmed if pre-approved)

Other Project Specific Requirements/Comments/Detection Limits:

Date Due: Time:

**Homogenize Samples before analysis**

**PLEASE NOTE: Project - Specific EDD**

MS/MSD (at unit cost) will be omitted unless you check here:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
04600-68	S-12M-C036-0.0-0.4	3/12/12	1147	SED	DS
09	S-12M-C036-0.4-0.9	3/12/12	1147		
	S-12M-C037-0.0-0.5	3/13/12	1239		
	S-12M-C037-0.5-1.0	3/13/12	1239		
	S-12M-C037-0.0-0.5 REP	3/13/12	1239		
	S-12M-C038-0.0-0.5	3/13/12	1220		
	S-12M-C038-0.5-1.0		1220		
	S-12M-C038-0.5-1.0 MSMSD		1220		
	S-12M-C039-0.0-0.5		1225		
	S-12M-C039-0.5-1.0		1225		

Container Type	Preservative
A	A
A	A
A	A

Date Rec'd in Lab:

ALPHA Job #: **L1204600**

### 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

ANALYSIS  
PCB Congeners (VCAA 8082)  
PCB Aroclors

SAMPLE HANDLING  
Filtration \_\_\_\_\_  
 Done  
 Not needed  
 Lab to do  
 Preservation  
 Lab to do  
(Please specify below)  
Sample Specific Comments

Relinquished By: **Dave Walsh**

Date/Time: **3/16/12 0915**

Received By: **MSW**

Date/Time: **3/16/12 0915**

**MSW**

**3/16/12 1605**

**MSW**

**3/16/12 1605**

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



## ANALYTICAL REPORT

Lab Number:	L1204603
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD HARBOR SUPERFUND
Project Number:	TO-0010-04
Report Date:	04/02/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1204603-01	S-12M-C032-0.0-0.5	NEW BEDFORD, MA	03/13/12 12:52
L1204603-02	S-12M-C032-0.5-1.0	NEW BEDFORD, MA	03/13/12 12:52
L1204603-03	S-12M-C037-0.0-0.5	NEW BEDFORD, MA	03/13/12 12:39
L1204603-04	S-12M-C037-0.5-1.0	NEW BEDFORD, MA	03/13/12 12:39
L1204603-05	S-12M-C037-0.0-0.5-REP	NEW BEDFORD, MA	03/13/12 12:39
L1204603-06	S-12M-C038-0.0-0.5	NEW BEDFORD, MA	03/13/12 12:20
L1204603-07	S-12M-C038-0.5-1.0	NEW BEDFORD, MA	03/13/12 12:20
L1204603-08	S-12M-C039-0.0-0.5	NEW BEDFORD, MA	03/13/12 12:25
L1204603-09	S-12M-C039-0.5-1.0	NEW BEDFORD, MA	03/13/12 12:25
L1204603-10	S-12M-C040-0.0-0.5	NEW BEDFORD, MA	03/13/12 13:04
L1204603-11	S-12M-C040-0.5-1.0	NEW BEDFORD, MA	03/13/12 13:04
L1204603-12	S-12M-C041-0.0-0.5	NEW BEDFORD, MA	03/13/12 13:31
L1204603-13	S-12M-C041-0.5-1.0	NEW BEDFORD, MA	03/13/12 13:31
L1204603-14	S-12M-C042-0.0-0.5	NEW BEDFORD, MA	03/13/12 13:18
L1204603-15	S-12M-C042-0.5-1.0	NEW BEDFORD, MA	03/13/12 13:18

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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.

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

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### Sample Receipt

Sediment samples were received intact and frozen on March 16, 2012. The samples were placed in refrigerated storage and removed on March 21, 2012 for initial percent solids and then replaced in refrigerated storage. Samples remained in refrigerated storage until they were removed to extract samples for PCB Aroclor analysis on March 23, 2012 and analyze for air-dried percent solids on March 26, 2012.



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**Case Narrative (continued)**

PCB Aroclors by 8082

L1204603-01 through -15 with the exception of -02 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG524844-4/-5 MS recoveries for Aroclor 1016 (2880%)/(2860%) and Aroclor 1260(196%)/(209%), performed on L1204603-07, are above the method acceptance criteria due to interference with Aroclors 1242 and 1254 present in the sample.

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

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative

Date: 04/02/12

# ORGANICS

# PCBS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-01  
**Client ID:** S-12M-C032-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 11:19  
**Analyst:** CM  
**Percent Solids:** 85%

**Date Collected:** 03/13/12 12:52  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 13:00  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	2160	--	50
Aroclor 1221	ND		ug/kg	2160	--	50
Aroclor 1232	ND		ug/kg	2160	--	50
Aroclor 1242	47700		ug/kg	2160	--	50
Aroclor 1248	ND		ug/kg	2160	--	50
Aroclor 1254	6050		ug/kg	2160	--	50
Aroclor 1260	ND		ug/kg	2160	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	82		30-150
Decachlorobiphenyl	76		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-02  
**Client ID:** S-12M-C032-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 11:50  
**Analyst:** CM  
**Percent Solids:** 89%

**Date Collected:** 03/13/12 12:52  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 13:00  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	41.2	--	1
Aroclor 1221	ND		ug/kg	41.2	--	1
Aroclor 1232	ND		ug/kg	41.2	--	1
Aroclor 1242	69.2		ug/kg	41.2	--	1
Aroclor 1248	ND		ug/kg	41.2	--	1
Aroclor 1254	ND		ug/kg	41.2	--	1
Aroclor 1260	ND		ug/kg	41.2	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	73		30-150
Decachlorobiphenyl	60		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

Lab ID: L1204603-03  
 Client ID: S-12M-C037-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/29/12 12:20  
 Analyst: CM  
 Percent Solids: 89%

Date Collected: 03/13/12 12:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 03/23/12 13:00  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	8140	--	200
Aroclor 1221	ND		ug/kg	8140	--	200
Aroclor 1232	ND		ug/kg	8140	--	200
Aroclor 1242	447000		ug/kg	8140	--	200
Aroclor 1248	ND		ug/kg	8140	--	200
Aroclor 1254	42100		ug/kg	8140	--	200
Aroclor 1260	ND		ug/kg	8140	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	83		30-150
Decachlorobiphenyl	79		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

Lab ID: L1204603-04  
 Client ID: S-12M-C037-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/29/12 12:51  
 Analyst: CM  
 Percent Solids: 93%

Date Collected: 03/13/12 12:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 03/23/12 13:00  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	4080	--	100
Aroclor 1221	ND		ug/kg	4080	--	100
Aroclor 1232	ND		ug/kg	4080	--	100
Aroclor 1242	218000		ug/kg	4080	--	100
Aroclor 1248	ND		ug/kg	4080	--	100
Aroclor 1254	24000		ug/kg	4080	--	100
Aroclor 1260	5950		ug/kg	4080	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	94		30-150
Decachlorobiphenyl	62		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

Lab ID: L1204603-05  
 Client ID: S-12M-C037-0.0-0.5-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/29/12 13:21  
 Analyst: CM  
 Percent Solids: 86%

Date Collected: 03/13/12 12:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 03/23/12 13:00  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	20400	--	500
Aroclor 1221	ND		ug/kg	20400	--	500
Aroclor 1232	ND		ug/kg	20400	--	500
Aroclor 1242	598000		ug/kg	20400	--	500
Aroclor 1248	ND		ug/kg	20400	--	500
Aroclor 1254	80400		ug/kg	20400	--	500
Aroclor 1260	ND		ug/kg	20400	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	85		30-150
Decachlorobiphenyl	84		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-06  
**Client ID:** S-12M-C038-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 13:51  
**Analyst:** CM  
**Percent Solids:** 91%

**Date Collected:** 03/13/12 12:20  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 13:00  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Polychlorinated Biphenyls by GC - Mansfield Lab</b>						
Aroclor 1016	ND		ug/kg	19800	--	500
Aroclor 1221	ND		ug/kg	19800	--	500
Aroclor 1232	ND		ug/kg	19800	--	500
Aroclor 1242	668000		ug/kg	19800	--	500
Aroclor 1248	ND		ug/kg	19800	--	500
Aroclor 1254	169000		ug/kg	19800	--	500
Aroclor 1260	33800		ug/kg	19800	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	85		30-150
Decachlorobiphenyl	88		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-07  
**Client ID:** S-12M-C038-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 14:22  
**Analyst:** CM  
**Percent Solids:** 88%

**Date Collected:** 03/13/12 12:20  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 13:00  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	1960	--	50
Aroclor 1221	ND		ug/kg	1960	--	50
Aroclor 1232	ND		ug/kg	1960	--	50
Aroclor 1242	87100		ug/kg	1960	--	50
Aroclor 1248	ND		ug/kg	1960	--	50
Aroclor 1254	10900		ug/kg	1960	--	50
Aroclor 1260	ND		ug/kg	1960	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	76		30-150
Decachlorobiphenyl	63		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-08  
**Client ID:** S-12M-C039-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 15:53  
**Analyst:** CM  
**Percent Solids:** 82%

**Date Collected:** 03/13/12 12:25  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 13:00  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	22700	--	500
Aroclor 1221	ND		ug/kg	22700	--	500
Aroclor 1232	ND		ug/kg	22700	--	500
Aroclor 1242	834000		ug/kg	22700	--	500
Aroclor 1248	ND		ug/kg	22700	--	500
Aroclor 1254	153000		ug/kg	22700	--	500
Aroclor 1260	ND		ug/kg	22700	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	79		30-150
Decachlorobiphenyl	63		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-09  
**Client ID:** S-12M-C039-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 16:23  
**Analyst:** CM  
**Percent Solids:** 91%

**Date Collected:** 03/13/12 12:25  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 13:00  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	7810	--	200
Aroclor 1221	ND		ug/kg	7810	--	200
Aroclor 1232	ND		ug/kg	7810	--	200
Aroclor 1242	234000		ug/kg	7810	--	200
Aroclor 1248	ND		ug/kg	7810	--	200
Aroclor 1254	ND		ug/kg	7810	--	200
Aroclor 1260	ND		ug/kg	7810	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	76		30-150
Decachlorobiphenyl	69		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-10  
**Client ID:** S-12M-C040-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 16:54  
**Analyst:** CM  
**Percent Solids:** 83%

**Date Collected:** 03/13/12 13:04  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 13:00  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	4310	--	100
Aroclor 1221	ND		ug/kg	4310	--	100
Aroclor 1232	ND		ug/kg	4310	--	100
Aroclor 1242	166000		ug/kg	4310	--	100
Aroclor 1248	ND		ug/kg	4310	--	100
Aroclor 1254	60100		ug/kg	4310	--	100
Aroclor 1260	11200		ug/kg	4310	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	79		30-150
Decachlorobiphenyl	74		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

Lab ID: L1204603-11  
 Client ID: S-12M-C040-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/29/12 17:24  
 Analyst: CM  
 Percent Solids: 80%

Date Collected: 03/13/12 13:04  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 03/23/12 14:30  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	9220	--	200
Aroclor 1221	ND		ug/kg	9220	--	200
Aroclor 1232	ND		ug/kg	9220	--	200
Aroclor 1242	321000		ug/kg	9220	--	200
Aroclor 1248	ND		ug/kg	9220	--	200
Aroclor 1254	62700		ug/kg	9220	--	200
Aroclor 1260	15600		ug/kg	9220	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	72		30-150
Decachlorobiphenyl	58		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-12  
**Client ID:** S-12M-C041-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 17:54  
**Analyst:** CM  
**Percent Solids:** 83%

**Date Collected:** 03/13/12 13:31  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 14:31  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	8540	--	200
Aroclor 1221	ND		ug/kg	8540	--	200
Aroclor 1232	ND		ug/kg	8540	--	200
Aroclor 1242	220000		ug/kg	8540	--	200
Aroclor 1248	ND		ug/kg	8540	--	200
Aroclor 1254	71800		ug/kg	8540	--	200
Aroclor 1260	13500		ug/kg	8540	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	72		30-150
Decachlorobiphenyl	64		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

Lab ID: L1204603-13  
 Client ID: S-12M-C041-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/29/12 18:25  
 Analyst: CM  
 Percent Solids: 88%

Date Collected: 03/13/12 13:31  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 03/23/12 14:31  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	8150	--	200
Aroclor 1221	ND		ug/kg	8150	--	200
Aroclor 1232	ND		ug/kg	8150	--	200
Aroclor 1242	296000		ug/kg	8150	--	200
Aroclor 1248	ND		ug/kg	8150	--	200
Aroclor 1254	67200		ug/kg	8150	--	200
Aroclor 1260	15400		ug/kg	8150	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	71		30-150
Decachlorobiphenyl	66		30-150



**Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12**SAMPLE RESULTS**

**Lab ID:** L1204603-14  
**Client ID:** S-12M-C042-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8082  
**Analytical Date:** 03/29/12 18:55  
**Analyst:** CM  
**Percent Solids:** 79%

**Date Collected:** 03/13/12 13:18  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 03/23/12 14:32  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	4520	--	100
Aroclor 1221	ND		ug/kg	4520	--	100
Aroclor 1232	ND		ug/kg	4520	--	100
Aroclor 1242	144000		ug/kg	4520	--	100
Aroclor 1248	ND		ug/kg	4520	--	100
Aroclor 1254	46800		ug/kg	4520	--	100
Aroclor 1260	9460		ug/kg	4520	--	100

Tetrachloro-meta-Xylene	55	30-150
Decachlorobiphenyl	53	30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

Lab ID: L1204603-15  
 Client ID: S-12M-C042-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Soil  
 Analytical Method: 1,8082  
 Analytical Date: 03/31/12 13:59  
 Analyst: CM  
 Percent Solids: 85%

Date Collected: 03/13/12 13:18  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 03/23/12 14:32  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/kg	16800	--	400
Aroclor 1221	ND		ug/kg	16800	--	400
Aroclor 1232	ND		ug/kg	16800	--	400
Aroclor 1242	468000		ug/kg	16800	--	400
Aroclor 1248	ND		ug/kg	16800	--	400
Aroclor 1254	59000		ug/kg	16800	--	400
Aroclor 1260	ND		ug/kg	16800	--	400

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	81		30-150
Decachlorobiphenyl	74		30-150

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
 Analytical Date: 03/27/12 18:32  
 Analyst: CM

Extraction Method: EPA 3570  
 Extraction Date: 03/23/12 13:00  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 03/27/12

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Mansfield Lab for sample(s): 01-15 Batch: WG524844-1					
Aroclor 1016	ND		ug/kg	40.0	--
Aroclor 1221	ND		ug/kg	40.0	--
Aroclor 1232	ND		ug/kg	40.0	--
Aroclor 1242	ND		ug/kg	40.0	--
Aroclor 1248	ND		ug/kg	40.0	--
Aroclor 1254	ND		ug/kg	40.0	--
Aroclor 1260	ND		ug/kg	40.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	83		30-150
Decachlorobiphenyl	79		30-150

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Mansfield Lab Associated sample(s): 01-15 QC Batch ID: WG524844-4 WG524844-5 QC Sample: L1204603-07 Client ID: S-12M-C038-0.5-1.0												
Aroclor 1016	ND	2020	58200	2880	Q	55700	2860	Q	40-140	4		50
Aroclor 1260	ND	2020	3970	196	Q	4080	209	Q	40-140	3		50

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
Tetrachloro-meta-Xylene	77		70		30-150
Decachlorobiphenyl	67		60		30-150

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** NEW BEDFORD HARBOR SUPERFUND**Lab Number:** L1204603**Project Number:** TO-0010-04**Report Date:** 04/02/12

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Polychlorinated Biphenyls by GC - Mansfield Lab Associated sample(s): 01-15 Batch: WG524844-2 WG524844-3								
Aroclor 1016	58		74		40-140	24		50
Aroclor 1260	72		93		40-140	25		50
Tetrachloro-meta-Xylene		66		85		30-150		
Decachlorobiphenyl		65		85		30-150		

# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-01  
**Client ID:** S-12M-C032-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:52  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	85.1		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	48.0		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-02  
**Client ID:** S-12M-C032-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:52  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	89.0		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	56.8		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-03  
**Client ID:** S-12M-C037-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	88.8		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	40.7		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-04  
**Client ID:** S-12M-C037-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	92.7		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	44.7		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-05  
**Client ID:** S-12M-C037-0.0-0.5-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	86.3		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	39.1		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-06  
**Client ID:** S-12M-C038-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:20  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	91.4		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	34.0		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-07  
**Client ID:** S-12M-C038-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:20  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	88.2		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	42.4		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-08  
**Client ID:** S-12M-C039-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:25  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	82.1		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	33.9		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-09  
**Client ID:** S-12M-C039-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 12:25  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	91.0		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	42.7		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-10  
**Client ID:** S-12M-C040-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 13:04  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	83.2		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	30.5		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-11  
**Client ID:** S-12M-C040-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 13:04  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	79.5		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	34.3		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-12  
**Client ID:** S-12M-C041-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 13:31  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	83.0		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	32.0		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-13  
**Client ID:** S-12M-C041-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 13:31  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	87.5		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	36.1		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-14  
**Client ID:** S-12M-C042-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 13:18  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	78.9		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	29.4		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**SAMPLE RESULTS**

**Lab ID:** L1204603-15  
**Client ID:** S-12M-C042-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Soil

**Date Collected:** 03/13/12 13:18  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	85.1		%	0.100	--	1	-	03/26/12 16:40	30,2540G	KB
Solids, Total (Pre-Dried)	23.2		%	0.100	NA	1	-	03/21/12 12:03	30,2540G	KB



**Lab Duplicate Analysis**  
**Batch Quality Control**

**Project Name:** NEW BEDFORD HARBOR SUPERFUND

**Project Number:** TO-0010-04

**Lab Number:** L1204603

**Report Date:** 04/02/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-15 QC Batch ID: WG524854-1 QC Sample: L1204603-07 Client ID: S-12M-C038-0.5-1.0						
Solids, Total	88.2	87.7	%	1		20

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

#### Cooler Information Custody Seal

##### Cooler

C	Absent
A	Absent
B	Absent
D	Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1204603-01A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-02A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-03A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-04A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-05A	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-06A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-07A	Amber 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-MS/MSD(),A2-TS-PREDRIED(7)
L1204603-07B	Glass 250ml unpreserved	D	N/A	3.3	Y	Absent	A2-PCB-8082(14)
L1204603-08A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-09A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-10A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-11A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-12A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-13A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-14A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)
L1204603-15A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCB-8082(14),A2-TS(7),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

## GLOSSARY

### Acronyms

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

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

- |           |   |
|-----------|---|
| <b>A</b>  | - Spectra identified as "Aldol Condensation Product".   |
| <b>B</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 five times (5x) 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. |
| <b>C</b>  | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.  |
| <b>D</b>  | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.   |
| <b>E</b>  | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.  |
| <b>G</b>  | - 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.  |
| <b>H</b>  | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.  |
| <b>I</b>  | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.  |
| <b>M</b>  | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.  |
| <b>NJ</b> | - 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.  |

Report Format: Data Usability Report





**Project Name:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

**Data Qualifiers**

- 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.
- 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:** NEW BEDFORD HARBOR SUPERFUND  
**Project Number:** TO-0010-04

**Lab Number:** L1204603  
**Report Date:** 04/02/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### **Connecticut Department of Public Health Certificate/Lab ID: PH-0141.**

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### **Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### **Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### **New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

### **New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.***

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

*Atmospheric Organic Parameters* (EPA TO-15)

*Biological Tissue* (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

*Air & Emissions* (EPA TO-15.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to LA-DEQ Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID: 460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 3020A, 6020A, 245.7, 9040B, SM4500H-B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A, 7470A, 7471B, 9040B, 9045C, 3050B, 3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

*Air & Emissions* (EPA TO-15.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.



# MANSFIELD CHAIN OF CUSTODY

PAGE 10 OF 13

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

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

### Client Information

Client: Woods Hole Group  
Address: 81 Technology Park  
East Falmouth, MA 02576  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DWALSH@WHGRP.COM

Project Name: New Bedford Harbor  
Project Location: New Bedford, MA  
Project #: TO-0010-04  
Project Manager: Dave Walsh  
ALPHA Quote #:  
Turn-Around Time

These samples have been previously analyzed by Alpha  
Other Project Specific Requirements/Comments/Detection Limits:  
Howogenize samples before analysis  
**PLEASE NOTE - Project Specific EPP**  
**MS/MSD (at unit cost) will be omitted unless you check here:**

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

Date Rec'd in Lab: \_\_\_\_\_

ALPHA Job #: L1204603

### Report Information - Data Deliverables

FAX  
 EMAIL  
 Add'l Deliverables

### Billing Information

Same as Client info  
PO #:

### Regulatory Requirements/Report Limits

State / Fed Program: \_\_\_\_\_ Criteria: \_\_\_\_\_

ANALYSIS  
PCB Cong. (NMA-9052)  
PCB Aroclors

### SAMPLE HANDLING

- Filtration \_\_\_\_\_
- Done
- Not needed
- Lab to do
- Preservation
- Lab to do

### Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Container Type Preservative	Date/Time	Received By:	Date/Time	Sample Specific Comments
		Date	Time							
	S-12M-C030-0.1-0.6	3/13/12	1131	SBD	DS	A A	3/12/12	MSY	3/16/12 16:05	LV07 - REP Field Rep
	S-12M-C030-0.6-1.1	3/13/12	1131			A A				LV07 - REP Field Rep
	S-12M-C030-1.1-1.6	3/13/12	1131			A A				LV07 - REP Field Rep
	S-12M-C031-0.1-0.6	3/13/12	1120			A A				LV07 MS/MSD
	S-12M-C031-0.6-1.1	3/13/12	1120			A A				LV07 Archive
	S-12M-C031-1.1-1.6	3/13/12	1120			A A				LV07 Archive
	S-12M-C032-0.0-0.5	3/13/12	1252			A A				27FF
	S-12M-C032-0.5-1.0	3/13/12	1252			A A				27FF
	S-12M-C033-6.0-0.2	3/12/12	1129			A A				LZ02

Relinquished By: Base

Date/Time: 3/16/12 09:05

Received By: MSY

Date/Time: 3/16/12 16:05

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





# MANSFIELD CHAIN OF CUSTODY

PAGE 13 OF 13

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

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

### Client Information

Client: Woods Hole Group  
Address: 81 Technology Park  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DVALSH@WHGRP.COM

Serial No: 040212

### Project Information

Project Name: New Bedford Harbor  
Project Location: New Bedford, MA  
Project #: T0-C010-C4  
Project Manager: Dave Walsh  
ALPHA Quote #:  
Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)  
Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

These samples have been previously analyzed by Alpha  
Other Project Specific Requirements/Comments/Detection Limits:

**PLEASE NOTE** How to analyze samples before analysis  
Project Specific Requirements/Comments/Detection Limits:  
MS/MSD (at unit cost) will be omitted unless you check here:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		

70	S-12M-C040-0.0-0.5	3/13/12	1304	SED	DS	X
71	S-12M-C040-0.5-1.0	3/13/12	1304			X
72	S-12M-C041-0.0-0.5	3/13/12	1331			X
73	S-12M-C041-0.5-1.0	3/13/12	1331			X
74	S-12M-C042-0.0-0.5	3/13/12	1318			X
75	S-12M-C042-0.5-1.0	3/13/12	1318			X

Container Type  
Preservative

Date/Time  
Received By:

Date/Time  
Received By:

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEX  Add'l Deliverables

### Regulatory Requirements/Report Limits

State/Fed Program Criteria

### Billing Information

Same as Client info PO #:

Date Rec'd in Lab:

ALPHA Job #: 1204603

ANALYSIS	PCB Analytes	SAMPLE HANDLING	Sample Specific Comments
		Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	

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





## ANALYTICAL REPORT

Lab Number:	L1207312
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD HARBOR
Project Number:	TO-0010-04
Report Date:	05/10/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1207312-01	S-12M-C019-2.4-2.9	NEW BEDFORD, MA	03/12/12 09:46
L1207312-02	S-12M-C019-3.7-3.9	NEW BEDFORD, MA	03/12/12 09:46
L1207312-03	S-12M-C020-1.7-2.2	NEW BEDFORD, MA	03/12/12 10:53
L1207312-04	S-12M-C021-1.2-1.7	NEW BEDFORD, MA	03/12/12 10:39
L1207312-05	S-12M-C024-0.9-1.4	NEW BEDFORD, MA	03/13/12 10:36
L1207312-06	S-12M-C028-1.1-1.6	NEW BEDFORD, MA	03/13/12 09:37

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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 free of charge for 30 days from the date the project is completed. After 30 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.

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

---

Sample Receipt

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

### Case Narrative (continued)

Sediment samples were received intact on March 16, 2012. The samples were placed in frozen storage and removed on April 27, 2012 for initial percent solids and then placed in refrigerated storage. Samples were removed from refrigerated storage on April 30, 2012 and May 01, 2012 when they were removed to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

L1207312-01 through -06, with the exception of sample -03 have elevated detection limits due to the dilutions required by the elevated concentrations of target compounds in the sample.

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

Authorized Signature:  Cynthia McQueen

Title: Technical Director/Representative

Date: 05/10/12

# ORGANICS

# PCBS

**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

**Lab ID:** L1207312-01  
**Client ID:** S-12M-C019-2.4-2.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 05/04/12 14:54  
**Analyst:** AW  
**Percent Solids:** 98%

**Date Collected:** 03/12/12 09:46  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 05/01/12 11:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	3500		ug/kg	1340	--	1000
CI3-BZ#18	10200		ug/kg	1340	--	1000
CI5-BZ#118	3160		ug/kg	1340	--	1000
CI5-BZ#105	ND		ug/kg	1340	--	1000
CI6-BZ#138	6050		ug/kg	1340	--	1000
CI7-BZ#187	1710		ug/kg	1340	--	1000
CI6-BZ#128	ND		ug/kg	1340	--	1000
CI7-BZ#180	ND		ug/kg	1340	--	1000
CI7-BZ#170	ND		ug/kg	1340	--	1000
CI8-BZ#195	ND		ug/kg	1340	--	1000
CI9-BZ#206	ND		ug/kg	1340	--	1000
CI10-BZ#209	ND		ug/kg	1340	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	92		30-150
DBOB	70		30-150

**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

**Lab ID:** L1207312-01  
**Client ID:** S-12M-C019-2.4-2.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 05/04/12 14:54  
**Analyst:** AW  
**Percent Solids:** 98%

**Date Collected:** 03/12/12 09:46  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 05/01/12 11:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	7260		ug/kg	1340	--	1000
CI4-BZ#44	21100		ug/kg	1340	--	1000
CI4-BZ#66	14900		ug/kg	1340	--	1000
CI5-BZ#101	6050		ug/kg	1340	--	1000
CI6-BZ#153	5510		ug/kg	1340	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	92		30-150
DBOB	70		30-150



**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

**Lab ID:** L1207312-01 D  
**Client ID:** S-12M-C019-2.4-2.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 05/04/12 20:44  
**Analyst:** AW  
**Percent Solids:** 98%

**Date Collected:** 03/12/12 09:46  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 05/01/12 11:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	49500		ug/kg	6680	--	5000

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**SAMPLE RESULTS**

Lab ID: L1207312-02  
 Client ID: S-12M-C019-3.7-3.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 05/04/12 21:28  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/12/12 09:46  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 05/01/12 11:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	276		ug/kg	135	--	100
CI3-BZ#18	401		ug/kg	135	--	100
CI4-BZ#66	289		ug/kg	135	--	100
CI5-BZ#118	ND		ug/kg	135	--	100
CI5-BZ#105	ND		ug/kg	135	--	100
CI6-BZ#138	ND		ug/kg	135	--	100
CI7-BZ#187	ND		ug/kg	135	--	100
CI6-BZ#128	ND		ug/kg	135	--	100
CI7-BZ#180	ND		ug/kg	135	--	100
CI7-BZ#170	ND		ug/kg	135	--	100
CI8-BZ#195	ND		ug/kg	135	--	100
CI9-BZ#206	ND		ug/kg	135	--	100
CI10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	69		30-150
DBOB	72		30-150

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**SAMPLE RESULTS**

Lab ID: L1207312-02  
 Client ID: S-12M-C019-3.7-3.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 05/04/12 21:28  
 Analyst: AW  
 Percent Solids: 98%

Date Collected: 03/12/12 09:46  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 05/01/12 11:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	698		ug/kg	135	--	100
CI4-BZ#52	924		ug/kg	135	--	100
CI4-BZ#44	355		ug/kg	135	--	100
CI5-BZ#101	187		ug/kg	135	--	100
CI6-BZ#153	157		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	69		30-150
DBOB	72		30-150

**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

**Lab ID:** L1207312-03  
**Client ID:** S-12M-C020-1.7-2.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 05/08/12 14:11  
**Analyst:** AW  
**Percent Solids:** 99%

**Date Collected:** 03/12/12 10:53  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 05/01/12 11:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	6.98		ug/kg	1.32	--	1
CI3-BZ#18	14.1		ug/kg	1.32	--	1
CI4-BZ#52	19.4		ug/kg	1.32	--	1
CI4-BZ#66	6.52		ug/kg	1.32	--	1
CI5-BZ#118	2.60		ug/kg	1.32	--	1
CI6-BZ#153	3.75		ug/kg	1.32	--	1
CI5-BZ#105	ND		ug/kg	1.32	--	1
CI6-BZ#138	2.93		ug/kg	1.32	--	1
CI7-BZ#187	ND		ug/kg	1.32	--	1
CI6-BZ#128	ND		ug/kg	1.32	--	1
CI7-BZ#180	ND		ug/kg	1.32	--	1
CI7-BZ#170	ND		ug/kg	1.32	--	1
CI8-BZ#195	ND		ug/kg	1.32	--	1
CI9-BZ#206	ND		ug/kg	1.32	--	1
CI10-BZ#209	ND		ug/kg	1.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	95		30-150

**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

**Lab ID:** L1207312-03  
**Client ID:** S-12M-C020-1.7-2.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 05/08/12 14:11  
**Analyst:** AW  
**Percent Solids:** 99%

**Date Collected:** 03/12/12 10:53  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 05/01/12 11:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	15.2		ug/kg	1.32	--	1
CI4-BZ#44	6.93		ug/kg	1.32	--	1
CI5-BZ#101	3.65		ug/kg	1.32	--	1

DBOB	83	30-150
BZ 198	95	30-150

**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

**Lab ID:** L1207312-04  
**Client ID:** S-12M-C021-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 05/07/12 16:43  
**Analyst:** AW  
**Percent Solids:** 99%

**Date Collected:** 03/12/12 10:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 05/01/12 11:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	286		ug/kg	66.6	--	50
CI3-BZ#18	785		ug/kg	66.6	--	50
CI5-BZ#105	ND		ug/kg	66.6	--	50
CI6-BZ#138	106		ug/kg	66.6	--	50
CI7-BZ#187	ND		ug/kg	66.6	--	50
CI6-BZ#128	ND		ug/kg	66.6	--	50
CI7-BZ#180	ND		ug/kg	66.6	--	50
CI7-BZ#170	ND		ug/kg	66.6	--	50
CI8-BZ#195	ND		ug/kg	66.6	--	50
CI9-BZ#206	ND		ug/kg	66.6	--	50
CI10-BZ#209	ND		ug/kg	66.6	--	50
DBOB	90			30-150		
BZ 198	69			30-150		

**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

Lab ID: L1207312-04  
 Client ID: S-12M-C021-1.2-1.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 05/07/12 16:43  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/12/12 10:39  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 05/01/12 11:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	750		ug/kg	66.6	--	50
CI4-BZ#52	614		ug/kg	66.6	--	50
CI4-BZ#44	293		ug/kg	66.6	--	50
CI4-BZ#66	377		ug/kg	66.6	--	50
CI5-BZ#101	263		ug/kg	66.6	--	50
CI5-BZ#118	170		ug/kg	66.6	--	50
CI6-BZ#153	144		ug/kg	66.6	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	69		30-150

**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

Lab ID: L1207312-05  
 Client ID: S-12M-C024-0.9-1.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 05/08/12 14:54  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/13/12 10:36  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 05/01/12 11:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	33.5		ug/kg	6.68	--	5
CI3-BZ#18	48.4		ug/kg	6.68	--	5
CI4-BZ#52	79.7		ug/kg	6.68	--	5
CI4-BZ#66	23.1		ug/kg	6.68	--	5
CI5-BZ#118	ND		ug/kg	6.68	--	5
CI5-BZ#105	ND		ug/kg	6.68	--	5
CI6-BZ#138	ND		ug/kg	6.68	--	5
CI7-BZ#187	ND		ug/kg	6.68	--	5
CI6-BZ#128	ND		ug/kg	6.68	--	5
CI7-BZ#180	ND		ug/kg	6.68	--	5
CI7-BZ#170	ND		ug/kg	6.68	--	5
CI8-BZ#195	ND		ug/kg	6.68	--	5
CI9-BZ#206	ND		ug/kg	6.68	--	5
CI10-BZ#209	ND		ug/kg	6.68	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	77		30-150
BZ 198	84		30-150



**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

**Lab ID:** L1207312-05  
**Client ID:** S-12M-C024-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 05/08/12 14:54  
**Analyst:** AW  
**Percent Solids:** 99%

**Date Collected:** 03/13/12 10:36  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 05/01/12 11:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	50.4		ug/kg	6.68	--	5
CI4-BZ#44	24.8		ug/kg	6.68	--	5
CI5-BZ#101	8.45		ug/kg	6.68	--	5
CI6-BZ#153	7.36		ug/kg	6.68	--	5

DBOB	77	30-150
BZ 198	84	30-150

Project Name: NEW BEDFORD HARBOR

Lab Number: L1207312

Project Number: TO-0010-04

Report Date: 05/10/12

## SAMPLE RESULTS

Lab ID: L1207312-06  
 Client ID: S-12M-C028-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082  
 Analytical Date: 05/07/12 17:27  
 Analyst: AW  
 Percent Solids: 99%

Date Collected: 03/13/12 09:37  
 Date Received: 03/16/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 05/01/12 11:40  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#18	1130		ug/kg	67.4	--	50
CI5-BZ#118	ND		ug/kg	67.4	--	50
CI5-BZ#105	ND		ug/kg	67.4	--	50
CI6-BZ#138	ND		ug/kg	67.4	--	50
CI7-BZ#187	ND		ug/kg	67.4	--	50
CI6-BZ#128	ND		ug/kg	67.4	--	50
CI7-BZ#180	ND		ug/kg	67.4	--	50
CI7-BZ#170	ND		ug/kg	67.4	--	50
CI8-BZ#195	ND		ug/kg	67.4	--	50
CI9-BZ#206	ND		ug/kg	67.4	--	50
CI10-BZ#209	ND		ug/kg	67.4	--	50
DBOB	98			30-150		
BZ 198	71			30-150		

**Project Name:** NEW BEDFORD HARBOR**Lab Number:** L1207312**Project Number:** TO-0010-04**Report Date:** 05/10/12**SAMPLE RESULTS**

**Lab ID:** L1207312-06  
**Client ID:** S-12M-C028-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082  
**Analytical Date:** 05/07/12 17:27  
**Analyst:** AW  
**Percent Solids:** 99%

**Date Collected:** 03/13/12 09:37  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 05/01/12 11:40  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	615		ug/kg	67.4	--	50
CI3-BZ#28	678		ug/kg	67.4	--	50
CI4-BZ#52	459		ug/kg	67.4	--	50
CI4-BZ#44	230		ug/kg	67.4	--	50
CI4-BZ#66	135		ug/kg	67.4	--	50
CI5-BZ#101	73.6		ug/kg	67.4	--	50
CI6-BZ#153	ND		ug/kg	67.4	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	98		30-150
BZ 198	71		30-150

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082  
Analytical Date: 05/04/12 11:59  
Analyst: AW

Extraction Method: EPA 3540C  
Extraction Date: 05/01/12 11:40  
Cleanup Method1: EPA 3630  
Cleanup Date1: 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-06 Batch: WG532745-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	80		30-150

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082  
Analytical Date: 05/04/12 11:59  
Analyst: AW

Extraction Method: EPA 3540C  
Extraction Date: 05/01/12 11:40  
Cleanup Method1: EPA 3630  
Cleanup Date1: 05/03/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-06 Batch: WG532745-1					
C16-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	80		30-150

## Matrix Spike Analysis

### Batch Quality Control

Project Name: NEW BEDFORD HARBOR

Lab Number: L1207312

Project Number: TO-0010-04

Report Date: 05/10/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG532745-4 WG532745-5 QC Sample: L1207312-02 Client ID: S-12M-C019-3.7-3.9												
Cl2-BZ#8	276	1990	1400	57		1440	54		40-140	3		30
Cl3-BZ#18	401	1990	1700	65		1720	61		40-140	1		30
Cl4-BZ#66	289	1990	1560	64		1620	62		40-140	4		30
Cl5-BZ#118	ND	1990	1430	72		1540	71		40-140	7		30
Cl5-BZ#105	ND	1990	1350	68		1380	64		40-140	2		30
Cl6-BZ#138	ND	1990	1430	72		1490	69		40-140	4		30
Cl7-BZ#187	ND	1990	1260	63		1380	64		40-140	9		30
Cl6-BZ#128	ND	1990	1330	67		1420	66		40-140	7		30
Cl7-BZ#180	ND	1990	1260	63		1300	60		40-140	3		30
Cl7-BZ#170	ND	1990	1360	68		1440	67		40-140	6		30
Cl8-BZ#195	ND	1990	1310	66		1380	64		40-140	5		30
Cl9-BZ#206	ND	1990	1420	71		1510	70		40-140	6		30
Cl10-BZ#209	ND	1990	1260	63		1330	62		40-140	5		30
Cl3-BZ#28	698	1990	2190	75		2240	71		40-140	2		30
Cl4-BZ#52	924	1990	2210	65		2220	60		40-140	0		30
Cl4-BZ#44	355	1990	1650	65		1700	62		40-140	3		30
Cl5-BZ#101	187	1990	1500	66		1570	64		40-140	5		30
Cl6-BZ#153	157	1990	1430	64		1510	63		40-140	5		30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-06    QC Batch ID: WG532745-4    WG532745-5    QC Sample: L1207312-02    Client ID: S-12M-C019-3.7-3.9

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	70		68		30-150
DBOB	63		63		30-150

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD HARBOR

Lab Number: L1207312

Project Number: TO-0010-04

Report Date: 05/10/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-06 Batch: WG532745-2 WG532745-3								
CI2-BZ#8	76		72		40-140	5		30
CI3-BZ#18	81		76		40-140	6		30
CI3-BZ#28	79		74		40-140	7		30
CI4-BZ#52	79		71		40-140	11		30
CI4-BZ#44	78		74		40-140	5		30
CI4-BZ#66	82		74		40-140	10		30
CI5-BZ#101	82		75		40-140	9		30
CI5-BZ#118	82		75		40-140	9		30
CI5-BZ#105	79		74		40-140	7		30
CI6-BZ#138	82		77		40-140	6		30
CI7-BZ#187	80		74		40-140	8		30
CI6-BZ#128	81		74		40-140	9		30
CI7-BZ#180	82		69		40-140	17		30
CI7-BZ#170	77		72		40-140	7		30
CI8-BZ#195	76		69		40-140	10		30
CI9-BZ#206	83		77		40-140	8		30
CI10-BZ#209	75		70		40-140	7		30



### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-06 Batch: WG532745-2 WG532745-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	83		77		30-150
DBOB	72		71		30-150

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-06 Batch: WG532745-2 WG532745-3								
Cl6-BZ#153	79		74		40-140	7		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	83		77		30-150
DBOB	72		71		30-150

# INORGANICS & MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR

Lab Number: L1207312

Project Number: TO-0010-04

Report Date: 05/10/12

## SAMPLE RESULTS

Lab ID: L1207312-01  
 Client ID: S-12M-C019-2.4-2.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment

Date Collected: 03/12/12 09:46  
 Date Received: 03/16/12  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	98.3		%	0.100	--	1	-	04/30/12 10:45	30,2540G	KB
Solids, Total (Pre-Dried)	38.4		%	0.100	NA	1	-	04/27/12 13:40	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**SAMPLE RESULTS**

**Lab ID:** L1207312-02  
**Client ID:** S-12M-C019-3.7-3.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 09:46  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.4		%	0.100	--	1	-	04/30/12 10:45	30,2540G	KB
Solids, Total (Pre-Dried)	41.2		%	0.100	NA	1	-	04/27/12 13:40	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**SAMPLE RESULTS**

**Lab ID:** L1207312-03  
**Client ID:** S-12M-C020-1.7-2.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 10:53  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.0		%	0.100	--	1	-	04/30/12 10:45	30,2540G	KB
Solids, Total (Pre-Dried)	46.1		%	0.100	NA	1	-	04/27/12 13:40	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**SAMPLE RESULTS**

**Lab ID:** L1207312-04  
**Client ID:** S-12M-C021-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/12/12 10:39  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.7		%	0.100	--	1	-	04/30/12 10:45	30,2540G	KB
Solids, Total (Pre-Dried)	37.8		%	0.100	NA	1	-	04/27/12 13:40	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**SAMPLE RESULTS**

**Lab ID:** L1207312-05  
**Client ID:** S-12M-C024-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 10:36  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.8		%	0.100	--	1	-	04/30/12 10:45	30,2540G	KB
Solids, Total (Pre-Dried)	40.6		%	0.100	NA	1	-	04/27/12 13:40	30,2540G	KB



**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**SAMPLE RESULTS**

**Lab ID:** L1207312-06  
**Client ID:** S-12M-C028-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 03/13/12 09:37  
**Date Received:** 03/16/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.6		%	0.100	--	1	-	04/30/12 10:45	30,2540G	KB
Solids, Total (Pre-Dried)	44.2		%	0.100	NA	1	-	04/27/12 13:40	30,2540G	KB





## Lab Duplicate Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR

Project Number: TO-0010-04

Lab Number: L1207312

Report Date: 05/10/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG532470-1 QC Sample: L1207312-01 Client ID: S-12M-C019-2.4-2.9						
Solids, Total	98.3	98.3	%	0		10

Project Name: NEW BEDFORD HARBOR

Lab Number: L1207312

Project Number: TO-0010-04

Report Date: 05/10/12

## 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(*)
L1207312-01A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1207312-02A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1207312-03A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1207312-04A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1207312-05A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1207312-06A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

## GLOSSARY

### Acronyms

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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value 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.

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

**Data Qualifiers**

- 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.
- 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:** NEW BEDFORD HARBOR  
**Project Number:** TO-0010-04

**Lab Number:** L1207312  
**Report Date:** 05/10/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised May 10, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### Florida Department of Health Certificate/Lab ID: E87814. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8270C, 8270D, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 3060A, 6020A, 7470A, 7471B, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

### New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040B, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Atmospheric Organic Parameters* (EPA 3C, TO-15)

*Biological Tissue* (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 245.7, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

*Air & Emissions* (EPA TO-15.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8015D, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to NJ-DEP Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID:460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B, SM4500H-B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

## **U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.)

*Air & Emissions* (EPA TO-15.)

## **Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.



**MANSFIELD CHAIN OF CUSTODY**

PAGE 7 OF 13

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

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

Date Rec'd in Lab:

ALPHA Job #: L1207312 *MT 4/26/12*

**Client Information**

Client: Woods Hole Group  
Address: 81 Technology Park Dr.  
East Falmouth, MA 02536  
Phone: 761-508-540-8080  
Fax: 508-540-1001  
Email: dwalsh@whgrp.com

**Project Information**

Project Name: New Bedford Harbor  
Project Location: New Bedford, MA  
Project #: TO-0010-04  
Project Manager: DAVE WALSH  
ALPHA Quote #:

**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

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)

Date Due: Time:

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize samples before analysis

**PLEASE NOTE** Project-specific EDD MS/MSD (at unit cost) will be omitted unless you check here:

ANALYSIS  
PCB Congeners

**SAMPLE HANDLING**

Filtration \_\_\_\_\_  
 Done  
 Not needed  
 Lab to do Preservation  
 Lab to do

(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES		
		Date	Time			1	2	3	4	5	6	7	8	9	10				
-1	S-12M-C019-1.9-2.4	3/12/12	09:46	SED	DS	1												LH08	1
-2	S-12M-C019-2.4-2.9	3/12/12	09:46	SED	DS	1												LH08 Archive	1
-2	S-12M-C019-3.7-3.9	3/12/12	09:46	SED	DS	1												LH08 Archive	1
-2	S-12M-C020-0.7-1.2	3/12/12	10:53	SED	DS	1												LG13 Archive	1
-2	S-12M-C020-1.2-1.7	3/12/12	10:53	SED	DS	1												LG13	1
-3	S-12M-C020-1.2-1.7-MS/MSD	3/12/12	10:53	SED	DS	1												LG13 MS/MSD	1
-3	S-12M-C020-1.7-2.2	3/12/12	10:53	SED	DS	1												LG13 Archive	1
-4	S-12M-C021-0.2-0.7	3/12/12	10:39	SED	DS	1												LG17	1
-4	S-12M-C021-0.7-1.2	3/12/12	10:39	SED	DS	1												LG17	1
-4	S-12M-C021-1.2-1.7	3/12/12	10:39	SED	DS	1												GG17 Archive	1

Container Type A  
Preservative A

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

Relinquished By: <u>Dave Walsh</u> <u>D.S.W.</u>	Date/Time: <u>3/16/12 0915</u> <u>3/16/12 1005</u>	Received By: <u>[Signature]</u>	Date/Time: <u>3/16/12 0915</u> <u>3/16/12 1005</u>
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**MANSFIELD CHAIN OF CUSTODY** PAGE 8 OF 13

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

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

Date Rec'd in Lab: \_\_\_\_\_  
ALPHA Job #: L120700-M 4/26/12

**Client Information**

Client: WOODS Hole Group  
Address: 81 Technology Park  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DWALSH@WHGRP.COM

**Project Information**

Project Name: New Bedford Harbor  
Project Location: New Bedford, MA  
Project #: TO-0010-04  
Project Manager: Dave Walsh  
ALPHA Quote #: \_\_\_\_\_

**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

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Other Project Specific Requirements/Comments/Detection Limits:  
Homogenize samples before analysis  
**PLEASE NOTE** - Project specific EDD  
MS/MSD (at unit cost) will be omitted unless you check here:

ANALYSIS  
PCB Congeners

**SAMPLE HANDLING**

Filtration \_\_\_\_\_  
 Done  
 Not needed  
 Lab to do Preservation  
 Lab to do

(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES					
		Date	Time			PCB Congeners																
	S-12M-C022-0.0-0.5	3/13/12	0914	SED	DS	X															PB2	1
	S-12M-C022-0.5-0.8	3/13/12	0914			X															PB2	1
	S-12M-C023-0.1-0.6	3/13/12	1021			X															LQ13	1
-25	S-12M-C023-0.6-1.1	3/13/12	1021			X															LQ13 Archive	1
	S-12M-C024-0.4-0.9	3/13/12	1036			X															LL14	1
-5	-26 S-12M-C024-0.9-1.4	3/13/12	1036			X															LL14 Archive	1
	S-12M-C025-0.5-1.0	3/13/12	1008			X															LU15	1
	S-12M-C025-0.5-1.0-REP	3/13/12	1008			X															LU15 REP	1
	S-12M-C025-1.0-1.5	3/13/12	1008			X															LU15 Archive	1
-27	S-12M-C025-1.5-2.0	3/13/12	1008			X															LU15 Archive	1

Container Type A  
Preservative A

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

Relinquished By: <u>Dave Walsh</u> <u>U.S.M.</u>	Date/Time: <u>3/16/12 0915</u> <u>3/16/12 1605</u>	Received By: <u>[Signature]</u> <u>[Signature]</u>	Date/Time: <u>3/16/12 0915</u> <u>3/16/12 1605</u>
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## ANALYTICAL REPORT

Lab Number:	L1218556
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dack Stuart
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD POST DREDGE
Project Number:	TO-0010-07
Report Date:	11/02/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1218556-01	S-120-C001-0.6-1.1	NEW BEDFORD, MA	10/15/12 12:15
L1218556-02	S-120-C001-1.1-1.6	NEW BEDFORD, MA	10/15/12 12:15
L1218556-03	S-120-C001-1.6-2.1	NEW BEDFORD, MA	10/15/12 12:15
L1218556-04	S-120-C001-0.1-0.6-REP	NEW BEDFORD, MA	10/15/12 12:25
L1218556-05	S-120-C001-0.9-1.4-REP	NEW BEDFORD, MA	10/15/12 12:25
L1218556-06	S-120-C001-1.4-1.9-REP	NEW BEDFORD, MA	10/15/12 12:25
L1218556-07	S-120-C002-0.3-0.8	NEW BEDFORD, MA	10/15/12 09:47
L1218556-08	S-120-C002-0.8-1.3	NEW BEDFORD, MA	10/15/12 09:47
L1218556-09	S-120-C002-1.3-1.8	NEW BEDFORD, MA	10/15/12 09:47
L1218556-10	S-120-C003-0.5-1.0	NEW BEDFORD, MA	10/15/12 11:30
L1218556-11	S-120-C003-1.0-1.5	NEW BEDFORD, MA	10/15/12 11:30
L1218556-12	S-120-C003-1.5-2.0	NEW BEDFORD, MA	10/15/12 11:30
L1218556-13	S-120-C004-0.0-0.5	NEW BEDFORD, MA	10/15/12 10:42
L1218556-14	S-120-C004-0.5-1.0	NEW BEDFORD, MA	10/15/12 10:42
L1218556-15	S-120-C004-1.0-1.5	NEW BEDFORD, MA	10/15/12 10:42
L1218556-16	EB-101712-01	NEW BEDFORD, MA	10/17/12 09:45
L1218556-17	EB-101712-02	NEW BEDFORD, MA	10/17/12 09:55
L1218556-18	EB-101712-03	NEW BEDFORD, MA	10/17/12 10:15
L1218556-19	EB-101712-04	NEW BEDFORD, MA	10/17/12 10:30

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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 free of charge for 30 days from the date the project is completed. After 30 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.

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

### Case Narrative (continued)

#### Sample Receipt

Sediment samples were received intact on October 15, 2012. The samples were analyzed for initial percent solids air-dried and then placed in frozen storage on October 18, 2012. Samples were removed from frozen storage on October 23, 2012 when they were removed to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

Samples L1218556-01, 02, 04, 05, 07, 08, 10, 11, 13 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The surrogate recovery for the method blank, WG569426-1 is outside the individual acceptance criteria for DBOB (153%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

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: 11/02/12

# ORGANICS

# PCBS



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-01 D  
 Client ID: S-120-C001-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 14:31  
 Analyst: JW  
 Percent Solids: 93%

Date Collected: 10/15/12 12:15  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	2330		ug/kg	701	--	500
CI4-BZ#66	1750		ug/kg	701	--	500
CI5-BZ#118	1070		ug/kg	701	--	500
CI5-BZ#105	ND		ug/kg	701	--	500
CI6-BZ#138	783		ug/kg	701	--	500
CI7-BZ#187	ND		ug/kg	701	--	500
CI6-BZ#128	ND		ug/kg	701	--	500
CI7-BZ#180	ND		ug/kg	701	--	500
CI7-BZ#170	ND		ug/kg	701	--	500
CI8-BZ#195	ND		ug/kg	701	--	500
CI9-BZ#206	ND		ug/kg	701	--	500
CI10-BZ#209	ND		ug/kg	701	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	88		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-01 D  
 Client ID: S-120-C001-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 14:31  
 Analyst: JW  
 Percent Solids: 93%

Date Collected: 10/15/12 12:15  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	907		ug/kg	701	--	500
CI3-BZ#28	3530		ug/kg	701	--	500
CI4-BZ#52	3700		ug/kg	701	--	500
CI4-BZ#44	1790		ug/kg	701	--	500
CI5-BZ#101	1260		ug/kg	701	--	500
CI6-BZ#153	912		ug/kg	701	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	88		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-02 D2  
 Client ID: S-120-C001-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 10:21  
 Analyst: JW  
 Percent Solids: 94%

Date Collected: 10/15/12 12:15  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	3530		ug/kg	1410	--	1000

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-02 D  
 Client ID: S-120-C001-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 16:42  
 Analyst: JW  
 Percent Solids: 94%

Date Collected: 10/15/12 12:15  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	840		ug/kg	141	--	100
CI3-BZ#18	1500		ug/kg	141	--	100
CI4-BZ#52	2290		ug/kg	141	--	100
CI4-BZ#66	1060		ug/kg	141	--	100
CI5-BZ#118	621		ug/kg	141	--	100
CI6-BZ#138	394		ug/kg	141	--	100
CI6-BZ#128	ND		ug/kg	141	--	100
CI7-BZ#180	ND		ug/kg	141	--	100
CI7-BZ#170	ND		ug/kg	141	--	100
CI8-BZ#195	ND		ug/kg	141	--	100
CI9-BZ#206	ND		ug/kg	141	--	100
CI10-BZ#209	ND		ug/kg	141	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	128		30-150
BZ 198	101		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-02 D  
 Client ID: S-120-C001-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 16:42  
 Analyst: JW  
 Percent Solids: 94%

Date Collected: 10/15/12 12:15  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI4-BZ#44	1210		ug/kg	141	--	100
CI5-BZ#101	693		ug/kg	141	--	100
CI6-BZ#153	453		ug/kg	141	--	100
CI5-BZ#105	ND		ug/kg	141	--	100
CI7-BZ#187	ND		ug/kg	141	--	100

DBOB	128	30-150
BZ 198	101	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-04 D  
 Client ID: S-120-C001-0.1-0.6-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 13:47  
 Analyst: JW  
 Percent Solids: 93%

Date Collected: 10/15/12 12:25  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	2380		ug/kg	707	--	500
CI4-BZ#52	4150		ug/kg	707	--	500
CI4-BZ#66	1780		ug/kg	707	--	500
CI5-BZ#118	1120		ug/kg	707	--	500
CI5-BZ#105	ND		ug/kg	707	--	500
CI6-BZ#138	789		ug/kg	707	--	500
CI7-BZ#187	ND		ug/kg	707	--	500
CI6-BZ#128	ND		ug/kg	707	--	500
CI7-BZ#180	ND		ug/kg	707	--	500
CI7-BZ#170	ND		ug/kg	707	--	500
CI8-BZ#195	ND		ug/kg	707	--	500
CI9-BZ#206	ND		ug/kg	707	--	500
CI10-BZ#209	ND		ug/kg	707	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	95		30-150
BZ 198	96		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

**Lab ID:** L1218556-04 D  
**Client ID:** S-120-C001-0.1-0.6-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 10/31/12 13:47  
**Analyst:** JW  
**Percent Solids:** 93%

**Date Collected:** 10/15/12 12:25  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 10/24/12 14:47  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1010		ug/kg	707	--	500
Cl3-BZ#28	3170		ug/kg	707	--	500
Cl4-BZ#44	1800		ug/kg	707	--	500
Cl5-BZ#101	1300		ug/kg	707	--	500
Cl6-BZ#153	947		ug/kg	707	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	95		30-150
BZ 198	96		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-05 D  
 Client ID: S-120-C001-0.9-1.4-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 21:48  
 Analyst: JW  
 Percent Solids: 97%

Date Collected: 10/15/12 12:25  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	47.8		ug/kg	13.7	--	10
CI3-BZ#18	114		ug/kg	13.7	--	10
CI4-BZ#52	210		ug/kg	13.7	--	10
CI4-BZ#66	90.0		ug/kg	13.7	--	10
CI5-BZ#118	56.6		ug/kg	13.7	--	10
CI6-BZ#138	35.8		ug/kg	13.7	--	10
CI6-BZ#128	ND		ug/kg	13.7	--	10
CI7-BZ#180	ND		ug/kg	13.7	--	10
CI7-BZ#170	ND		ug/kg	13.7	--	10
CI8-BZ#195	ND		ug/kg	13.7	--	10
CI9-BZ#206	ND		ug/kg	13.7	--	10
CI10-BZ#209	ND		ug/kg	13.7	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	122		30-150
BZ 198	95		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-05 D  
 Client ID: S-120-C001-0.9-1.4-REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 21:48  
 Analyst: JW  
 Percent Solids: 97%

Date Collected: 10/15/12 12:25  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	170		ug/kg	13.7	--	10
CI4-BZ#44	82.2		ug/kg	13.7	--	10
CI5-BZ#101	65.1		ug/kg	13.7	--	10
CI6-BZ#153	43.2		ug/kg	13.7	--	10
CI5-BZ#105	ND		ug/kg	13.7	--	10
CI7-BZ#187	ND		ug/kg	13.7	--	10
DBOB	122			30-150		
BZ 198	95			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-07 D  
 Client ID: S-120-C002-0.3-0.8  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 15:15  
 Analyst: JW  
 Percent Solids: 95%

Date Collected: 10/15/12 09:47  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	3220		ug/kg	686	--	500
CI3-BZ#18	6460		ug/kg	686	--	500
CI4-BZ#52	8220		ug/kg	686	--	500
CI4-BZ#66	4030		ug/kg	686	--	500
CI6-BZ#138	1760		ug/kg	686	--	500
CI6-BZ#128	ND		ug/kg	686	--	500
CI7-BZ#180	792		ug/kg	686	--	500
CI8-BZ#195	ND		ug/kg	686	--	500
CI9-BZ#206	ND		ug/kg	686	--	500
CI10-BZ#209	ND		ug/kg	686	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	123		30-150
BZ 198	116		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-07 D  
 Client ID: S-120-C002-0.3-0.8  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 15:15  
 Analyst: JW  
 Percent Solids: 95%

Date Collected: 10/15/12 09:47  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	6920		ug/kg	686	--	500
CI4-BZ#44	3630		ug/kg	686	--	500
CI5-BZ#101	2850		ug/kg	686	--	500
CI5-BZ#118	1610		ug/kg	686	--	500
CI6-BZ#153	2090		ug/kg	686	--	500
CI5-BZ#105	ND		ug/kg	686	--	500
CI7-BZ#187	838		ug/kg	686	--	500
CI7-BZ#170	ND		ug/kg	686	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	123		30-150
BZ 198	116		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-08 D  
 Client ID: S-120-C002-0.8-1.3  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 15:58  
 Analyst: JW  
 Percent Solids: 97%

Date Collected: 10/15/12 09:47  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1230		ug/kg	270	--	200
Cl3-BZ#18	2330		ug/kg	270	--	200
Cl4-BZ#52	2770		ug/kg	270	--	200
Cl4-BZ#66	1520		ug/kg	270	--	200
Cl5-BZ#118	771		ug/kg	270	--	200
Cl7-BZ#187	340		ug/kg	270	--	200
Cl6-BZ#128	ND		ug/kg	270	--	200
Cl7-BZ#180	354		ug/kg	270	--	200
Cl8-BZ#195	ND		ug/kg	270	--	200
Cl9-BZ#206	ND		ug/kg	270	--	200
Cl10-BZ#209	ND		ug/kg	270	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	112		30-150
BZ 198	96		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-08 D  
 Client ID: S-120-C002-0.8-1.3  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 15:58  
 Analyst: JW  
 Percent Solids: 97%

Date Collected: 10/15/12 09:47  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	2220		ug/kg	270	--	200
CI4-BZ#44	1280		ug/kg	270	--	200
CI5-BZ#101	1240		ug/kg	270	--	200
CI6-BZ#153	829		ug/kg	270	--	200
CI5-BZ#105	ND		ug/kg	270	--	200
CI6-BZ#138	507		ug/kg	270	--	200
CI7-BZ#170	ND		ug/kg	270	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	112		30-150
BZ 198	96		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-10 D  
 Client ID: S-120-C003-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 11:05  
 Analyst: JW  
 Percent Solids: 93%

Date Collected: 10/15/12 11:30  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	710	--	500
CI3-BZ#18	1640		ug/kg	710	--	500
CI4-BZ#52	3380		ug/kg	710	--	500
CI4-BZ#66	1540		ug/kg	710	--	500
CI5-BZ#105	ND		ug/kg	710	--	500
CI6-BZ#138	747		ug/kg	710	--	500
CI7-BZ#187	ND		ug/kg	710	--	500
CI6-BZ#128	ND		ug/kg	710	--	500
CI7-BZ#180	ND		ug/kg	710	--	500
CI7-BZ#170	ND		ug/kg	710	--	500
CI8-BZ#195	ND		ug/kg	710	--	500
CI9-BZ#206	ND		ug/kg	710	--	500
CI10-BZ#209	ND		ug/kg	710	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	100		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-10 D  
 Client ID: S-120-C003-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 11:05  
 Analyst: JW  
 Percent Solids: 93%

Date Collected: 10/15/12 11:30  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	2350		ug/kg	710	--	500
CI4-BZ#44	1520		ug/kg	710	--	500
CI5-BZ#101	1200		ug/kg	710	--	500
CI5-BZ#118	993		ug/kg	710	--	500
CI6-BZ#153	853		ug/kg	710	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	100		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-11 D  
 Client ID: S-120-C003-1.0-1.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 22:32  
 Analyst: JW  
 Percent Solids: 94%

Date Collected: 10/15/12 11:30  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	22.1		ug/kg	7.01	--	5
CI3-BZ#18	41.5		ug/kg	7.01	--	5
CI4-BZ#52	53.6		ug/kg	7.01	--	5
CI4-BZ#44	19.4		ug/kg	7.01	--	5
CI5-BZ#118	13.6		ug/kg	7.01	--	5
CI5-BZ#105	ND		ug/kg	7.01	--	5
CI6-BZ#138	9.68		ug/kg	7.01	--	5
CI7-BZ#187	ND		ug/kg	7.01	--	5
CI6-BZ#128	ND		ug/kg	7.01	--	5
CI7-BZ#180	ND		ug/kg	7.01	--	5
CI7-BZ#170	ND		ug/kg	7.01	--	5
CI8-BZ#195	ND		ug/kg	7.01	--	5
CI9-BZ#206	ND		ug/kg	7.01	--	5
CI10-BZ#209	ND		ug/kg	7.01	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	111		30-150
DBOB	123		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-11 D  
 Client ID: S-120-C003-1.0-1.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 22:32  
 Analyst: JW  
 Percent Solids: 94%

Date Collected: 10/15/12 11:30  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	45.4		ug/kg	7.01	--	5
CI4-BZ#66	21.8		ug/kg	7.01	--	5
CI5-BZ#101	17.1		ug/kg	7.01	--	5
CI6-BZ#153	11.2		ug/kg	7.01	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	111		30-150
DBOB	123		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-13 D  
 Client ID: S-120-C004-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 23:16  
 Analyst: JW  
 Percent Solids: 94%

Date Collected: 10/15/12 10:42  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	19.8		ug/kg	6.85	--	5
CI3-BZ#18	33.7		ug/kg	6.85	--	5
CI4-BZ#52	83.4		ug/kg	6.85	--	5
CI5-BZ#118	23.3		ug/kg	6.85	--	5
CI6-BZ#138	17.1		ug/kg	6.85	--	5
CI6-BZ#128	ND		ug/kg	6.85	--	5
CI7-BZ#180	ND		ug/kg	6.85	--	5
CI7-BZ#170	ND		ug/kg	6.85	--	5
CI8-BZ#195	ND		ug/kg	6.85	--	5
CI9-BZ#206	ND		ug/kg	6.85	--	5
CI10-BZ#209	ND		ug/kg	6.85	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	112		30-150
DBOB	120		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-13 D  
 Client ID: S-120-C004-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 10/31/12 23:16  
 Analyst: JW  
 Percent Solids: 94%

Date Collected: 10/15/12 10:42  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	70.6		ug/kg	6.85	--	5
CI4-BZ#44	33.5		ug/kg	6.85	--	5
CI4-BZ#66	35.0		ug/kg	6.85	--	5
CI5-BZ#101	27.1		ug/kg	6.85	--	5
CI6-BZ#153	18.9		ug/kg	6.85	--	5
CI5-BZ#105	ND		ug/kg	6.85	--	5
CI7-BZ#187	ND		ug/kg	6.85	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	112		30-150
DBOB	120		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-14  
 Client ID: S-120-C004-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/01/12 00:00  
 Analyst: JW  
 Percent Solids: 96%

Date Collected: 10/15/12 10:42  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/kg	1.38	--	1
CI3-BZ#18	ND		ug/kg	1.38	--	1
CI3-BZ#28	ND		ug/kg	1.38	--	1
CI4-BZ#52	ND		ug/kg	1.38	--	1
CI4-BZ#44	ND		ug/kg	1.38	--	1
CI4-BZ#66	ND		ug/kg	1.38	--	1
CI5-BZ#101	ND		ug/kg	1.38	--	1
CI5-BZ#118	ND		ug/kg	1.38	--	1
CI5-BZ#105	ND		ug/kg	1.38	--	1
CI6-BZ#138	ND		ug/kg	1.38	--	1
CI7-BZ#187	ND		ug/kg	1.38	--	1
CI6-BZ#128	ND		ug/kg	1.38	--	1
CI7-BZ#180	ND		ug/kg	1.38	--	1
CI7-BZ#170	ND		ug/kg	1.38	--	1
CI8-BZ#195	ND		ug/kg	1.38	--	1
CI9-BZ#206	ND		ug/kg	1.38	--	1
CI10-BZ#209	ND		ug/kg	1.38	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	83		30-150
DBOB	87		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

**Lab ID:** L1218556-14  
**Client ID:** S-120-C004-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/01/12 00:00  
**Analyst:** JW  
**Percent Solids:** 96%

**Date Collected:** 10/15/12 10:42  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 10/24/12 14:47  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	1.38	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	83		30-150
DBOB	87		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-16  
 Client ID: EB-101712-01  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Water  
 Analytical Method: 1,8082A  
 Analytical Date: 10/30/12 01:28  
 Analyst: JW

Date Collected: 10/17/12 09:45  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/l	0.00505	--	1
CI3-BZ#18	ND		ug/l	0.00505	--	1
CI3-BZ#28	ND		ug/l	0.00505	--	1
CI4-BZ#52	ND		ug/l	0.00505	--	1
CI4-BZ#44	ND		ug/l	0.00505	--	1
CI4-BZ#66	ND		ug/l	0.00505	--	1
CI5-BZ#101	ND		ug/l	0.00505	--	1
CI5-BZ#118	ND		ug/l	0.00505	--	1
CI5-BZ#105	ND		ug/l	0.00505	--	1
CI6-BZ#138	ND		ug/l	0.00505	--	1
CI7-BZ#187	ND		ug/l	0.00505	--	1
CI6-BZ#128	ND		ug/l	0.00505	--	1
CI7-BZ#180	ND		ug/l	0.00505	--	1
CI7-BZ#170	ND		ug/l	0.00505	--	1
CI8-BZ#195	ND		ug/l	0.00505	--	1
CI9-BZ#206	ND		ug/l	0.00505	--	1
CI10-BZ#209	ND		ug/l	0.00505	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	93		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

**Lab ID:** L1218556-16  
**Client ID:** EB-101712-01  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 10/30/12 01:28  
**Analyst:** JW

**Date Collected:** 10/17/12 09:45  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/l	0.00505	--	1
DBOB	86		30-150			
BZ 198	93		30-150			

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-17  
 Client ID: EB-101712-02  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Water  
 Analytical Method: 1,8082A  
 Analytical Date: 10/30/12 02:12  
 Analyst: JW

Date Collected: 10/17/12 09:55  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/l	0.00510	--	1
CI3-BZ#18	ND		ug/l	0.00510	--	1
CI3-BZ#28	ND		ug/l	0.00510	--	1
CI4-BZ#52	ND		ug/l	0.00510	--	1
CI4-BZ#44	ND		ug/l	0.00510	--	1
CI4-BZ#66	ND		ug/l	0.00510	--	1
CI5-BZ#101	ND		ug/l	0.00510	--	1
CI5-BZ#118	ND		ug/l	0.00510	--	1
CI5-BZ#105	ND		ug/l	0.00510	--	1
CI6-BZ#138	ND		ug/l	0.00510	--	1
CI7-BZ#187	ND		ug/l	0.00510	--	1
CI6-BZ#128	ND		ug/l	0.00510	--	1
CI7-BZ#180	ND		ug/l	0.00510	--	1
CI7-BZ#170	ND		ug/l	0.00510	--	1
CI8-BZ#195	ND		ug/l	0.00510	--	1
CI9-BZ#206	ND		ug/l	0.00510	--	1
CI10-BZ#209	ND		ug/l	0.00510	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	96		30-150
BZ 198	97		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

**Lab ID:** L1218556-17  
**Client ID:** EB-101712-02  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 10/30/12 02:12  
**Analyst:** JW

**Date Collected:** 10/17/12 09:55  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/l	0.00510	--	1
DBOB	96			30-150		
BZ 198	97			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

Lab ID: L1218556-18  
 Client ID: EB-101712-03  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Water  
 Analytical Method: 1,8082A  
 Analytical Date: 10/30/12 02:55  
 Analyst: JW

Date Collected: 10/17/12 10:15  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/l	0.00538	--	1
CI3-BZ#18	ND		ug/l	0.00538	--	1
CI3-BZ#28	ND		ug/l	0.00538	--	1
CI4-BZ#52	ND		ug/l	0.00538	--	1
CI4-BZ#44	ND		ug/l	0.00538	--	1
CI4-BZ#66	ND		ug/l	0.00538	--	1
CI5-BZ#101	ND		ug/l	0.00538	--	1
CI5-BZ#118	ND		ug/l	0.00538	--	1
CI5-BZ#105	ND		ug/l	0.00538	--	1
CI6-BZ#138	ND		ug/l	0.00538	--	1
CI7-BZ#187	ND		ug/l	0.00538	--	1
CI6-BZ#128	ND		ug/l	0.00538	--	1
CI7-BZ#180	ND		ug/l	0.00538	--	1
CI7-BZ#170	ND		ug/l	0.00538	--	1
CI8-BZ#195	ND		ug/l	0.00538	--	1
CI9-BZ#206	ND		ug/l	0.00538	--	1
CI10-BZ#209	ND		ug/l	0.00538	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	90		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

**Lab ID:** L1218556-18  
**Client ID:** EB-101712-03  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 10/30/12 02:55  
**Analyst:** JW

**Date Collected:** 10/17/12 10:15  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/l	0.00538	--	1
DBOB	85		30-150			
BZ 198	90		30-150			

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

**Lab ID:** L1218556-19  
**Client ID:** EB-101712-04  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 10/30/12 03:39  
**Analyst:** JW

**Date Collected:** 10/17/12 10:30  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	ND		ug/l	0.00521	--	1
CI3-BZ#18	ND		ug/l	0.00521	--	1
CI3-BZ#28	ND		ug/l	0.00521	--	1
CI4-BZ#52	ND		ug/l	0.00521	--	1
CI4-BZ#44	ND		ug/l	0.00521	--	1
CI4-BZ#66	ND		ug/l	0.00521	--	1
CI5-BZ#101	ND		ug/l	0.00521	--	1
CI5-BZ#118	ND		ug/l	0.00521	--	1
CI5-BZ#105	ND		ug/l	0.00521	--	1
CI6-BZ#138	ND		ug/l	0.00521	--	1
CI7-BZ#187	ND		ug/l	0.00521	--	1
CI6-BZ#128	ND		ug/l	0.00521	--	1
CI7-BZ#180	ND		ug/l	0.00521	--	1
CI7-BZ#170	ND		ug/l	0.00521	--	1
CI8-BZ#195	ND		ug/l	0.00521	--	1
CI9-BZ#206	ND		ug/l	0.00521	--	1
CI10-BZ#209	ND		ug/l	0.00521	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	92		30-150
DBOB	91		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**SAMPLE RESULTS**

**Lab ID:** L1218556-19  
**Client ID:** EB-101712-04  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 10/30/12 03:39  
**Analyst:** JW

**Date Collected:** 10/17/12 10:30  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/l	0.00521	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	92		30-150
DBOB	91		30-150

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 1,8082A  
**Analytical Date:** 10/29/12 23:17  
**Analyst:** JW

**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 16-19 Batch: WG569321-1					
Cl2-BZ#8	ND		ug/l	0.00500	--
Cl3-BZ#18	ND		ug/l	0.00500	--
Cl3-BZ#28	ND		ug/l	0.00500	--
Cl4-BZ#52	ND		ug/l	0.00500	--
Cl4-BZ#44	ND		ug/l	0.00500	--
Cl4-BZ#66	ND		ug/l	0.00500	--
Cl5-BZ#101	ND		ug/l	0.00500	--
Cl5-BZ#118	ND		ug/l	0.00500	--
Cl5-BZ#105	ND		ug/l	0.00500	--
Cl6-BZ#138	ND		ug/l	0.00500	--
Cl7-BZ#187	ND		ug/l	0.00500	--
Cl6-BZ#128	ND		ug/l	0.00500	--
Cl7-BZ#180	ND		ug/l	0.00500	--
Cl7-BZ#170	ND		ug/l	0.00500	--
Cl8-BZ#195	ND		ug/l	0.00500	--
Cl9-BZ#206	ND		ug/l	0.00500	--
Cl10-BZ#209	ND		ug/l	0.00500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	106		30-150

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
Analytical Date: 10/29/12 23:17  
Analyst: JW

Extraction Method: EPA 3510C  
Extraction Date: 10/24/12 10:30

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 16-19 Batch: WG569321-1					
C16-BZ#153	ND		ug/l	0.00500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
BZ 198	96		30-150
DBOB	106		30-150

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 10/30/12 13:06  
 Analyst: JW

Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-02,04-05,07-08,10-11,13-14 Batch: WG569426-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	153	Q	30-150
BZ 198	125		30-150



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 10/30/12 13:06  
 Analyst: JW

Extraction Method: EPA 3540C  
 Extraction Date: 10/24/12 14:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 10/29/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-02,04-05,07-08,10-11,13-14 Batch: WG569426-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	153	Q	30-150
BZ 198	125		30-150

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE

**Lab Number:** L1218556

**Project Number:** TO-0010-07

**Report Date:** 11/02/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 16-19 Batch: WG569321-2 WG569321-3								
CI2-BZ#8	87		93		40-140	6		30
CI3-BZ#18	86		94		40-140	9		30
CI3-BZ#28	95		104		40-140	9		30
CI4-BZ#52	89		96		40-140	7		30
CI4-BZ#44	91		99		40-140	9		30
CI4-BZ#66	92		100		40-140	9		30
CI5-BZ#101	89		97		40-140	8		30
CI5-BZ#118	94		101		40-140	8		30
CI5-BZ#105	94		100		40-140	6		30
CI6-BZ#138	94		101		40-140	8		30
CI7-BZ#187	87		95		40-140	8		30
CI6-BZ#128	92		97		40-140	5		30
CI7-BZ#180	92		100		40-140	8		30
CI7-BZ#170	91		97		40-140	7		30
CI8-BZ#195	89		96		40-140	7		30
CI9-BZ#206	96		103		40-140	7		30
CI10-BZ#209	87		94		40-140	7		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 16-19 Batch: WG569321-2 WG569321-3								

DBOB	93	102	30-150
BZ 198	90	93	30-150

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 16-19 Batch: WG569321-2 WG569321-3								
--	--	--	--	--	--	--	--	--

Cl6-BZ#153	77	80	40-140	3	30
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Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	93		102		30-150
BZ 198	90		93		30-150

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Lab Number: L1218556

Project Number: TO-0010-07

Report Date: 11/02/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11,13-14 Batch: WG569426-2 WG569426-3								
CI2-BZ#8	121		124		40-140	2		30
CI3-BZ#18	127		131		40-140	3		30
CI3-BZ#28	125		130		40-140	4		30
CI4-BZ#52	121		124		40-140	2		30
CI4-BZ#44	126		129		40-140	2		30
CI4-BZ#66	125		128		40-140	2		30
CI5-BZ#101	127		128		40-140	1		30
CI5-BZ#118	130		131		40-140	1		30
CI5-BZ#105	125		124		40-140	1		30
CI6-BZ#138	129		128		40-140	1		30
CI7-BZ#187	125		122		40-140	2		30
CI6-BZ#128	125		121		40-140	3		30
CI7-BZ#180	125		121		40-140	3		30
CI7-BZ#170	126		120		40-140	5		30
CI8-BZ#195	121		116		40-140	4		30
CI9-BZ#206	137		130		40-140	5		30
CI10-BZ#209	128		122		40-140	5		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11,13-14 Batch: WG569426-2 WG569426-3								

DBOB	135	136	30-150
BZ 198	131	123	30-150

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11,13-14 Batch: WG569426-2 WG569426-3								
Cl6-BZ#153	112	111	40-140	1	30			

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	135		136		30-150
BZ 198	131		123		30-150

# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-01  
**Client ID:** S-120-C001-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 12:15  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	92.6		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	39.2		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-02  
**Client ID:** S-120-C001-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 12:15  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.5		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	44.4		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB





**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-04  
**Client ID:** S-120-C001-0.1-0.6-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 12:25  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	92.9		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	37.0		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-05  
**Client ID:** S-120-C001-0.9-1.4-REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 12:25  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.3		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	47.4		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-07  
**Client ID:** S-120-C002-0.3-0.8  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 09:47  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.2		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	43.9		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-08  
**Client ID:** S-120-C002-0.8-1.3  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 09:47  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.4		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	50.6		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-10  
**Client ID:** S-120-C003-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 11:30  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.4		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	39.7		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-11  
**Client ID:** S-120-C003-1.0-1.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 11:30  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.3		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	46.8		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-13  
**Client ID:** S-120-C004-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 10:42  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.3		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	44.8		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**SAMPLE RESULTS**

**Lab ID:** L1218556-14  
**Client ID:** S-120-C004-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 10:42  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.6		%	0.100	--	1	-	10/23/12 15:47	30,2540G	KB
Solids, Total (Pre-Dried)	47.1		%	0.100	NA	1	-	10/16/12 15:25	30,2540G	KB





### Lab Duplicate Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE

**Project Number:** TO-0010-07

**Lab Number:** L1218556

**Report Date:** 11/02/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-02,04-05,07-08,10-11,13-14 QC Batch ID: WG569090-1 QC Sample: L1218556-01 Client ID: S-120-C001-0.6-1.1						
Solids, Total	92.6	92.8	%	0		10

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

### 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  
 F Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1218556-01A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-02A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-03A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	HOLD()
L1218556-04A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-05A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-06A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	HOLD()
L1218556-07A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-08A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-09A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	HOLD()
L1218556-10A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-11A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-12A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	HOLD()
L1218556-13A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-14A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1218556-15A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	HOLD()
L1218556-16A	Amber 1000ml unpreserved	F	7	5.2	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1218556-16B	Amber 1000ml unpreserved	F	7	5.2	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1218556-17A	Amber 1000ml unpreserved	F	7	5.2	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1218556-17B	Amber 1000ml unpreserved	F	7	5.2	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1218556-18A	Amber 1000ml unpreserved	F	7	5.2	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1218556-18B	Amber 1000ml unpreserved	F	7	5.2	Y	Absent	A2-PCBCONG-8082-NOAA(7)

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1218556**Project Number:** TO-0010-07**Report Date:** 11/02/12**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1218556-19A	Amber 1000ml unpreserved	F	7	5.2	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1218556-19B	Amber 1000ml unpreserved	F	7	5.2	Y	Absent	A2-PCBCONG-8082-NOAA(7)

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

## GLOSSARY

### Acronyms

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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value 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.

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

**Data Qualifiers**

- 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.
- 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:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1218556  
**Report Date:** 11/02/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### Florida Department of Health Certificate/Lab ID: E87814. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

### New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Atmospheric Organic Parameters* (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

*Biological Tissue* (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

*Air & Emissions* (EPA TO-15, TO-10A.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Non-Potable Water* (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D .)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID:460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.)

*Air & Emissions* (EPA TO-15.)



**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.



**MANSFIELD CHAIN OF CUSTODY**

PAGE 1 OF 2

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

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

**Client Information**

Client: WOODS Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

**Project Information**

Project Name: New Bedford Post-Dredge  
Project Location: New Bedford, MA  
Project #: TO-0010-07  
Project Manager: Dave Walsh  
ALPHA Quote #:

**Turn-Around Time**

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

Date Rec'd in Lab: \_\_\_\_\_

**Report Information - Data Deliverables**

FAX  EMAIL  
 ADEX  Add'l Deliverables

ALPHA Job #: L1218556

**Billing Information**

Same as Client info PO #: \_\_\_\_\_

**Regulatory Requirements/Report Limits**

State (Fed) Program \_\_\_\_\_ Criteria \_\_\_\_\_

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before sample analysis

**PLEASE NOTE** Project-specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										SAMPLE HANDLING	TOTAL # BOTTLES		
		Date	Time			PCB Congeners 8082	Percent Total Solids	PCB Homologs										Filtration	
1	S-120-C001-0.6-1.1	10/15/12	12:15	SE	DS	X	X											<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1
2	S-120-C001-1.1-2.6					X	X										<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1	
3	S-120-C001-1.6-2.1					X	X											<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1
4	S-120-C001-0.1-0.6-REP					12:25	X	X										<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1
5	S-120-C001-0.9-1.4-REP					12:25	X	X										<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1
6	S-120-C001-1.4-1.9-REP					12:25	X	X										<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1
7	S-120-C002-0.3-0.8					9:47	X	X										<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1
8	S-120-C002-0.8-1.3					9:47	X	X										<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1
9	S-120-C002-1.3-1.8					9:47	X	X										<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1
10	S-120-C003-0.5-1.0					11:30	X	X	X									<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>	1

Container Type A  
Preservative A

Relinquished By: Dave Stuart Date/Time: 10/15/12 1815  
Received By: [Signature] Date/Time: 10/15/12 1815

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
Delivery Order 0010-07  
May 2013



**MANSFIELD CHAIN OF CUSTODY**

PAGE 2 OF 2

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

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

**Client Information**

Client: WOODS Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM  
 These samples have been previously analyzed by Alpha

**Project Information**

Project Name: New Bedford Post-Dredge  
Project Location: New Bedford, MA  
Project #: TO-0010-07  
Project Manager: Dave Walsh  
ALPHA Quote #:

**Turn-Around Time**

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

Date Rec'd in Lab:

**Report Information - Data Deliverables**

FAX  EMAIL  
 ADEx  Add'l Deliverables

**Billing Information**

Same as Client info PO #: \_\_\_\_\_

**Regulatory Requirements/Report Limits**

State  Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before analysis

**PLEASE NOTE** Project-specific EDD  
MS/MSD (at unit cost) will be omitted unless you check here:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS		SAMPLE HANDLING		TOTAL # BOTTLES	
		Date	Time			RCB Compens	Percent Solids	Filtration	Preservation		
11	S-120-C003-1.0-1.5	10/15/12	11:30	SE	DS	X	X			PA418	1
12	S-120-C003-1.5-2.0		11:30			X	X			↓ Archive	1
13	S-120-C004-0.0-0.5		10:42			X	X			PU16	1
14	S-120-C004-0.5-1.0		10:42			X	X				1
15	S-120-C004-1.0-1.5		10:42			X	X			↓ Archive	1

Container Type A  
Preservative A

Relinquished By: Dave Walsh Date/Time: 10/15/12 1815  
Received By: [Signature] Date/Time: 10/15/12 1815  
B-478

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
Delivery Order 0010-07  
May 2013



# MANSFIELD CHAIN OF CUSTODY

PAGE 2 OF 10

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

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

### Project Information

Project Name: New Bedford Post-Dredge

Project Location: New Bedford, MA

Project #: TO-0010-07

Project Manager: Dave Walsh

ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Date Rec'd in Lab:

ALPHA Job #: L1218556

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEX  Add'l Deliverables

### Billing Information

Same as Client info  PO #:

### Client Information

Client: WOODS Hole Group

Address: 81 Technology Park Dr  
 East Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before analysis

### PLEASE NOTE

Project-specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

### Regulatory Requirements/Report Limits

State/Fed Program: 06 Criteria: \_\_\_\_\_

ANALYSIS PCB Congeners 8092 Percent Solids	SAMPLE HANDLING		TOTAL # BOTTLES
	Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)		
Sample Specific Comments			

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Analysis						Sample Specific Comments	TOTAL # BOTTLES	
		Date	Time			1	2	3	4	5	6			
	S-120-C009-0.9-1.4	10/16/12	14:01	SE	DS	X	X						LF16	1
	S-120-C009-1.4-1.9					X	X							1
	S-120-C009-3.1-3.6					X	X						Archive	1
	S-120-C009-3.1-3.6 MSMSD					X	X						MSMSD	1
	S-120-C010-0.0-0.5		10:03			X	X						LG20	1
	S-120-C010-0.5-1.0					X	X							1
	S-120-C010-1.0-1.5					X	X						Archive	1
16	EB-101712-01	10/17/12	9:45	SW	DS	X							Equipment Blank 1 - wire	2
17	EB-101712-02		9:55	SW	DS	X							Equipment Blank 2 - spoon	2
18	EB-101712-03		10:15	SW	DS	X							Equipment Blank 3 - core barrel	2

Container Type A  
 Preservative A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side. Delivery Order 0010-07 May 2013

Relinquished By: <u>Dave Walsh</u>	Date/Time: <u>10/19/12 1605</u>	Received By: <u>[Signature]</u>	Date/Time: <u>10/19/12 1710</u>
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# MANSFIELD CHAIN OF CUSTODY

PAGE 3 OF 10

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

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

**Client Information**  
 Client: Woods Hole Group  
 Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
 Phone: 508-540-8080  
 Fax: 508-540-1001  
 Email: DS.TUART@WHGRP.COM

**Project Information**  
 Project Name: New Bedford Post-Dredge  
 Project Location: New Bedford, MA  
 Project #: TO-0010-07  
 Project Manager: Dave Walsh  
 ALPHA Quote #:

**Turn-Around Time**  
 Standard     RUSH (only confirmed if pre-approved!)  
 Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Other Project Specific Requirements/Comments/Detection Limits:  
homogenize samples before analysis  
**PLEASE NOTE** Project specific EDP  
 MS/MSD (at unit cost) will be omitted unless you check here:

Date Rec'd in Lab: \_\_\_\_\_ ALPHA Job #: L1218556

**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: \_\_\_\_\_

**ANALYSIS**  
PCB Congeners 8082  
Percent Solids

**SAMPLE HANDLING**  
 Filtration \_\_\_\_\_  
 Done  
 Not needed  
 Lab to do  
 Preservation \_\_\_\_\_  
 Lab to do  
(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS		SAMPLE HANDLING	TOTAL # BOTTLES
		Date	Time			PCB Congeners 8082	Percent Solids		
	S-120-Cφ11-0.4-0.9	10/16/12	9:05	SE	DS	X	X	PB04	1
	S-120-Cφ11-0.9-1.4	↓	↓	↓	↓	X	X	↓	1
	S-120-Cφ11-1.4-1.9	↓	↓	↓	↓	X	X	↓ Archive	1
19	EB-101712-04	10/17/12	10:30	SW	DS	X		Equipment Blank 4 - shears	2
	S-120-Cφ12-0.0-0.3	10/16/12	14:23	SE	DS	X	X	PR LG13	1
	S-120-Cφ12-0.3-0.8	↓	↓	↓	↓	X	X	↓	1
	S-120-Cφ12-0.3-0.8 MSMSD	↓	↓	↓	↓	X	X	↓ MSMSD	1
	S-120-Cφ12-0.8-1.3	↓	↓	↓	↓	X	X	↓ Archive	1
	S-120-Cφ13-0.0-0.5	↓	15:56	↓	↓	X	X	LM14	1
	S-120-Cφ13-0.5-1.0	↓	↓	↓	↓	X	X	↓ Archive	1

Container Type: A  
 Preservative: A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
 May 2013

Relinquished By: Dave Walsh Date/Time: 10/19/12 1605  
 Received By: J. Thudela Date/Time: 10/19/12 1745



## ANALYTICAL REPORT

Lab Number:	L1219169
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dack Stuart
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD POST DREDGE
Project Number:	TO-0010-07
Report Date:	11/13/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1219169-01	S-120-C005-0.0-0.4	NEW BEDFORD, MA	10/15/12 09:23
L1219169-02	S-120-C005-0.4-0.9	NEW BEDFORD, MA	10/15/12 09:23
L1219169-03	S-120-C006-0.1-0.6	NEW BEDFORD, MA	10/15/12 11:12
L1219169-04	S-120-C007-0.0-0.5	NEW BEDFORD, MA	10/15/12 11:12
L1219169-05	S-120-C008-0.7-1.2	NEW BEDFORD, MA	10/16/12 09:30
L1219169-06	S-120-C008-1.2-1.7	NEW BEDFORD, MA	10/16/12 09:30
L1219169-07	S-120-C009-0.9-1.4	NEW BEDFORD, MA	10/16/12 14:01
L1219169-08	S-120-C009-1.4-1.9	NEW BEDFORD, MA	10/16/12 14:01
L1219169-09	S-120-C010-0.0-0.5	NEW BEDFORD, MA	10/16/12 10:03
L1219169-10	S-120-C010-0.5-1.0	NEW BEDFORD, MA	10/16/12 10:03
L1219169-11	S-120-C011-0.4-0.9	NEW BEDFORD, MA	10/16/12 09:05
L1219169-12	S-120-C011-0.9-1.4	NEW BEDFORD, MA	10/16/12 09:05
L1219169-13	S-120-C012-0.0-0.3	NEW BEDFORD, MA	10/16/12 14:23
L1219169-14	S-120-C012-0.3-0.8	NEW BEDFORD, MA	10/16/12 14:23
L1219169-15	S-120-C013-0.0-0.5	NEW BEDFORD, MA	10/16/12 15:56
L1219169-16	S-120-C005-0.9-1.4	NEW BEDFORD, MA	10/15/12 09:23
L1219169-17	S-120-C006-0.6-1.1	NEW BEDFORD, MA	10/15/12 11:12
L1219169-18	S-120-C007-0.5-1.0	NEW BEDFORD, MA	10/15/12 11:51
L1219169-19	S-120-C008-1.7-2.2	NEW BEDFORD, MA	10/16/12 09:30
L1219169-20	S-120-C009-3.1-3.6	NEW BEDFORD, MA	10/16/12 14:01
L1219169-21	S-120-C010-0.5-1.0	NEW BEDFORD, MA	10/16/12 10:03
L1219169-22	S-120-C011-1.4-1.9	NEW BEDFORD, MA	10/16/12 09:05
L1219169-23	S-120-C012-0.8-1.3	NEW BEDFORD, MA	10/16/12 14:23
L1219169-24	S-120-C013-0.5-1.0	NEW BEDFORD, MA	10/16/12 15:56

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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 free of charge for 30 days from the date the project is completed. After 30 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.

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

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**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

### Case Narrative (continued)

#### Sample Receipt

Sediment samples were received intact on October 19, 2012. The samples were analyzed for initial percent solids air-dried and then placed in frozen storage on October 26, 2012. Samples were removed from frozen storage on October 29, 2012 when they were removed to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

L1219169-01 through 15 except for 04 and 12 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1219169-05, 08, 09 have elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the samples.

L1219169-06: The internal standard (IS) response for BZ192 (44%) was below the acceptance criteria of 50% for the CLPII column; however, re-analysis achieved similar results. All positive detections were reported from the compliant column with the exception of BZ 28 due to obvious interference.

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: 11/13/12

# ORGANICS

# PCBS

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-01 D  
 Client ID: S-12O-C005-0.0-0.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 21:31  
 Analyst: RR  
 Percent Solids: 99%

Date Collected: 10/15/12 09:23  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	752		ug/kg	133	--	100
CI3-BZ#18	1110		ug/kg	133	--	100
CI4-BZ#52	2300		ug/kg	133	--	100
CI4-BZ#66	931		ug/kg	133	--	100
CI5-BZ#118	384		ug/kg	133	--	100
CI6-BZ#138	643		ug/kg	133	--	100
CI7-BZ#187	253		ug/kg	133	--	100
CI6-BZ#128	ND		ug/kg	133	--	100
CI7-BZ#180	318		ug/kg	133	--	100
CI8-BZ#195	ND		ug/kg	133	--	100
CI9-BZ#206	ND		ug/kg	133	--	100
CI10-BZ#209	ND		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	87		30-150
BZ 198	69		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

**Lab ID:** L1219169-01 D  
**Client ID:** S-12O-C005-0.0-0.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/09/12 21:31  
**Analyst:** RR  
**Percent Solids:** 99%

**Date Collected:** 10/15/12 09:23  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 10/30/12 14:28  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	1540		ug/kg	133	--	100
CI4-BZ#44	877		ug/kg	133	--	100
CI5-BZ#101	668		ug/kg	133	--	100
CI6-BZ#153	579		ug/kg	133	--	100
CI5-BZ#105	173		ug/kg	133	--	100
CI7-BZ#170	182		ug/kg	133	--	100
DBOB	87			30-150		
BZ 198	69			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-02 D  
 Client ID: S-12O-C005-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 04:05  
 Analyst: RR  
 Percent Solids: 92%

Date Collected: 10/15/12 09:23  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	31.9		ug/kg	7.10	--	5
CI3-BZ#18	61.0		ug/kg	7.10	--	5
CI4-BZ#52	96.3		ug/kg	7.10	--	5
CI4-BZ#66	48.0		ug/kg	7.10	--	5
CI5-BZ#118	25.4		ug/kg	7.10	--	5
CI6-BZ#138	22.5		ug/kg	7.10	--	5
CI6-BZ#128	ND		ug/kg	7.10	--	5
CI7-BZ#180	ND		ug/kg	7.10	--	5
CI8-BZ#195	ND		ug/kg	7.10	--	5
CI9-BZ#206	ND		ug/kg	7.10	--	5
CI10-BZ#209	ND		ug/kg	7.10	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	89		30-150
DBOB	101		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-02 D  
 Client ID: S-12O-C005-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 04:05  
 Analyst: RR  
 Percent Solids: 92%

Date Collected: 10/15/12 09:23  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	98.7		ug/kg	7.10	--	5
CI4-BZ#44	45.3		ug/kg	7.10	--	5
CI5-BZ#101	39.9		ug/kg	7.10	--	5
CI6-BZ#153	23.6		ug/kg	7.10	--	5
CI5-BZ#105	7.21		ug/kg	7.10	--	5
CI7-BZ#187	ND		ug/kg	7.10	--	5
CI7-BZ#170	ND		ug/kg	7.10	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	89		30-150
DBOB	101		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-03 D  
 Client ID: S-12O-C006-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 04:49  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/15/12 11:12  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	29.6		ug/kg	14.2	--	10
CI3-BZ#18	56.5		ug/kg	14.2	--	10
CI4-BZ#52	151		ug/kg	14.2	--	10
CI4-BZ#66	67.9		ug/kg	14.2	--	10
CI5-BZ#118	40.8		ug/kg	14.2	--	10
CI6-BZ#138	36.6		ug/kg	14.2	--	10
CI7-BZ#187	ND		ug/kg	14.2	--	10
CI6-BZ#128	ND		ug/kg	14.2	--	10
CI7-BZ#180	ND		ug/kg	14.2	--	10
CI7-BZ#170	ND		ug/kg	14.2	--	10
CI8-BZ#195	ND		ug/kg	14.2	--	10
CI9-BZ#206	ND		ug/kg	14.2	--	10
CI10-BZ#209	ND		ug/kg	14.2	--	10

DBOB 102 30-150  
 BZ 198 85 30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-03 D  
 Client ID: S-12O-C006-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 04:49  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/15/12 11:12  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	116		ug/kg	14.2	--	10
CI4-BZ#44	67.4		ug/kg	14.2	--	10
CI5-BZ#101	47.8		ug/kg	14.2	--	10
CI6-BZ#153	34.2		ug/kg	14.2	--	10
CI5-BZ#105	ND		ug/kg	14.2	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	102		30-150
BZ 198	85		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-04  
 Client ID: S-12O-C007-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 06:16  
 Analyst: RR  
 Percent Solids: 97%

Date Collected: 10/15/12 11:12  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	1.83		ug/kg	1.34	--	1
CI3-BZ#18	2.86		ug/kg	1.34	--	1
CI4-BZ#52	4.84		ug/kg	1.34	--	1
CI4-BZ#44	1.60		ug/kg	1.34	--	1
CI5-BZ#118	1.41		ug/kg	1.34	--	1
CI5-BZ#105	ND		ug/kg	1.34	--	1
CI7-BZ#187	ND		ug/kg	1.34	--	1
CI6-BZ#128	ND		ug/kg	1.34	--	1
CI7-BZ#180	ND		ug/kg	1.34	--	1
CI7-BZ#170	ND		ug/kg	1.34	--	1
CI8-BZ#195	ND		ug/kg	1.34	--	1
CI10-BZ#209	ND		ug/kg	1.34	--	1

DBOB 104 30-150  
 BZ 198 92 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

**Lab ID:** L1219169-04  
**Client ID:** S-12O-C007-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/10/12 06:16  
**Analyst:** RR  
**Percent Solids:** 97%

**Date Collected:** 10/15/12 11:12  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 10/30/12 14:28  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	3.17		ug/kg	1.34	--	1
CI4-BZ#66	2.59		ug/kg	1.34	--	1
CI5-BZ#101	1.62		ug/kg	1.34	--	1
CI6-BZ#153	1.41		ug/kg	1.34	--	1
CI6-BZ#138	ND		ug/kg	1.34	--	1
CI9-BZ#206	ND		ug/kg	1.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	92		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-05 D  
 Client ID: S-12O-C008-0.7-1.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 02:37  
 Analyst: RR  
 Percent Solids: 99%

Date Collected: 10/16/12 09:30  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	5440		ug/kg	658	--	200
CI3-BZ#18	8560		ug/kg	658	--	200
CI4-BZ#52	6480		ug/kg	658	--	200
CI4-BZ#66	3280		ug/kg	658	--	200
CI5-BZ#105	ND		ug/kg	658	--	200
CI6-BZ#138	965		ug/kg	658	--	200
CI7-BZ#187	ND		ug/kg	658	--	200
CI6-BZ#128	ND		ug/kg	658	--	200
CI7-BZ#180	ND		ug/kg	658	--	200
CI7-BZ#170	ND		ug/kg	658	--	200
CI8-BZ#195	ND		ug/kg	658	--	200
CI9-BZ#206	ND		ug/kg	658	--	200
CI10-BZ#209	ND		ug/kg	658	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	116		30-150
BZ 198	100		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-05 D  
 Client ID: S-12O-C008-0.7-1.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 02:37  
 Analyst: RR  
 Percent Solids: 99%

Date Collected: 10/16/12 09:30  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	9060		ug/kg	658	--	200
CI4-BZ#44	3460		ug/kg	658	--	200
CI5-BZ#101	1740		ug/kg	658	--	200
CI5-BZ#118	1350		ug/kg	658	--	200
CI6-BZ#153	988		ug/kg	658	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	116		30-150
BZ 198	100		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-06 D  
 Client ID: S-12O-C008-1.2-1.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/13/12 06:50  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/16/12 09:30  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	33.8		ug/kg	6.84	--	5
CI3-BZ#18	106		ug/kg	6.84	--	5
CI4-BZ#52	44.8		ug/kg	6.84	--	5
CI4-BZ#44	32.5		ug/kg	6.84	--	5
CI4-BZ#66	8.78		ug/kg	6.84	--	5
CI5-BZ#101	ND		ug/kg	6.84	--	5
CI5-BZ#118	ND		ug/kg	6.84	--	5
CI5-BZ#105	ND		ug/kg	6.84	--	5
CI6-BZ#138	ND		ug/kg	6.84	--	5
CI7-BZ#187	ND		ug/kg	6.84	--	5
CI6-BZ#128	ND		ug/kg	6.84	--	5
CI7-BZ#180	ND		ug/kg	6.84	--	5
CI7-BZ#170	ND		ug/kg	6.84	--	5
CI8-BZ#195	ND		ug/kg	6.84	--	5
CI9-BZ#206	ND		ug/kg	6.84	--	5
CI10-BZ#209	ND		ug/kg	6.84	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	72		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

**Lab ID:** L1219169-06 D  
**Client ID:** S-12O-C008-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/13/12 06:50  
**Analyst:** RR  
**Percent Solids:** 96%

**Date Collected:** 10/16/12 09:30  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 10/30/12 14:28  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	90.0		ug/kg	6.84	--	5
Cl6-BZ#153	ND		ug/kg	6.84	--	5

DBOB	92	30-150
BZ 198	72	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-07 D  
 Client ID: S-12O-C009-0.9-1.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/13/12 05:22  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/16/12 14:01  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	5570		ug/kg	1380	--	1000
CI3-BZ#18	12300		ug/kg	1380	--	1000
CI4-BZ#66	6200		ug/kg	1380	--	1000
CI5-BZ#105	ND		ug/kg	1380	--	1000
CI6-BZ#138	2030		ug/kg	1380	--	1000
CI7-BZ#187	ND		ug/kg	1380	--	1000
CI6-BZ#128	ND		ug/kg	1380	--	1000
CI7-BZ#180	ND		ug/kg	1380	--	1000
CI7-BZ#170	ND		ug/kg	1380	--	1000
CI8-BZ#195	ND		ug/kg	1380	--	1000
CI9-BZ#206	ND		ug/kg	1380	--	1000
CI10-BZ#209	ND		ug/kg	1380	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	98		30-150
BZ 198	69		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-07 D  
 Client ID: S-12O-C009-0.9-1.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/13/12 05:22  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/16/12 14:01  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	11400		ug/kg	1380	--	1000
CI4-BZ#52	19000		ug/kg	1380	--	1000
CI4-BZ#44	6700		ug/kg	1380	--	1000
CI5-BZ#101	4350		ug/kg	1380	--	1000
CI5-BZ#118	2700		ug/kg	1380	--	1000
CI6-BZ#153	3080		ug/kg	1380	--	1000
DBOB	98			30-150		
BZ 198	69			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-08 D  
 Client ID: S-12O-C009-1.4-1.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 23:42  
 Analyst: RR  
 Percent Solids: 88%

Date Collected: 10/16/12 14:01  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	422		ug/kg	370	--	100
CI3-BZ#18	1140		ug/kg	370	--	100
CI4-BZ#52	3370		ug/kg	370	--	100
CI4-BZ#66	1560		ug/kg	370	--	100
CI5-BZ#105	ND		ug/kg	370	--	100
CI6-BZ#138	653		ug/kg	370	--	100
CI7-BZ#187	ND		ug/kg	370	--	100
CI6-BZ#128	ND		ug/kg	370	--	100
CI7-BZ#180	ND		ug/kg	370	--	100
CI7-BZ#170	ND		ug/kg	370	--	100
CI8-BZ#195	ND		ug/kg	370	--	100
CI9-BZ#206	ND		ug/kg	370	--	100
CI10-BZ#209	ND		ug/kg	370	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	74		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-08 D  
 Client ID: S-12O-C009-1.4-1.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 23:42  
 Analyst: RR  
 Percent Solids: 88%

Date Collected: 10/16/12 14:01  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	752		ug/kg	370	--	100
CI4-BZ#44	1020		ug/kg	370	--	100
CI5-BZ#101	1220		ug/kg	370	--	100
CI5-BZ#118	875		ug/kg	370	--	100
CI6-BZ#153	677		ug/kg	370	--	100

DBOB	83	30-150
BZ 198	74	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-09 D  
 Client ID: S-12O-C010-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 20:47  
 Analyst: RR  
 Percent Solids: 95%

Date Collected: 10/16/12 10:03  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	1610		ug/kg	342	--	100
CI3-BZ#18	3550		ug/kg	342	--	100
CI4-BZ#52	4300		ug/kg	342	--	100
CI4-BZ#66	1560		ug/kg	342	--	100
CI5-BZ#105	ND		ug/kg	342	--	100
CI6-BZ#138	744		ug/kg	342	--	100
CI7-BZ#187	ND		ug/kg	342	--	100
CI6-BZ#128	ND		ug/kg	342	--	100
CI7-BZ#180	ND		ug/kg	342	--	100
CI7-BZ#170	ND		ug/kg	342	--	100
CI8-BZ#195	ND		ug/kg	342	--	100
CI9-BZ#206	ND		ug/kg	342	--	100
CI10-BZ#209	ND		ug/kg	342	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	81		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-09 D  
 Client ID: S-12O-C010-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 20:47  
 Analyst: RR  
 Percent Solids: 95%

Date Collected: 10/16/12 10:03  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	3570		ug/kg	342	--	100
CI4-BZ#44	1120		ug/kg	342	--	100
CI5-BZ#101	1160		ug/kg	342	--	100
CI5-BZ#118	876		ug/kg	342	--	100
CI6-BZ#153	749		ug/kg	342	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	81		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-10 D  
 Client ID: S-12O-C010-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 05:32  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/16/12 10:03  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	114		ug/kg	27.0	--	20
CI3-BZ#18	248		ug/kg	27.0	--	20
CI4-BZ#52	286		ug/kg	27.0	--	20
CI4-BZ#44	83.7		ug/kg	27.0	--	20
CI4-BZ#66	135		ug/kg	27.0	--	20
CI5-BZ#118	94.1		ug/kg	27.0	--	20
CI6-BZ#138	67.5		ug/kg	27.0	--	20
CI7-BZ#187	ND		ug/kg	27.0	--	20
CI6-BZ#128	ND		ug/kg	27.0	--	20
CI7-BZ#180	ND		ug/kg	27.0	--	20
CI7-BZ#170	ND		ug/kg	27.0	--	20
CI8-BZ#195	ND		ug/kg	27.0	--	20
CI9-BZ#206	ND		ug/kg	27.0	--	20
CI10-BZ#209	ND		ug/kg	27.0	--	20

DBOB 127 30-150  
 BZ 198 107 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-10 D  
 Client ID: S-12O-C010-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 05:32  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/16/12 10:03  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	238		ug/kg	27.0	--	20
CI5-BZ#101	104		ug/kg	27.0	--	20
CI6-BZ#153	62.4		ug/kg	27.0	--	20
CI5-BZ#105	ND		ug/kg	27.0	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	127		30-150
BZ 198	107		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-11 D  
 Client ID: S-12O-C011-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 00:26  
 Analyst: RR  
 Percent Solids: 100%

Date Collected: 10/16/12 09:05  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	821		ug/kg	130	--	100
CI3-BZ#18	1760		ug/kg	130	--	100
CI4-BZ#52	2310		ug/kg	130	--	100
CI4-BZ#66	1470		ug/kg	130	--	100
CI5-BZ#118	1180		ug/kg	130	--	100
CI6-BZ#138	608		ug/kg	130	--	100
CI6-BZ#128	132		ug/kg	130	--	100
CI7-BZ#180	ND		ug/kg	130	--	100
CI7-BZ#170	ND		ug/kg	130	--	100
CI8-BZ#195	ND		ug/kg	130	--	100
CI9-BZ#206	ND		ug/kg	130	--	100
CI10-BZ#209	ND		ug/kg	130	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	71		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-11 D  
 Client ID: S-12O-C011-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 00:26  
 Analyst: RR  
 Percent Solids: 100%

Date Collected: 10/16/12 09:05  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	2140		ug/kg	130	--	100
CI4-BZ#44	716		ug/kg	130	--	100
CI5-BZ#101	1200		ug/kg	130	--	100
CI6-BZ#153	746		ug/kg	130	--	100
CI5-BZ#105	182		ug/kg	130	--	100
CI7-BZ#187	ND		ug/kg	130	--	100
DBOB	86			30-150		
BZ 198	71			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

**Lab ID:** L1219169-12  
**Client ID:** S-12O-C011-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/10/12 07:00  
**Analyst:** RR  
**Percent Solids:** 95%

**Date Collected:** 10/16/12 09:05  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 10/30/12 14:28  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	2.33		ug/kg	1.39	--	1
CI3-BZ#18	2.36		ug/kg	1.39	--	1
CI4-BZ#52	3.25		ug/kg	1.39	--	1
CI4-BZ#44	ND		ug/kg	1.39	--	1
CI4-BZ#66	ND		ug/kg	1.39	--	1
CI5-BZ#101	ND		ug/kg	1.39	--	1
CI5-BZ#118	ND		ug/kg	1.39	--	1
CI5-BZ#105	ND		ug/kg	1.39	--	1
CI6-BZ#138	ND		ug/kg	1.39	--	1
CI7-BZ#187	ND		ug/kg	1.39	--	1
CI6-BZ#128	ND		ug/kg	1.39	--	1
CI7-BZ#180	ND		ug/kg	1.39	--	1
CI7-BZ#170	ND		ug/kg	1.39	--	1
CI8-BZ#195	ND		ug/kg	1.39	--	1
CI9-BZ#206	ND		ug/kg	1.39	--	1
CI10-BZ#209	ND		ug/kg	1.39	--	1

DBOB	90	30-150
BZ 198	88	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

**Lab ID:** L1219169-12  
**Client ID:** S-12O-C011-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/10/12 07:00  
**Analyst:** RR  
**Percent Solids:** 95%

**Date Collected:** 10/16/12 09:05  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 10/30/12 14:28  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1.78		ug/kg	1.39	--	1
Cl6-BZ#153	ND		ug/kg	1.39	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	88		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-13 D  
 Client ID: S-12O-C012-0.0-0.3  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 03:21  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/16/12 14:23  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	10900		ug/kg	1330	--	1000
CI4-BZ#52	17800		ug/kg	1330	--	1000
CI4-BZ#66	5890		ug/kg	1330	--	1000
CI5-BZ#105	ND		ug/kg	1330	--	1000
CI6-BZ#138	2560		ug/kg	1330	--	1000
CI7-BZ#187	ND		ug/kg	1330	--	1000
CI6-BZ#128	ND		ug/kg	1330	--	1000
CI7-BZ#180	ND		ug/kg	1330	--	1000
CI7-BZ#170	ND		ug/kg	1330	--	1000
CI8-BZ#195	ND		ug/kg	1330	--	1000
CI9-BZ#206	ND		ug/kg	1330	--	1000
CI10-BZ#209	ND		ug/kg	1330	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	78		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-13 D  
 Client ID: S-12O-C012-0.0-0.3  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 03:21  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/16/12 14:23  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	5310		ug/kg	1330	--	1000
CI3-BZ#28	13600		ug/kg	1330	--	1000
CI4-BZ#44	5620		ug/kg	1330	--	1000
CI5-BZ#101	4250		ug/kg	1330	--	1000
CI5-BZ#118	2860		ug/kg	1330	--	1000
CI6-BZ#153	3040		ug/kg	1330	--	1000
DBOB	97			30-150		
BZ 198	78			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-14 D  
 Client ID: S-12O-C012-0.3-0.8  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 07:44  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/16/12 14:23  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	30.9		ug/kg	6.76	--	5
CI3-BZ#18	49.0		ug/kg	6.76	--	5
CI4-BZ#52	91.4		ug/kg	6.76	--	5
CI4-BZ#66	31.0		ug/kg	6.76	--	5
CI5-BZ#118	14.6		ug/kg	6.76	--	5
CI5-BZ#105	ND		ug/kg	6.76	--	5
CI6-BZ#138	12.4		ug/kg	6.76	--	5
CI6-BZ#128	ND		ug/kg	6.76	--	5
CI7-BZ#180	ND		ug/kg	6.76	--	5
CI7-BZ#170	ND		ug/kg	6.76	--	5
CI8-BZ#195	ND		ug/kg	6.76	--	5
CI9-BZ#206	ND		ug/kg	6.76	--	5
CI10-BZ#209	ND		ug/kg	6.76	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	82		30-150
DBOB	89		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-14 D  
 Client ID: S-12O-C012-0.3-0.8  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 07:44  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/16/12 14:23  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	63.8		ug/kg	6.76	--	5
CI4-BZ#44	27.8		ug/kg	6.76	--	5
CI5-BZ#101	20.4		ug/kg	6.76	--	5
CI6-BZ#153	14.1		ug/kg	6.76	--	5
CI7-BZ#187	ND		ug/kg	6.76	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	82		30-150
DBOB	89		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-15 D  
 Client ID: S-12O-C013-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 01:54  
 Analyst: RR  
 Percent Solids: 95%

Date Collected: 10/16/12 15:56  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	460		ug/kg	139	--	100
CI3-BZ#18	748		ug/kg	139	--	100
CI4-BZ#52	2080		ug/kg	139	--	100
CI4-BZ#66	804		ug/kg	139	--	100
CI5-BZ#118	426		ug/kg	139	--	100
CI6-BZ#138	367		ug/kg	139	--	100
CI6-BZ#128	ND		ug/kg	139	--	100
CI7-BZ#170	ND		ug/kg	139	--	100
CI8-BZ#195	ND		ug/kg	139	--	100
CI9-BZ#206	ND		ug/kg	139	--	100
CI10-BZ#209	ND		ug/kg	139	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	82		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**SAMPLE RESULTS**

Lab ID: L1219169-15 D  
 Client ID: S-12O-C013-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/10/12 01:54  
 Analyst: RR  
 Percent Solids: 95%

Date Collected: 10/16/12 15:56  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	2050		ug/kg	139	--	100
CI4-BZ#44	866		ug/kg	139	--	100
CI5-BZ#101	626		ug/kg	139	--	100
CI6-BZ#153	442		ug/kg	139	--	100
CI5-BZ#105	ND		ug/kg	139	--	100
CI7-BZ#187	ND		ug/kg	139	--	100
CI7-BZ#180	ND		ug/kg	139	--	100

DBOB	93	30-150
BZ 198	82	30-150

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
Analytical Date: 11/09/12 06:48  
Analyst: RR

Extraction Method: EPA 3540C  
Extraction Date: 10/30/12 14:28  
Cleanup Method1: EPA 3630  
Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-15 Batch: WG570680-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	109		30-150
BZ 198	95		30-150

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 06:48  
 Analyst: RR

Extraction Method: EPA 3540C  
 Extraction Date: 10/30/12 14:28  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/02/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-15 Batch: WG570680-1					
C16-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	109		30-150
BZ 198	95		30-150

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-15 QC Batch ID: WG570680-4 WG570680-5 QC Sample: L1219169-14 Client ID: S-120-C012-0.3-0.8												
Cl2-BZ#8	30.9	1690	1320	76		1330	77		40-140	1		30
Cl3-BZ#18	49.0	1690	1360	78		1400	80		40-140	3		30
Cl4-BZ#52	91.4	1690	1430	79		1500	84		40-140	5		30
Cl4-BZ#66	31.0	1690	1490	87		1560	91		40-140	5		30
Cl5-BZ#118	14.6	1690	1530	90		1610	95		40-140	5		30
Cl5-BZ#105	ND	1690	1550	92		1640	97		40-140	6		30
Cl6-BZ#138	12.4	1690	1510	89		1590	94		40-140	5		30
Cl6-BZ#128	ND	1690	1480	88		1550	92		40-140	5		30
Cl7-BZ#180	ND	1690	1500	89		1580	94		40-140	5		30
Cl7-BZ#170	ND	1690	1450	86		1520	90		40-140	5		30
Cl8-BZ#195	ND	1690	1390	82		1450	86		40-140	4		30
Cl9-BZ#206	ND	1690	1480	88		1550	92		40-140	5		30
Cl10-BZ#209	ND	1690	1280	76		1300	77		40-140	2		30
Cl3-BZ#28	63.8	1690	1600	91		1610	92		40-140	1		30
Cl4-BZ#44	27.8	1690	1410	82		1420	83		40-140	1		30
Cl5-BZ#101	20.4	1690	1410	82		1460	86		40-140	3		30
Cl6-BZ#153	14.1	1690	1240	73		1280	75		40-140	3		30
Cl7-BZ#187	ND	1690	1330	79		1410	84		40-140	6		30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-15    QC Batch ID: WG570680-4    WG570680-5    QC Sample: L1219169-14    Client ID: S-12O-C012-0.3-0.8

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	85		89		30-150
DBOB	96		101		30-150

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Lab Number: L1219169

Project Number: TO-0010-07

Report Date: 11/13/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-15 Batch: WG570680-2 WG570680-3								
CI2-BZ#8	99		94		40-140	5		30
CI3-BZ#18	105		99		40-140	6		30
CI3-BZ#28	105		101		40-140	4		30
CI4-BZ#52	106		95		40-140	11		30
CI4-BZ#44	108		102		40-140	6		30
CI4-BZ#66	108		104		40-140	4		30
CI5-BZ#101	110		105		40-140	5		30
CI5-BZ#118	112		109		40-140	3		30
CI5-BZ#105	104		104		40-140	0		30
CI6-BZ#138	110		107		40-140	3		30
CI7-BZ#187	104		101		40-140	3		30
CI6-BZ#128	106		104		40-140	2		30
CI7-BZ#180	104		103		40-140	1		30
CI7-BZ#170	101		100		40-140	1		30
CI8-BZ#195	95		96		40-140	1		30
CI9-BZ#206	101		104		40-140	3		30
CI10-BZ#209	91		92		40-140	1		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-15 Batch: WG570680-2 WG570680-3								

DBOB	116		107		30-150			
BZ 198	102		98		30-150			

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-15 Batch: WG570680-2 WG570680-3								
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Cl6-BZ#153	95		91		40-140	4		30
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Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	116		107		30-150
BZ 198	102		98		30-150

# INORGANICS & MISCELLANEOUS



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-01  
**Client ID:** S-12O-C005-0.0-0.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 09:23  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.9		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	44.2		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-02  
**Client ID:** S-12O-C005-0.4-0.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 09:23  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	92.0		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	66.2		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-03  
**Client ID:** S-12O-C006-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 11:12  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.1		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	45.4		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-04  
**Client ID:** S-12O-C007-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 11:12  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.3		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	51.3		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-05  
**Client ID:** S-12O-C008-0.7-1.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 09:30  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.2		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	81.0		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-06  
**Client ID:** S-12O-C008-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 09:30  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.2		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	58.6		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-07  
**Client ID:** S-12O-C009-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 14:01  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.7		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	40.3		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-08  
**Client ID:** S-12O-C009-1.4-1.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 14:01  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	88.2		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	50.3		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB





**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-09  
**Client ID:** S-12O-C010-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 10:03  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.2		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	59.0		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-10  
**Client ID:** S-12O-C010-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 10:03  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.8		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	56.1		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-11  
**Client ID:** S-12O-C011-0.4-0.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 09:05  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	99.7		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	74.1		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-12  
**Client ID:** S-12O-C011-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 09:05  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.8		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	47.1		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-13  
**Client ID:** S-12O-C012-0.0-0.3  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 14:23  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.9		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	35.5		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-14  
**Client ID:** S-12O-C012-0.3-0.8  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 14:23  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.5		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	44.7		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**SAMPLE RESULTS**

**Lab ID:** L1219169-15  
**Client ID:** S-12O-C013-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 15:56  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.7		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR
Solids, Total (Pre-Dried)	51.3		%	0.100	NA	1	-	10/24/12 16:00	30,2540G	KB



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE

**Project Number:** TO-0010-07

**Lab Number:** L1219169

**Report Date:** 11/13/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-15 QC Batch ID: WG570368-1 QC Sample: L1219169-14 Client ID: S-12O-C012-0.3-0.8						
Solids, Total	97.5	96.6	%	1		10



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

### 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  
D Absent  
B Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1219169-01A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-02A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-03A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-04A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-05A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-06A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-07A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-08A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-09A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-10A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-11A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-12A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-13A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-14A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-14B	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-15A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219169-16A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()
L1219169-17A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219169**Project Number:** TO-0010-07**Report Date:** 11/13/12**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1219169-18A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()
L1219169-19A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()
L1219169-20A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()
L1219169-20B	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()
L1219169-21A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()
L1219169-22A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()
L1219169-23A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	HOLD()
L1219169-24A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	HOLD()

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

## 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.
LCS D	- 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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

**Data Qualifiers**

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.
- 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

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**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219169  
**Report Date:** 11/13/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### **Connecticut Department of Public Health** Certificate/Lab ID: PH-0141.

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### **Florida Department of Health** Certificate/Lab ID: E87814. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### **Louisiana Department of Environmental Quality** Certificate/Lab ID: 03090. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### **New Hampshire Department of Environmental Services** Certificate/Lab ID: 2206. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

### **New Jersey Department of Environmental Protection** Certificate/Lab ID: MA015. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Atmospheric Organic Parameters* (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

*Biological Tissue* (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

*Air & Emissions* (EPA TO-15, TO-10A.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Non-Potable Water* (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D .)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID:460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.)

*Air & Emissions* (EPA TO-15.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.











## ANALYTICAL REPORT

Lab Number:	L1219170
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dack Stuart
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD POST DREDGE
Project Number:	TO-0010-07
Report Date:	11/09/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1219170-01	S-120-C012-0.0-0.2 REP	NEW BEDFORD, MA	10/16/12 14:34
L1219170-02	S-120-C012-0.2-0.7 REP	NEW BEDFORD, MA	10/16/12 14:34
L1219170-03	S-120-C014-0.9-1.4	NEW BEDFORD, MA	10/16/12 16:47
L1219170-04	S-120-C014-1.4-1.9	NEW BEDFORD, MA	10/16/12 16:47
L1219170-05	S-120-C015-0.0-0.5	NEW BEDFORD, MA	10/16/12 13:41
L1219170-06	S-120-C015-0.5-1.0	NEW BEDFORD, MA	10/16/12 13:41
L1219170-07	S-120-C016-0.6-1.1	NEW BEDFORD, MA	10/16/12 15:41
L1219170-08	S-120-C016-1.1-1.6	NEW BEDFORD, MA	10/16/12 15:41
L1219170-09	S-120-C017-0.4-0.9	NEW BEDFORD, MA	10/16/12 16:25
L1219170-10	S-120-C017-0.9-1.4	NEW BEDFORD, MA	10/16/12 16:25
L1219170-11	S-120-C018-0.0-0.5	NEW BEDFORD, MA	10/17/12 14:43
L1219170-12	S-120-C018-0.5-1.0	NEW BEDFORD, MA	10/17/12 14:43
L1219170-13	S-120-C018-0.0-0.3 REP	NEW BEDFORD, MA	10/17/12 14:54
L1219170-14	S-120-C018-0.3-0.8 REP	NEW BEDFORD, MA	10/17/12 14:54
L1219170-15	S-120-C019-0.5-1.0	NEW BEDFORD, MA	10/17/12 15:37
L1219170-16	S-120-C019-1.0-1.5	NEW BEDFORD, MA	10/17/12 15:37
L1219170-17	S-120-C020-0.6-1.1	NEW BEDFORD, MA	10/17/12 15:12
L1219170-18	S-120-C020-1.1-1.6	NEW BEDFORD, MA	10/17/12 15:12
L1219170-19	S-120-C021-0.5-1.0	NEW BEDFORD, MA	10/17/12 15:51
L1219170-20	S-120-C021-1.0-1.5	NEW BEDFORD, MA	10/17/12 15:51
L1219170-21	S-120-C012-0.7-1.2 REP	NEW BEDFORD, MA	10/16/12 14:34
L1219170-22	S-120-C014-1.9-2.4	NEW BEDFORD, MA	10/16/12 16:47
L1219170-23	S-120-C015-1.0-1.5	NEW BEDFORD, MA	10/16/12 13:41
L1219170-24	S-120-C016-1.6-2.2	NEW BEDFORD, MA	10/16/12 15:41
L1219170-25	S-120-C017-1.4-1.8	NEW BEDFORD, MA	10/16/12 16:25
L1219170-26	S-120-C018-1.0-1.5	NEW BEDFORD, MA	10/17/12 14:43
L1219170-27	S-120-C018-0.8-1.3 REP	NEW BEDFORD, MA	10/17/12 14:54
L1219170-28	S-120-C019-1.5-2.0	NEW BEDFORD, MA	10/17/12 15:37
L1219170-29	S-120-C020-1.6-2.1	NEW BEDFORD, MA	10/17/12 15:12

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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 free of charge for 30 days from the date the project is completed. After 30 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.

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

### Case Narrative (continued)

#### Sample Receipt

Sediment samples were received intact on October 19, 2012. The samples were analyzed for initial percent solids air-dried and then placed in frozen storage on October 26, 2012. Samples were removed from frozen storage on November 1, 2012 when they were removed to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

L1219170-01 through 03, 06 through 09, 11, 15, 16, 18, through 20 have elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the target compounds present in the sample.

L1219170-04, 05, 10, 13, 14 and 17 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1219170-07 has an elevated detection limit due to limited sample volume available for analysis.

The WG571272-3 LCSD recoveries, associated with L1219170-01 through -20, are above the individual acceptance criteria for Cl3-BZ#28 (160%) and Cl4-BZ#52 (149%), since LCS recoveries were within acceptance criteria and the associated samples had high level concentrations reported for affected compounds no corrective action required. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds. The WG571272-3 LCS/LCSD RPD(s), associated with L1219170-01 through -20, are above the acceptance criteria for Cl3-

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

### Case Narrative (continued)

BZ#28 (34%) and Cl4-BZ#52 (31%).

The WG571272-4/-5 MS/MSD recoveries, performed on L1219170-08, were above the acceptance criteria for Cl3-BZ#28 (147%)/(154%); however, the associated LCS/LCSD recoveries were within criteria. The results of the sample utilized for the MS/MSD are considered to have a potentially high bias for these compounds.

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: 11/09/12



# ORGANICS

# PCBS

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-01 D  
 Client ID: S-12O-C012-0.0-0.2 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 21:20  
 Analyst: JS  
 Percent Solids: 87%

Date Collected: 10/16/12 14:34  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	8000		ug/kg	1890	--	500
CI3-BZ#18	20200		ug/kg	1890	--	500
CI4-BZ#52	26000		ug/kg	1890	--	500
CI4-BZ#66	8530		ug/kg	1890	--	500
CI5-BZ#105	ND		ug/kg	1890	--	500
CI6-BZ#138	3200		ug/kg	1890	--	500
CI6-BZ#128	ND		ug/kg	1890	--	500
CI7-BZ#180	ND		ug/kg	1890	--	500
CI7-BZ#170	ND		ug/kg	1890	--	500
CI8-BZ#195	ND		ug/kg	1890	--	500
CI9-BZ#206	ND		ug/kg	1890	--	500
CI10-BZ#209	ND		ug/kg	1890	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	107		30-150
BZ 198	86		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

**Lab ID:** L1219170-01 D  
**Client ID:** S-12O-C012-0.0-0.2 REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/08/12 21:20  
**Analyst:** JS  
**Percent Solids:** 87%

**Date Collected:** 10/16/12 14:34  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 11/01/12 12:38  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	20000		ug/kg	1890	--	500
CI4-BZ#44	8020		ug/kg	1890	--	500
CI5-BZ#101	6090		ug/kg	1890	--	500
CI5-BZ#118	4180		ug/kg	1890	--	500
CI6-BZ#153	4370		ug/kg	1890	--	500
CI7-BZ#187	ND		ug/kg	1890	--	500
DBOB	107			30-150		
BZ 198	86			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-02 D  
 Client ID: S-12O-C012-0.2-0.7 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/07/12 16:42  
 Analyst: JS  
 Percent Solids: 90%

Date Collected: 10/16/12 14:34  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	572		ug/kg	182	--	100
CI4-BZ#52	916		ug/kg	182	--	100
CI4-BZ#66	319		ug/kg	182	--	100
CI5-BZ#105	ND		ug/kg	182	--	100
CI6-BZ#138	ND		ug/kg	182	--	100
CI7-BZ#187	ND		ug/kg	182	--	100
CI6-BZ#128	ND		ug/kg	182	--	100
CI7-BZ#180	ND		ug/kg	182	--	100
CI7-BZ#170	ND		ug/kg	182	--	100
CI8-BZ#195	ND		ug/kg	182	--	100
CI9-BZ#206	ND		ug/kg	182	--	100
CI10-BZ#209	ND		ug/kg	182	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	82		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

**Lab ID:** L1219170-02 D  
**Client ID:** S-12O-C012-0.2-0.7 REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/07/12 16:42  
**Analyst:** JS  
**Percent Solids:** 90%

**Date Collected:** 10/16/12 14:34  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 11/01/12 12:38  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	286		ug/kg	182	--	100
Cl3-BZ#28	705		ug/kg	182	--	100
Cl4-BZ#44	314		ug/kg	182	--	100
Cl5-BZ#101	230		ug/kg	182	--	100
Cl5-BZ#118	ND		ug/kg	182	--	100
Cl6-BZ#153	ND		ug/kg	182	--	100
DBOB	80			30-150		
BZ 198	82			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-03 D2  
 Client ID: S-12O-C014-0.9-1.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/07/12 17:26  
 Analyst: JS  
 Percent Solids: 95%

Date Collected: 10/16/12 16:47  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI5-BZ#101	5870		ug/kg	516	--	100
CI5-BZ#118	3250		ug/kg	516	--	100
CI6-BZ#138	6700		ug/kg	516	--	100
CI7-BZ#187	1990		ug/kg	516	--	100
CI6-BZ#128	1290		ug/kg	516	--	100
CI7-BZ#180	1940		ug/kg	516	--	100
CI7-BZ#170	1370		ug/kg	516	--	100
CI8-BZ#195	ND		ug/kg	516	--	100
CI9-BZ#206	ND		ug/kg	516	--	100
CI10-BZ#209	ND		ug/kg	516	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	83		30-150
DBOB	60		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-03 D2  
 Client ID: S-12O-C014-0.9-1.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/07/12 17:26  
 Analyst: JS  
 Percent Solids: 95%

Date Collected: 10/16/12 16:47  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	5610		ug/kg	516	--	100
Cl5-BZ#105	1050		ug/kg	516	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	83		30-150
DBOB	60		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

**Lab ID:** L1219170-03 D  
**Client ID:** S-12O-C014-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/08/12 20:36  
**Analyst:** JS  
**Percent Solids:** 95%

**Date Collected:** 10/16/12 16:47  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 11/01/12 12:38  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	224000		ug/kg	20600	--	4000
Cl4-BZ#66	33200		ug/kg	20600	--	4000

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-03 D  
 Client ID: S-12O-C014-0.9-1.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 20:36  
 Analyst: JS  
 Percent Solids: 95%

Date Collected: 10/16/12 16:47  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	117000		ug/kg	20600	--	4000
CI3-BZ#28	223000		ug/kg	20600	--	4000
CI4-BZ#52	158000		ug/kg	20600	--	4000
CI4-BZ#44	59200		ug/kg	20600	--	4000

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-04 D  
 Client ID: S-12O-C014-1.4-1.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 00:15  
 Analyst: JS  
 Percent Solids: 87%

Date Collected: 10/16/12 16:47  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	52.2		ug/kg	15.1	--	10
CI3-BZ#18	96.8		ug/kg	15.1	--	10
CI4-BZ#66	43.5		ug/kg	15.1	--	10
CI5-BZ#105	ND		ug/kg	15.1	--	10
CI6-BZ#138	ND		ug/kg	15.1	--	10
CI7-BZ#187	ND		ug/kg	15.1	--	10
CI6-BZ#128	ND		ug/kg	15.1	--	10
CI7-BZ#180	ND		ug/kg	15.1	--	10
CI7-BZ#170	ND		ug/kg	15.1	--	10
CI8-BZ#195	ND		ug/kg	15.1	--	10
CI9-BZ#206	ND		ug/kg	15.1	--	10
CI10-BZ#209	ND		ug/kg	15.1	--	10

DBOB 79 30-150  
 BZ 198 79 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-04 D  
 Client ID: S-12O-C014-1.4-1.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 00:15  
 Analyst: JS  
 Percent Solids: 87%

Date Collected: 10/16/12 16:47  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	103		ug/kg	15.1	--	10
CI4-BZ#52	147		ug/kg	15.1	--	10
CI4-BZ#44	46.2		ug/kg	15.1	--	10
CI5-BZ#101	17.9		ug/kg	15.1	--	10
CI5-BZ#118	ND		ug/kg	15.1	--	10
CI6-BZ#153	ND		ug/kg	15.1	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	79		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-05 D  
 Client ID: S-12O-C015-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 14:46  
 Analyst: JS  
 Percent Solids: 80%

Date Collected: 10/16/12 13:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	5570		ug/kg	814	--	500
CI3-BZ#18	10900		ug/kg	814	--	500
CI4-BZ#66	8020		ug/kg	814	--	500
CI5-BZ#118	4980		ug/kg	814	--	500
CI6-BZ#138	2920		ug/kg	814	--	500
CI6-BZ#128	ND		ug/kg	814	--	500
CI7-BZ#180	ND		ug/kg	814	--	500
CI7-BZ#170	ND		ug/kg	814	--	500
CI8-BZ#195	ND		ug/kg	814	--	500
CI9-BZ#206	ND		ug/kg	814	--	500
CI10-BZ#209	ND		ug/kg	814	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	95		30-150
BZ 198	84		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-05 D  
 Client ID: S-12O-C015-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 14:46  
 Analyst: JS  
 Percent Solids: 80%

Date Collected: 10/16/12 13:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	13700		ug/kg	814	--	500
CI4-BZ#52	12900		ug/kg	814	--	500
CI4-BZ#44	6140		ug/kg	814	--	500
CI5-BZ#101	6270		ug/kg	814	--	500
CI6-BZ#153	3510		ug/kg	814	--	500
CI5-BZ#105	ND		ug/kg	814	--	500
CI7-BZ#187	ND		ug/kg	814	--	500

DBOB	95	30-150
BZ 198	84	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-06 D  
 Client ID: S-12O-C015-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/07/12 19:37  
 Analyst: JS  
 Percent Solids: 97%

Date Collected: 10/16/12 13:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	477		ug/kg	170	--	100
CI3-BZ#18	869		ug/kg	170	--	100
CI4-BZ#52	1180		ug/kg	170	--	100
CI4-BZ#66	559		ug/kg	170	--	100
CI5-BZ#105	ND		ug/kg	170	--	100
CI6-BZ#138	250		ug/kg	170	--	100
CI7-BZ#187	ND		ug/kg	170	--	100
CI6-BZ#128	ND		ug/kg	170	--	100
CI7-BZ#180	ND		ug/kg	170	--	100
CI7-BZ#170	ND		ug/kg	170	--	100
CI8-BZ#195	ND		ug/kg	170	--	100
CI9-BZ#206	ND		ug/kg	170	--	100
CI10-BZ#209	ND		ug/kg	170	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	87		30-150
BZ 198	80		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-06 D  
 Client ID: S-12O-C015-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/07/12 19:37  
 Analyst: JS  
 Percent Solids: 97%

Date Collected: 10/16/12 13:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	976		ug/kg	170	--	100
CI4-BZ#44	505		ug/kg	170	--	100
CI5-BZ#101	432		ug/kg	170	--	100
CI5-BZ#118	302		ug/kg	170	--	100
CI6-BZ#153	266		ug/kg	170	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	87		30-150
BZ 198	80		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-07 D  
 Client ID: S-12O-C016-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 15:29  
 Analyst: JS  
 Percent Solids: 95%

Date Collected: 10/16/12 15:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	22400		ug/kg	2360	--	400
CI5-BZ#105	ND		ug/kg	2360	--	400
CI6-BZ#138	3900		ug/kg	2360	--	400
CI7-BZ#187	ND		ug/kg	2360	--	400
CI6-BZ#128	ND		ug/kg	2360	--	400
CI7-BZ#180	ND		ug/kg	2360	--	400
CI7-BZ#170	ND		ug/kg	2360	--	400
CI8-BZ#195	ND		ug/kg	2360	--	400
CI9-BZ#206	ND		ug/kg	2360	--	400
CI10-BZ#209	ND		ug/kg	2360	--	400

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	79		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-07 D  
 Client ID: S-12O-C016-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 15:29  
 Analyst: JS  
 Percent Solids: 95%

Date Collected: 10/16/12 15:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	12000		ug/kg	2360	--	400
CI3-BZ#28	32000		ug/kg	2360	--	400
CI4-BZ#52	31100		ug/kg	2360	--	400
CI4-BZ#44	14400		ug/kg	2360	--	400
CI4-BZ#66	10200		ug/kg	2360	--	400
CI5-BZ#101	7890		ug/kg	2360	--	400
CI5-BZ#118	3570		ug/kg	2360	--	400
CI6-BZ#153	4900		ug/kg	2360	--	400
DBOB	104			30-150		
BZ 198	79			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-08 D  
 Client ID: S-12O-C016-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/07/12 21:05  
 Analyst: JS  
 Percent Solids: 87%

Date Collected: 10/16/12 15:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	1360		ug/kg	189	--	100
CI4-BZ#66	587		ug/kg	189	--	100
CI5-BZ#101	388		ug/kg	189	--	100
CI5-BZ#105	ND		ug/kg	189	--	100
CI6-BZ#138	203		ug/kg	189	--	100
CI7-BZ#187	ND		ug/kg	189	--	100
CI6-BZ#128	ND		ug/kg	189	--	100
CI7-BZ#180	ND		ug/kg	189	--	100
CI7-BZ#170	ND		ug/kg	189	--	100
CI8-BZ#195	ND		ug/kg	189	--	100
CI9-BZ#206	ND		ug/kg	189	--	100
CI10-BZ#209	ND		ug/kg	189	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	67		30-150
BZ 198	69		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-08 D  
 Client ID: S-12O-C016-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/07/12 21:05  
 Analyst: JS  
 Percent Solids: 87%

Date Collected: 10/16/12 15:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	670		ug/kg	189	--	100
CI3-BZ#28	1520		ug/kg	189	--	100
CI4-BZ#52	1790		ug/kg	189	--	100
CI4-BZ#44	726		ug/kg	189	--	100
CI5-BZ#118	197		ug/kg	189	--	100
CI6-BZ#153	248		ug/kg	189	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	67		30-150
BZ 198	69		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-09 D  
 Client ID: S-12O-C017-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 16:13  
 Analyst: JS  
 Percent Solids: 94%

Date Collected: 10/16/12 16:25  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	9700		ug/kg	1720	--	500
CI3-BZ#18	18400		ug/kg	1720	--	500
CI4-BZ#52	28100		ug/kg	1720	--	500
CI5-BZ#101	6140		ug/kg	1720	--	500
CI5-BZ#105	ND		ug/kg	1720	--	500
CI6-BZ#138	3600		ug/kg	1720	--	500
CI6-BZ#128	ND		ug/kg	1720	--	500
CI7-BZ#180	ND		ug/kg	1720	--	500
CI7-BZ#170	ND		ug/kg	1720	--	500
CI8-BZ#195	ND		ug/kg	1720	--	500
CI9-BZ#206	ND		ug/kg	1720	--	500
CI10-BZ#209	ND		ug/kg	1720	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	103		30-150
BZ 198	83		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-09 D  
 Client ID: S-12O-C017-0.4-0.9  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 16:13  
 Analyst: JS  
 Percent Solids: 94%

Date Collected: 10/16/12 16:25  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	25500		ug/kg	1720	--	500
CI4-BZ#44	14300		ug/kg	1720	--	500
CI4-BZ#66	9410		ug/kg	1720	--	500
CI5-BZ#118	3440		ug/kg	1720	--	500
CI6-BZ#153	4170		ug/kg	1720	--	500
CI7-BZ#187	ND		ug/kg	1720	--	500
DBOB	103			30-150		
BZ 198	83			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-10 D  
 Client ID: S-12O-C017-0.9-1.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 00:43  
 Analyst: JS  
 Percent Solids: 92%

Date Collected: 10/16/12 16:25  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#18	756		ug/kg	141	--	100
CI5-BZ#101	235		ug/kg	141	--	100
CI5-BZ#105	ND		ug/kg	141	--	100
CI6-BZ#138	142		ug/kg	141	--	100
CI7-BZ#187	ND		ug/kg	141	--	100
CI6-BZ#128	ND		ug/kg	141	--	100
CI7-BZ#180	ND		ug/kg	141	--	100
CI7-BZ#170	ND		ug/kg	141	--	100
CI8-BZ#195	ND		ug/kg	141	--	100
CI9-BZ#206	ND		ug/kg	141	--	100
CI10-BZ#209	ND		ug/kg	141	--	100
DBOB	86			30-150		
BZ 198	86			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-10 D  
 Client ID: S-12O-C017-0.9-1.4  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 00:43  
 Analyst: JS  
 Percent Solids: 92%

Date Collected: 10/16/12 16:25  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	371		ug/kg	141	--	100
CI3-BZ#28	882		ug/kg	141	--	100
CI4-BZ#52	1020		ug/kg	141	--	100
CI4-BZ#44	532		ug/kg	141	--	100
CI4-BZ#66	350		ug/kg	141	--	100
CI5-BZ#118	ND		ug/kg	141	--	100
CI6-BZ#153	158		ug/kg	141	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	86		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-11 D  
 Client ID: S-12O-C018-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 16:57  
 Analyst: JS  
 Percent Solids: 97%

Date Collected: 10/17/12 14:43  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	2380		ug/kg	672	--	200
CI3-BZ#18	5920		ug/kg	672	--	200
CI4-BZ#52	9210		ug/kg	672	--	200
CI4-BZ#66	4080		ug/kg	672	--	200
CI5-BZ#118	2380		ug/kg	672	--	200
CI6-BZ#138	1770		ug/kg	672	--	200
CI6-BZ#128	ND		ug/kg	672	--	200
CI7-BZ#180	ND		ug/kg	672	--	200
CI7-BZ#170	ND		ug/kg	672	--	200
CI8-BZ#195	ND		ug/kg	672	--	200
CI9-BZ#206	ND		ug/kg	672	--	200
CI10-BZ#209	ND		ug/kg	672	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	89		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-11 D  
 Client ID: S-12O-C018-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 16:57  
 Analyst: JS  
 Percent Solids: 97%

Date Collected: 10/17/12 14:43  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	9400		ug/kg	672	--	200
CI4-BZ#44	4710		ug/kg	672	--	200
CI5-BZ#101	2790		ug/kg	672	--	200
CI6-BZ#153	1970		ug/kg	672	--	200
CI5-BZ#105	ND		ug/kg	672	--	200
CI7-BZ#187	ND		ug/kg	672	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	89		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-12 D  
 Client ID: S-12O-C018-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 02:26  
 Analyst: JS  
 Percent Solids: 92%

Date Collected: 10/17/12 14:43  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	196		ug/kg	57.8	--	40
CI3-BZ#18	463		ug/kg	57.8	--	40
CI4-BZ#52	624		ug/kg	57.8	--	40
CI5-BZ#118	176		ug/kg	57.8	--	40
CI7-BZ#187	ND		ug/kg	57.8	--	40
CI6-BZ#128	ND		ug/kg	57.8	--	40
CI7-BZ#180	ND		ug/kg	57.8	--	40
CI7-BZ#170	ND		ug/kg	57.8	--	40
CI8-BZ#195	ND		ug/kg	57.8	--	40
CI9-BZ#206	ND		ug/kg	57.8	--	40
CI10-BZ#209	ND		ug/kg	57.8	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	110		30-150
BZ 198	96		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-12 D  
 Client ID: S-12O-C018-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 02:26  
 Analyst: JS  
 Percent Solids: 92%

Date Collected: 10/17/12 14:43  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	576		ug/kg	57.8	--	40
CI4-BZ#44	289		ug/kg	57.8	--	40
CI4-BZ#66	292		ug/kg	57.8	--	40
CI5-BZ#101	213		ug/kg	57.8	--	40
CI6-BZ#153	130		ug/kg	57.8	--	40
CI5-BZ#105	ND		ug/kg	57.8	--	40
CI6-BZ#138	72.5		ug/kg	57.8	--	40

DBOB	110	30-150
BZ 198	96	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-13 D  
 Client ID: S-12O-C018-0.0-0.3 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 17:41  
 Analyst: JS  
 Percent Solids: 97%

Date Collected: 10/17/12 14:54  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	839		ug/kg	271	--	200
CI3-BZ#18	1570		ug/kg	271	--	200
CI4-BZ#52	3190		ug/kg	271	--	200
CI4-BZ#66	1530		ug/kg	271	--	200
CI5-BZ#118	927		ug/kg	271	--	200
CI6-BZ#138	624		ug/kg	271	--	200
CI7-BZ#187	ND		ug/kg	271	--	200
CI6-BZ#128	ND		ug/kg	271	--	200
CI7-BZ#180	ND		ug/kg	271	--	200
CI7-BZ#170	ND		ug/kg	271	--	200
CI8-BZ#195	ND		ug/kg	271	--	200
CI9-BZ#206	ND		ug/kg	271	--	200
CI10-BZ#209	ND		ug/kg	271	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	78		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-13 D  
 Client ID: S-12O-C018-0.0-0.3 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 17:41  
 Analyst: JS  
 Percent Solids: 97%

Date Collected: 10/17/12 14:54  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	3100		ug/kg	271	--	200
CI4-BZ#44	1600		ug/kg	271	--	200
CI5-BZ#101	1100		ug/kg	271	--	200
CI6-BZ#153	742		ug/kg	271	--	200
CI5-BZ#105	ND		ug/kg	271	--	200

DBOB	78	30-150
BZ 198	78	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-14 D  
 Client ID: S-12O-C018-0.3-0.8 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 23:31  
 Analyst: JS  
 Percent Solids: 98%

Date Collected: 10/17/12 14:54  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	265		ug/kg	27.1	--	20
CI4-BZ#66	131		ug/kg	27.1	--	20
CI5-BZ#105	ND		ug/kg	27.1	--	20
CI6-BZ#138	42.9		ug/kg	27.1	--	20
CI7-BZ#187	ND		ug/kg	27.1	--	20
CI6-BZ#128	ND		ug/kg	27.1	--	20
CI7-BZ#180	ND		ug/kg	27.1	--	20
CI7-BZ#170	ND		ug/kg	27.1	--	20
CI8-BZ#195	ND		ug/kg	27.1	--	20
CI9-BZ#206	ND		ug/kg	27.1	--	20
CI10-BZ#209	ND		ug/kg	27.1	--	20

DBOB 84 30-150  
 BZ 198 84 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-14 D  
 Client ID: S-12O-C018-0.3-0.8 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 23:31  
 Analyst: JS  
 Percent Solids: 98%

Date Collected: 10/17/12 14:54  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	142		ug/kg	27.1	--	20
CI3-BZ#28	408		ug/kg	27.1	--	20
CI4-BZ#52	321		ug/kg	27.1	--	20
CI4-BZ#44	139		ug/kg	27.1	--	20
CI5-BZ#101	82.6		ug/kg	27.1	--	20
CI5-BZ#118	59.8		ug/kg	27.1	--	20
CI6-BZ#153	51.3		ug/kg	27.1	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	84		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-15 D  
 Client ID: S-12O-C019-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 18:25  
 Analyst: JS  
 Percent Solids: 97%

Date Collected: 10/17/12 15:37  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	13400		ug/kg	3400	--	2000
CI3-BZ#18	19000		ug/kg	3400	--	2000
CI4-BZ#66	11400		ug/kg	3400	--	2000
CI5-BZ#101	6890		ug/kg	3400	--	2000
CI5-BZ#105	ND		ug/kg	3400	--	2000
CI6-BZ#138	4760		ug/kg	3400	--	2000
CI7-BZ#187	ND		ug/kg	3400	--	2000
CI6-BZ#128	ND		ug/kg	3400	--	2000
CI7-BZ#180	ND		ug/kg	3400	--	2000
CI7-BZ#170	ND		ug/kg	3400	--	2000
CI8-BZ#195	ND		ug/kg	3400	--	2000
CI9-BZ#206	ND		ug/kg	3400	--	2000
CI10-BZ#209	ND		ug/kg	3400	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	119		30-150
BZ 198	78		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-15 D  
 Client ID: S-12O-C019-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 18:25  
 Analyst: JS  
 Percent Solids: 97%

Date Collected: 10/17/12 15:37  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	26500		ug/kg	3400	--	2000
CI4-BZ#52	39600		ug/kg	3400	--	2000
CI4-BZ#44	14900		ug/kg	3400	--	2000
CI5-BZ#118	3930		ug/kg	3400	--	2000
CI6-BZ#153	4880		ug/kg	3400	--	2000

DBOB	119	30-150
BZ 198	78	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-16 D2  
 Client ID: S-12O-C019-1.0-1.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 05:06  
 Analyst: JS  
 Percent Solids: 89%

Date Collected: 10/17/12 15:37  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	702		ug/kg	374	--	100
DBOB	89		30-150			
BZ 198	78		30-150			

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-16 D  
 Client ID: S-12O-C019-1.0-1.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 00:59  
 Analyst: JS  
 Percent Solids: 89%

Date Collected: 10/17/12 15:37  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	288		ug/kg	37.4	--	10
CI3-BZ#18	400		ug/kg	37.4	--	10
CI4-BZ#66	213		ug/kg	37.4	--	10
CI5-BZ#118	54.2		ug/kg	37.4	--	10
CI6-BZ#138	62.4		ug/kg	37.4	--	10
CI7-BZ#187	ND		ug/kg	37.4	--	10
CI6-BZ#128	ND		ug/kg	37.4	--	10
CI7-BZ#180	ND		ug/kg	37.4	--	10
CI7-BZ#170	ND		ug/kg	37.4	--	10
CI8-BZ#195	ND		ug/kg	37.4	--	10
CI9-BZ#206	ND		ug/kg	37.4	--	10
CI10-BZ#209	ND		ug/kg	37.4	--	10

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-16 D  
 Client ID: S-12O-C019-1.0-1.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 00:59  
 Analyst: JS  
 Percent Solids: 89%

Date Collected: 10/17/12 15:37  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	541		ug/kg	37.4	--	10
CI4-BZ#44	249		ug/kg	37.4	--	10
CI5-BZ#101	112		ug/kg	37.4	--	10
CI6-BZ#153	80.8		ug/kg	37.4	--	10
CI5-BZ#105	ND		ug/kg	37.4	--	10

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-17 D  
 Client ID: S-12O-C020-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 19:08  
 Analyst: JS  
 Percent Solids: 96%

Date Collected: 10/17/12 15:12  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	9830		ug/kg	689	--	500
CI4-BZ#66	3640		ug/kg	689	--	500
CI6-BZ#138	1160		ug/kg	689	--	500
CI7-BZ#187	ND		ug/kg	689	--	500
CI6-BZ#128	ND		ug/kg	689	--	500
CI7-BZ#180	ND		ug/kg	689	--	500
CI7-BZ#170	ND		ug/kg	689	--	500
CI8-BZ#195	ND		ug/kg	689	--	500
CI9-BZ#206	ND		ug/kg	689	--	500
CI10-BZ#209	ND		ug/kg	689	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	105		30-150
BZ 198	97		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-17 D  
 Client ID: S-12O-C020-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 19:08  
 Analyst: JS  
 Percent Solids: 96%

Date Collected: 10/17/12 15:12  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	4830		ug/kg	689	--	500
CI3-BZ#28	11400		ug/kg	689	--	500
CI4-BZ#52	11100		ug/kg	689	--	500
CI4-BZ#44	3980		ug/kg	689	--	500
CI5-BZ#101	1960		ug/kg	689	--	500
CI5-BZ#118	1360		ug/kg	689	--	500
CI6-BZ#153	1340		ug/kg	689	--	500
CI5-BZ#105	ND		ug/kg	689	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	105		30-150
BZ 198	97		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-18 D  
 Client ID: S-12O-C020-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 01:43  
 Analyst: JS  
 Percent Solids: 96%

Date Collected: 10/17/12 15:12  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#18	233		ug/kg	34.7	--	10
CI4-BZ#66	103		ug/kg	34.7	--	10
CI5-BZ#118	38.2		ug/kg	34.7	--	10
CI5-BZ#105	ND		ug/kg	34.7	--	10
CI7-BZ#187	ND		ug/kg	34.7	--	10
CI6-BZ#128	ND		ug/kg	34.7	--	10
CI7-BZ#180	ND		ug/kg	34.7	--	10
CI7-BZ#170	ND		ug/kg	34.7	--	10
CI8-BZ#195	ND		ug/kg	34.7	--	10
CI9-BZ#206	ND		ug/kg	34.7	--	10
CI10-BZ#209	ND		ug/kg	34.7	--	10
DBOB	83			30-150		
BZ 198	80			30-150		



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-18 D  
 Client ID: S-12O-C020-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/09/12 01:43  
 Analyst: JS  
 Percent Solids: 96%

Date Collected: 10/17/12 15:12  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	178		ug/kg	34.7	--	10
CI3-BZ#28	305		ug/kg	34.7	--	10
CI4-BZ#52	371		ug/kg	34.7	--	10
CI4-BZ#44	114		ug/kg	34.7	--	10
CI5-BZ#101	59.3		ug/kg	34.7	--	10
CI6-BZ#153	47.0		ug/kg	34.7	--	10
CI6-BZ#138	ND		ug/kg	34.7	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	80		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-19 D  
 Client ID: S-12O-C021-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 19:52  
 Analyst: JS  
 Percent Solids: 94%

Date Collected: 10/17/12 15:51  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	16400		ug/kg	3500	--	1000
CI3-BZ#18	25100		ug/kg	3500	--	1000
CI4-BZ#66	13100		ug/kg	3500	--	1000
CI5-BZ#101	7770		ug/kg	3500	--	1000
CI5-BZ#105	ND		ug/kg	3500	--	1000
CI6-BZ#138	5330		ug/kg	3500	--	1000
CI7-BZ#187	ND		ug/kg	3500	--	1000
CI6-BZ#128	ND		ug/kg	3500	--	1000
CI7-BZ#180	ND		ug/kg	3500	--	1000
CI7-BZ#170	ND		ug/kg	3500	--	1000
CI8-BZ#195	ND		ug/kg	3500	--	1000
CI9-BZ#206	ND		ug/kg	3500	--	1000
CI10-BZ#209	ND		ug/kg	3500	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	79		30-150
DBOB	69		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-19 D  
 Client ID: S-12O-C021-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 19:52  
 Analyst: JS  
 Percent Solids: 94%

Date Collected: 10/17/12 15:51  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	34700		ug/kg	3500	--	1000
CI4-BZ#52	43700		ug/kg	3500	--	1000
CI4-BZ#44	17000		ug/kg	3500	--	1000
CI5-BZ#118	4370		ug/kg	3500	--	1000
CI6-BZ#153	5480		ug/kg	3500	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	79		30-150
DBOB	69		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-20 D  
 Client ID: S-12O-C021-1.0-1.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 08:01  
 Analyst: JS  
 Percent Solids: 98%

Date Collected: 10/17/12 15:51  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#18	1150		ug/kg	169	--	100
CI4-BZ#66	451		ug/kg	169	--	100
CI5-BZ#105	ND		ug/kg	169	--	100
CI6-BZ#138	ND		ug/kg	169	--	100
CI7-BZ#187	ND		ug/kg	169	--	100
CI6-BZ#128	ND		ug/kg	169	--	100
CI7-BZ#180	ND		ug/kg	169	--	100
CI7-BZ#170	ND		ug/kg	169	--	100
CI8-BZ#195	ND		ug/kg	169	--	100
CI9-BZ#206	ND		ug/kg	169	--	100
CI10-BZ#209	ND		ug/kg	169	--	100

DBOB 93 30-150  
 BZ 198 78 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219170**Project Number:** TO-0010-07**Report Date:** 11/09/12**SAMPLE RESULTS**

Lab ID: L1219170-20 D  
 Client ID: S-12O-C021-1.0-1.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/08/12 08:01  
 Analyst: JS  
 Percent Solids: 98%

Date Collected: 10/17/12 15:51  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 15:29  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	546		ug/kg	169	--	100
CI3-BZ#28	1160		ug/kg	169	--	100
CI4-BZ#52	1360		ug/kg	169	--	100
CI4-BZ#44	512		ug/kg	169	--	100
CI5-BZ#101	252		ug/kg	169	--	100
CI5-BZ#118	ND		ug/kg	169	--	100
CI6-BZ#153	ND		ug/kg	169	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	78		30-150

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
Analytical Date: 11/07/12 13:47  
Analyst: JS

Extraction Method: EPA 3570  
Extraction Date: 11/01/12 12:38  
Cleanup Method1: EPA 3630  
Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG571272-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	122		30-150
BZ 198	105		30-150

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 11/07/12 13:47  
 Analyst: JS

Extraction Method: EPA 3570  
 Extraction Date: 11/01/12 12:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/05/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG571272-1					
C16-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	122		30-150
BZ 198	105		30-150

## Matrix Spike Analysis

### Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Lab Number: L1219170

Project Number: TO-0010-07

Report Date: 11/09/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG571272-4 WG571272-5 QC Sample: L1219170-08 Client ID: S-120-C016-1.1-1.6												
Cl3-BZ#18	1360	1920	3100	91		3600	102		40-140	15		30
Cl4-BZ#66	587	1920	2490	99		2860	103		40-140	14		30
Cl5-BZ#101	388	1920	2300	100		2700	105		40-140	16		30
Cl5-BZ#105	ND	1920	1730	90		1950	89		40-140	12		30
Cl6-BZ#138	203	1920	1910	89		2220	92		40-140	15		30
Cl7-BZ#187	ND	1920	1580	83		1870	85		40-140	17		30
Cl6-BZ#128	ND	1920	1640	86		1920	87		40-140	16		30
Cl7-BZ#180	ND	1920	1650	86		1940	88		40-140	16		30
Cl7-BZ#170	ND	1920	1610	84		1880	85		40-140	15		30
Cl8-BZ#195	ND	1920	1530	80		1780	81		40-140	15		30
Cl9-BZ#206	ND	1920	1660	87		1880	85		40-140	12		30
Cl10-BZ#209	ND	1920	1460	76		1640	75		40-140	12		30
Cl2-BZ#8	670	1920	2100	75		2620	89		40-140	22		30
Cl3-BZ#28	1520	1920	4330	147	Q	4900	154	Q	40-140	12		30
Cl4-BZ#52	1790	1920	4010	116		4650	130		40-140	15		30
Cl4-BZ#44	726	1920	2570	96		3010	104		40-140	16		30
Cl5-BZ#118	197	1920	1920	90		2240	93		40-140	15		30
Cl6-BZ#153	248	1920	1640	73		1960	78		40-140	18		30



### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20    QC Batch ID: WG571272-4    WG571272-5    QC Sample: L1219170-08    Client ID: S-12O-C016-1.1-1.6

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	82		87		30-150
DBOB	82		89		30-150

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Lab Number: L1219170

Project Number: TO-0010-07

Report Date: 11/09/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG571272-2 WG571272-3								
CI2-BZ#8	107		121		40-140	12		30
CI3-BZ#18	113		132		40-140	16		30
CI3-BZ#28	113		160	Q	40-140	34	Q	30
CI4-BZ#52	109		149	Q	40-140	31	Q	30
CI4-BZ#44	112		118		40-140	5		30
CI4-BZ#66	112		123		40-140	9		30
CI5-BZ#101	110		121		40-140	10		30
CI5-BZ#118	116		119		40-140	3		30
CI5-BZ#105	111		107		40-140	4		30
CI6-BZ#138	113		112		40-140	1		30
CI7-BZ#187	102		99		40-140	3		30
CI6-BZ#128	107		102		40-140	5		30
CI7-BZ#180	106		102		40-140	4		30
CI7-BZ#170	105		99		40-140	6		30
CI8-BZ#195	99		94		40-140	5		30
CI9-BZ#206	109		103		40-140	6		30
CI10-BZ#209	104		91		40-140	13		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG571272-2 WG571272-3								

DBOB	123	119	30-150
BZ 198	102	96	30-150

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG571272-2 WG571272-3								
--	--	--	--	--	--	--	--	--

Cl6-BZ#153	97	100	40-140	3	30
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Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	123		119		30-150
BZ 198	102		96		30-150

# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-01  
**Client ID:** S-12O-C012-0.0-0.2 REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 14:34  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	86.7		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	34.3		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-02  
**Client ID:** S-12O-C012-0.2-0.7 REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 14:34  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	89.9		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	35.3		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-03  
**Client ID:** S-12O-C014-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 16:47  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.3		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	38.8		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-04  
**Client ID:** S-12O-C014-1.4-1.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 16:47  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	87.0		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	43.4		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB





**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-05  
**Client ID:** S-12O-C015-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 13:41  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	79.9		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	43.8		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-06  
**Client ID:** S-12O-C015-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 13:41  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.3		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	47.2		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-07  
**Client ID:** S-12O-C016-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 15:41  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.5		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	36.9		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-08  
**Client ID:** S-12O-C016-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 15:41  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	86.9		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	38.1		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-09  
**Client ID:** S-12O-C017-0.4-0.9  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 16:25  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.9		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	35.5		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-10  
**Client ID:** S-12O-C017-0.9-1.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 16:25  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	92.2		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	37.3		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-11  
**Client ID:** S-12O-C018-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 14:43  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.8		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	41.3		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-12  
**Client ID:** S-12O-C018-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 14:43  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	92.1		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	48.4		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB





**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-13  
**Client ID:** S-12O-C018-0.0-0.3 REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 14:54  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.1		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	36.8		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-14  
**Client ID:** S-12O-C018-0.3-0.8 REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 14:54  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.7		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	47.4		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-15  
**Client ID:** S-12O-C019-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 15:37  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.8		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	35.9		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-16  
**Client ID:** S-12O-C019-1.0-1.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 15:37  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	88.6		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	45.0		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-17  
**Client ID:** S-12O-C020-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 15:12  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.8		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	60.0		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-18  
**Client ID:** S-12O-C020-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 15:12  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.9		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	46.0		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-19  
**Client ID:** S-12O-C021-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 15:51  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.0		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	36.5		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**SAMPLE RESULTS**

**Lab ID:** L1219170-20  
**Client ID:** S-12O-C021-1.0-1.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 15:51  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.9		%	0.100	--	1	-	11/01/12 11:45	30,2540G	KB
Solids, Total (Pre-Dried)	45.6		%	0.100	NA	1	-	10/24/12 16:30	30,2540G	KB





## Lab Duplicate Analysis

Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Project Number: TO-0010-07

Lab Number: L1219170

Report Date: 11/09/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG571251-1 QC Sample: L1219170-08 Client ID: S-12O-C016-1.1-1.6						
Solids, Total	86.9	86.2	%	1		10

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

### 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
D	Absent
B	Absent
C	Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1219170-01A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-02A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-03A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-04A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-05A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-06A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-07A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-08A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-08B	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-09A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-10A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-11A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-12A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-13A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-14A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-15A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1219170-16A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-17A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-18A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-19A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-20A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219170-21A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	HOLD()
L1219170-22A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	HOLD()
L1219170-23A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	HOLD()
L1219170-24A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	HOLD()
L1219170-25A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	HOLD()
L1219170-26A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	HOLD()
L1219170-27A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	HOLD()
L1219170-28A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	HOLD()
L1219170-29A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	HOLD()

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

## 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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

**Data Qualifiers**

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.
- 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:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219170  
**Report Date:** 11/09/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### Florida Department of Health Certificate/Lab ID: E87814. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

### New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Atmospheric Organic Parameters* (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

*Biological Tissue* (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

*Air & Emissions* (EPA TO-15, TO-10A.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Non-Potable Water* (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D .)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID:460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.

*Air & Emissions* (EPA TO-15.)



**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.



**MANSFIELD CHAIN OF CUSTODY**

PAGE 4 OF 10

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

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

**Client Information**

Client: WOODS Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize samples before analysis.

**PLEASE NOTE**

Project-specific EDP

MS/MSD (at unit cost) will be omitted unless you check here:

**Project Information**

Project Name: New Bedford Post-dredge  
Project Location: New Bedford, MA  
Project #: TO-0010-07  
Project Manager: Dave Walsh  
ALPHA Quote #:

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Date Rec'd in Lab:

**Report Information - Data Deliverables**

FAX  EMAIL  
 ADEX  Add'l Deliverables

ALPHA Job #: L1219170

**Billing Information**

Same as Client info PO #:

**Regulatory Requirements/Report Limits**

State/Fed Program Criteria

ANALYSIS	PCB Congeners 8082	Total Percent Solids	<b>SAMPLE HANDLING</b>										TOTAL # BOTTLES
			Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed Preservation _____ <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do (Please specify below) Sample Specific Comments										

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES		
		Date	Time			PCB Congeners 8082	Total Percent Solids												
- 1	S-120-C012-0.0-0.2-REP	10/16/12	14:34	SE	DS	X	X											LG13-REP	1
- 2	S-120-C012-0.2-0.7-REP	I	I	I	I	X	X											I	1
- 21	S-120-C012-0.7-1.2-REP	I	I	I	I	X	X											I Archive	1
- 3	S-120-C014-0.4-1.4	10/16/12	16:47	I	I	X	X											PH02	1
- 4	S-120-C014-1.4-1.9	I	I	I	I	X	X											I	1
- 22	S-120-C014-1.9-2.4	I	I	I	I	X	X											I Archive	1
- 5	S-120-C015-0.0-0.5	I	13:41	I	I	X	X											LG17	1
- 6	<del>S-120-C015-0.5-1.0</del> S-120-C015-0.5-1.0	I	I	I	I	X	X											I	1
- 23	S-120-C015-1.0-1.5	I	I	I	I	X	X											I Archive	1
- 7	S-120-C016-0.6-1.1	I	15:41	I	I	X	X											LK12	1

Container Type A

Preservative A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
Delivery Order 0010-07  
May 2013

Relinquished By:

Duch Storm  
T. Hurdell

Date/Time

10/19/12 1605  
10/19/12 1705

Received By:

T. Hurdell  
[Signature]

Date/Time

10/19/12 1605  
10/19/12 1715



**MANSFIELD CHAIN OF CUSTODY**

PAGE 5 OF 10

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

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

**Client Information**

Client: WOODS Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before analysis

**PLEASE NOTE**

Project-specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

**Project Information**

Project Name: New Bedford Post-Dredge

Project Location: New Bedford, MA

Project #: TU-0816-07

Project Manager: Dave Walsh

ALPHA Quote #:

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Date Rec'd in Lab:

**Report Information - Data Deliverables**

FAX  EMAIL  
 ADEX  Add'l Deliverables

ALPHA Job #: L1219170

**Billing Information**

Same as Client info PO #: \_\_\_\_\_

**Regulatory Requirements/Report Limits**

State/Fed Program: MA Criteria: \_\_\_\_\_

ANALYSIS PCB Congenit 8092 Percent Solids											TOTAL # BOTTLES
	SAMPLE HANDLING Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed Preservation <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do (Please specify below)										
Sample Specific Comments											

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES				
		Date	Time																		
- 8	S-120-C016-1.1-1.6	10/16/12	15:41	SE	DS	X	X													LK12	1
↓	S-120-C016-1.1-1.6MSMSD					X	X													MSMSD	1
- 24	S-120-C016-1.6-2.2					X	X													Archive	1
- 9	S-120-C017-0.4-0.9		16:25			X	X													LM18	1
- 10	S-120-C017-0.9-1.4					X	X														1
- 25	S-120-C017-1.4-1.8					X	X													Archive	1
- 11	S-120-C018-0.0-0.5	10/17/12	14:43			X	X													PU19	1
- 12	S-120-C018-0.5-1.0					X	X														1
- 26	S-120-C018-1.0-1.5					X	X													Archive	1
- 13	S-120-C018-0.0-0.3 REP		14:54			X	X													PU19-REP	1

Container Type A

Preservative A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
Delivery Order 0010-07  
May 2013

Relinquished By:	Date/Time	Received By:	Date/Time
<u>Dave Walsh</u>	<u>10/19/12 1605</u>	<u>T. Huddle</u>	<u>10/19/12 1710</u>
<u>T. Huddle</u>	<u>10/19/12 1705</u>	<u>T. Huddle</u>	<u>10/19/12 1710</u>



**MANSFIELD CHAIN OF CUSTODY**

PAGE 6 OF 10

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

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

**Project Information**

Project Name: New Bedford Post-Dredge  
Project Location: New Bedford, MA  
Project #: TO-0010-07  
Project Manager: Dave Walsh  
ALPHA Quote #:

Date Rec'd in Lab:

ALPHA Job #: L1219170

**Report Information - Data Deliverables**

FAX  EMAIL  
 ADEx  Add'l Deliverables

**Billing Information**

Same as Client info PO #:

**Client Information**

Client: WOODS Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

**Turn-Around Time**

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

Other Project Specific Requirements/Comments/Detection Limits:  
Homogenize before analysis  
Project-specific EDD  
PLEASE NOTE MS/MSD (at unit cost) will be omitted unless you check here:

**Regulatory Requirements/Report Limits**

State/Fed Program Criteria

*ANALYSIS*  
*PCB Congeners 5082*  
*Percent Solids*

**SAMPLE HANDLING**

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

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Analysis		Sample Specific Comments	TOTAL # BOTTLES
		Date	Time			PCB Congeners	Percent Solids		
-14	S-120-C018-0.3-0.8 REP	10/17/12	14:54	SE	DS	X	X	DU19-REP	1
-27	S-120-C018-0.8-1.3 REP		L			X	X	L Archive	1
-15	S-120-C019-0.5-1.0		15:37			X	X	PL04	1
-16	S-120-C019-1.0-1.5		L			X	X	L	1
-28	S-120-C019-1.5-2.0		L			X	X	L Archive	1
-17	S-120-C020-0.6-1.1		15:12			X	X	PH04	1
-18	S-120-C020-1.1-1.6		L			X	X	L	1
-29	S-120-C020-1.6-2.1		L			X	X	L Archive	1
-19	S-120-C021-0.5-1.0		15:51			X	X	PL02	1
-20	S-120-C021-1.0-1.5		L			X	X	L	1

Container Type A  
Preservative A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side. Delivery Order 0010-07 May 2013

Relinquished By: Dave Walsh Date/Time: 10/19/12 1605  
T. Handell Date/Time: 10/19/12 1705

Received By: T. Handell Date/Time: 10/19/12 1705  
J. Handell



## ANALYTICAL REPORT

Lab Number:	L1219172
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dack Stuart
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD POST DREDGE
Project Number:	TO-0010-07
Report Date:	11/19/12

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1219172-01	S-120-C022-0.0-0.5	NEW BEDFORD, MA	10/17/12 16:03
L1219172-02	S-120-C023-0.0-0.5	NEW BEDFORD, MA	10/17/12 16:12
L1219172-03	S-120-C024-0.0-0.2	NEW BEDFORD, MA	10/17/12 16:28
L1219172-04	S-120-C024-0.2-0.7	NEW BEDFORD, MA	10/17/12 16:28
L1219172-05	S-120-C025-0.0-0.5	NEW BEDFORD, MA	10/17/12 16:43
L1219172-06	S-120-C026-0.0-0.5	NEW BEDFORD, MA	10/18/12 15:48
L1219172-07	S-120-C026-0.5-1.0	NEW BEDFORD, MA	10/18/12 15:48
L1219172-08	S-120-C027-0.0-0.2	NEW BEDFORD, MA	10/18/12 13:51
L1219172-09	S-120-C027-0.2-0.7	NEW BEDFORD, MA	10/18/12 13:51
L1219172-10	S-120-C028-0.7-1.2	NEW BEDFORD, MA	10/18/12 14:52
L1219172-11	S-120-C028-1.2-1.7	NEW BEDFORD, MA	10/18/12 14:52
L1219172-12	S-120-C029-0.0-0.5	NEW BEDFORD, MA	10/18/12 13:41
L1219172-13	S-120-C030-0.0-0.5	NEW BEDFORD, MA	10/18/12 15:10
L1219172-14	S-120-C030-0.5-1.0	NEW BEDFORD, MA	10/18/12 15:10
L1219172-15	S-120-C031-0.7-1.2	NEW BEDFORD, MA	10/18/12 15:41
L1219172-16	S-120-C031-1.2-1.7	NEW BEDFORD, MA	10/18/12 15:41
L1219172-17	S-120-C032-0.6-1.1	NEW BEDFORD, MA	10/18/12 14:15
L1219172-18	S-120-C032-1.1-1.6	NEW BEDFORD, MA	10/18/12 14:15
L1219172-19	S-120-C033-0.0-0.1	NEW BEDFORD, MA	10/18/12 14:31
L1219172-20	S-120-C033-0.1-0.6	NEW BEDFORD, MA	10/18/12 14:31
L1219172-21	S-120-C033-0.0-0.2 REP	NEW BEDFORD, MA	10/18/12 14:39
L1219172-22	S-120-C033-0.2-0.7 REP	NEW BEDFORD, MA	10/18/12 14:39
L1219172-23	S-120-C021-1.5-2.0	NEW BEDFORD, MA	10/17/12 15:51
L1219172-24	S-120-C022-0.5-1.0	NEW BEDFORD, MA	10/17/12 16:03
L1219172-25	S-120-C023-0.5-1.0	NEW BEDFORD, MA	10/17/12 16:12
L1219172-26	S-120-C024-0.7-1.2	NEW BEDFORD, MA	10/17/12 16:28
L1219172-27	S-120-C025-0.5-1.0	NEW BEDFORD, MA	10/17/12 16:43
L1219172-28	S-120-C026-1.0-1.5	NEW BEDFORD, MA	10/18/12 15:48
L1219172-29	S-120-C027-0.7-1.2	NEW BEDFORD, MA	10/18/12 13:51
L1219172-30	S-120-C028-1.2-1.7	NEW BEDFORD, MA	10/18/12 14:52
L1219172-31	S-120-C029-0.5-1.0	NEW BEDFORD, MA	10/18/12 13:41

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1219172-32	S-12O-C030-1.0-1.5	NEW BEDFORD, MA	10/18/12 15:10
L1219172-33	S-12O-C031-1.2-1.7	NEW BEDFORD, MA	10/18/12 15:41
L1219172-34	S-12O-C033-1.6-2.1	NEW BEDFORD, MA	10/18/12 14:15
L1219172-35	S-12O-C033-0.6-1.1	NEW BEDFORD, MA	10/18/12 14:31
L1219172-36	S-12O-C033-0.7-1.2 REP	NEW BEDFORD, MA	10/18/12 14:39

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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 free of charge for 30 days from the date the project is completed. After 30 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.

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



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

### Case Narrative (continued)

#### Sample Receipt

Sediment samples were received intact on October 19, 2012. The samples were analyzed for initial percent solids air-dried and then placed in frozen storage on October 26, 2012. Samples were removed from frozen storage on November 6, 2012 when they were removed to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

#### PCB Congeners by GC/ECD

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values reported. Technical judgment was employed in the case of an observed interference. In each case that interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

L1219172-01 through -08, -10 through -17 and -19 through -22 have elevated detection limits due to the dilutions required by the elevated concentrations of target compounds in the samples.

The WG572113-5 MS/MSD RPDs, performed on L1219172-01, are above the acceptance criteria for several compounds.

The WG572113-7 MS/MSD RPDs, performed on L1219172-02, are above the acceptance criteria for several compounds.

The WG572113-8 MS recoveries, performed on L1219172-14, were above the acceptance criteria for CI3-BZ#18 (171%), CI3-BZ#28 (171%), CI4-BZ#52 (169%), CI4-BZ#66 (147%), CI5-BZ#101 (144%), CI5-BZ#118 (144%); however, the associated LCS/LCSD recoveries were within criteria. The results of the sample utilized for the MS/MSD are considered to have a potentially high bias for these compounds.

The WG572113-9 MSD recoveries, performed on L1219172-14, were above the acceptance criteria for CI3-BZ#28 (159%); however, the associated LCS/LCSD recoveries were within criteria. The results of the sample utilized for the MS/MSD are considered to have a potentially high bias for these compounds.

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**Case Narrative (continued)**

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: 11/19/12

# ORGANICS

# PCBS

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-01 D  
 Client ID: S-12O-C022-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/13/12 02:28  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/17/12 16:03  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	464		ug/kg	67.9	--	50
CI3-BZ#18	911		ug/kg	67.9	--	50
CI4-BZ#52	1230		ug/kg	67.9	--	50
CI4-BZ#66	612		ug/kg	67.9	--	50
CI6-BZ#128	ND		ug/kg	67.9	--	50
CI7-BZ#180	ND		ug/kg	67.9	--	50
CI7-BZ#170	ND		ug/kg	67.9	--	50
CI8-BZ#195	ND		ug/kg	67.9	--	50
CI9-BZ#206	ND		ug/kg	67.9	--	50
CI10-BZ#209	ND		ug/kg	67.9	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	100		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-01 D  
 Client ID: S-12O-C022-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/13/12 02:28  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/17/12 16:03  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	1340		ug/kg	67.9	--	50
CI4-BZ#44	545		ug/kg	67.9	--	50
CI5-BZ#101	425		ug/kg	67.9	--	50
CI5-BZ#118	332		ug/kg	67.9	--	50
CI6-BZ#153	248		ug/kg	67.9	--	50
CI5-BZ#105	ND		ug/kg	67.9	--	50
CI6-BZ#138	122		ug/kg	67.9	--	50
CI7-BZ#187	ND		ug/kg	67.9	--	50
DBOB	104			30-150		
BZ 198	100			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

**Lab ID:** L1219172-02 D  
**Client ID:** S-12O-C023-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/13/12 00:16  
**Analyst:** RR  
**Percent Solids:** 95%

**Date Collected:** 10/17/12 16:12  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 11/06/12 12:41  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	388		ug/kg	171	--	50
CI5-BZ#105	ND		ug/kg	171	--	50
CI7-BZ#187	ND		ug/kg	171	--	50
CI6-BZ#128	ND		ug/kg	171	--	50
CI7-BZ#180	ND		ug/kg	171	--	50
CI7-BZ#170	ND		ug/kg	171	--	50
CI8-BZ#195	ND		ug/kg	171	--	50
CI9-BZ#206	ND		ug/kg	171	--	50
CI10-BZ#209	ND		ug/kg	171	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	87		30-150
DBOB	91		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-02 D  
 Client ID: S-12O-C023-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/13/12 00:16  
 Analyst: RR  
 Percent Solids: 95%

Date Collected: 10/17/12 16:12  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	180		ug/kg	171	--	50
CI3-BZ#28	790		ug/kg	171	--	50
CI4-BZ#52	899		ug/kg	171	--	50
CI4-BZ#44	378		ug/kg	171	--	50
CI4-BZ#66	326		ug/kg	171	--	50
CI5-BZ#101	271		ug/kg	171	--	50
CI5-BZ#118	203		ug/kg	171	--	50
CI6-BZ#153	208		ug/kg	171	--	50
CI6-BZ#138	ND		ug/kg	171	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	87		30-150
DBOB	91		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-03 D  
 Client ID: S-12O-C024-0.0-0.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 15:25  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/17/12 16:28  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	4760		ug/kg	1500	--	1000
CI3-BZ#18	10800		ug/kg	1500	--	1000
CI4-BZ#52	14700		ug/kg	1500	--	1000
CI4-BZ#66	4940		ug/kg	1500	--	1000
CI5-BZ#118	2430		ug/kg	1500	--	1000
CI5-BZ#105	ND		ug/kg	1500	--	1000
CI7-BZ#187	ND		ug/kg	1500	--	1000
CI6-BZ#128	ND		ug/kg	1500	--	1000
CI7-BZ#180	ND		ug/kg	1500	--	1000
CI7-BZ#170	ND		ug/kg	1500	--	1000
CI8-BZ#195	ND		ug/kg	1500	--	1000
CI9-BZ#206	ND		ug/kg	1500	--	1000
CI10-BZ#209	ND		ug/kg	1500	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	124		30-150
BZ 198	98		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-03 D  
 Client ID: S-12O-C024-0.0-0.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 15:25  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/17/12 16:28  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	13400		ug/kg	1500	--	1000
CI4-BZ#44	5540		ug/kg	1500	--	1000
CI5-BZ#101	3640		ug/kg	1500	--	1000
CI6-BZ#153	2670		ug/kg	1500	--	1000
CI6-BZ#138	ND		ug/kg	1500	--	1000

DBOB	124	30-150
BZ 198	98	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-04 D  
 Client ID: S-12O-C024-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 19:48  
 Analyst: RR  
 Percent Solids: 94%

Date Collected: 10/17/12 16:28  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	2600		ug/kg	703	--	500
CI3-BZ#18	3940		ug/kg	703	--	500
CI4-BZ#52	6960		ug/kg	703	--	500
CI4-BZ#66	2320		ug/kg	703	--	500
CI5-BZ#118	975		ug/kg	703	--	500
CI5-BZ#105	ND		ug/kg	703	--	500
CI7-BZ#187	ND		ug/kg	703	--	500
CI6-BZ#128	ND		ug/kg	703	--	500
CI7-BZ#180	ND		ug/kg	703	--	500
CI7-BZ#170	ND		ug/kg	703	--	500
CI8-BZ#195	ND		ug/kg	703	--	500
CI9-BZ#206	ND		ug/kg	703	--	500
CI10-BZ#209	ND		ug/kg	703	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	126		30-150
BZ 198	129		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-04 D  
 Client ID: S-12O-C024-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 19:48  
 Analyst: RR  
 Percent Solids: 94%

Date Collected: 10/17/12 16:28  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	7180		ug/kg	703	--	500
CI4-BZ#44	2940		ug/kg	703	--	500
CI5-BZ#101	1680		ug/kg	703	--	500
CI6-BZ#153	1140		ug/kg	703	--	500
CI6-BZ#138	ND		ug/kg	703	--	500

DBOB	126	30-150
BZ 198	129	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-05 D  
 Client ID: S-12O-C025-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 20:31  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/17/12 16:43  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	2130		ug/kg	682	--	500
CI3-BZ#18	3330		ug/kg	682	--	500
CI4-BZ#52	7050		ug/kg	682	--	500
CI4-BZ#66	2310		ug/kg	682	--	500
CI5-BZ#105	ND		ug/kg	682	--	500
CI7-BZ#187	ND		ug/kg	682	--	500
CI6-BZ#128	ND		ug/kg	682	--	500
CI7-BZ#180	ND		ug/kg	682	--	500
CI7-BZ#170	ND		ug/kg	682	--	500
CI8-BZ#195	ND		ug/kg	682	--	500
CI9-BZ#206	ND		ug/kg	682	--	500
CI10-BZ#209	ND		ug/kg	682	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	146		30-150
BZ 198	145		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

**Lab ID:** L1219172-05 D  
**Client ID:** S-12O-C025-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/14/12 20:31  
**Analyst:** RR  
**Percent Solids:** 96%

**Date Collected:** 10/17/12 16:43  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 11/06/12 12:41  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	5950		ug/kg	682	--	500
CI4-BZ#44	2400		ug/kg	682	--	500
CI5-BZ#101	1720		ug/kg	682	--	500
CI5-BZ#118	1180		ug/kg	682	--	500
CI6-BZ#153	1300		ug/kg	682	--	500
CI6-BZ#138	ND		ug/kg	682	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	146		30-150
BZ 198	145		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-06 D  
 Client ID: S-12O-C026-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 13:58  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/18/12 15:48  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	10900		ug/kg	1760	--	500
CI3-BZ#18	20800		ug/kg	1760	--	500
CI4-BZ#52	32000		ug/kg	1760	--	500
CI4-BZ#66	11000		ug/kg	1760	--	500
CI5-BZ#118	3720		ug/kg	1760	--	500
CI5-BZ#105	ND		ug/kg	1760	--	500
CI7-BZ#187	ND		ug/kg	1760	--	500
CI6-BZ#128	ND		ug/kg	1760	--	500
CI7-BZ#180	ND		ug/kg	1760	--	500
CI7-BZ#170	ND		ug/kg	1760	--	500
CI8-BZ#195	ND		ug/kg	1760	--	500
CI9-BZ#206	ND		ug/kg	1760	--	500
CI10-BZ#209	ND		ug/kg	1760	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	145		30-150
BZ 198	114		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-06 D  
 Client ID: S-12O-C026-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 13:58  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/18/12 15:48  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	24800		ug/kg	1760	--	500
CI4-BZ#44	13100		ug/kg	1760	--	500
CI5-BZ#101	6870		ug/kg	1760	--	500
CI6-BZ#153	4750		ug/kg	1760	--	500
CI6-BZ#138	2280		ug/kg	1760	--	500

DBOB	145	30-150
BZ 198	114	30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-07 D  
 Client ID: S-12O-C026-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 17:37  
 Analyst: RR  
 Percent Solids: 89%

Date Collected: 10/18/12 15:48  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	13000		ug/kg	2900	--	2000
CI3-BZ#18	20100		ug/kg	2900	--	2000
CI4-BZ#52	37300		ug/kg	2900	--	2000
CI4-BZ#66	11700		ug/kg	2900	--	2000
CI5-BZ#105	ND		ug/kg	2900	--	2000
CI7-BZ#187	ND		ug/kg	2900	--	2000
CI6-BZ#128	ND		ug/kg	2900	--	2000
CI7-BZ#180	ND		ug/kg	2900	--	2000
CI7-BZ#170	ND		ug/kg	2900	--	2000
CI8-BZ#195	ND		ug/kg	2900	--	2000
CI9-BZ#206	ND		ug/kg	2900	--	2000
CI10-BZ#209	ND		ug/kg	2900	--	2000

DBOB 98 30-150  
 BZ 198 91 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-07 D  
 Client ID: S-12O-C026-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 17:37  
 Analyst: RR  
 Percent Solids: 89%

Date Collected: 10/18/12 15:48  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	28300		ug/kg	2900	--	2000
CI4-BZ#44	15300		ug/kg	2900	--	2000
CI5-BZ#101	6370		ug/kg	2900	--	2000
CI5-BZ#118	3080		ug/kg	2900	--	2000
CI6-BZ#153	4510		ug/kg	2900	--	2000
CI6-BZ#138	ND		ug/kg	2900	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	98		30-150
BZ 198	91		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-08 D  
 Client ID: S-12O-C027-0.0-0.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 00:54  
 Analyst: RR  
 Percent Solids: 97%

Date Collected: 10/18/12 13:51  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	1350		ug/kg	391	--	100
CI3-BZ#18	3760		ug/kg	391	--	100
CI4-BZ#52	5570		ug/kg	391	--	100
CI4-BZ#66	1580		ug/kg	391	--	100
CI5-BZ#118	902		ug/kg	391	--	100
CI5-BZ#105	ND		ug/kg	391	--	100
CI6-BZ#128	ND		ug/kg	391	--	100
CI7-BZ#180	ND		ug/kg	391	--	100
CI7-BZ#170	ND		ug/kg	391	--	100
CI8-BZ#195	ND		ug/kg	391	--	100
CI9-BZ#206	ND		ug/kg	391	--	100
CI10-BZ#209	ND		ug/kg	391	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	87		30-150
BZ 198	91		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

**Lab ID:** L1219172-08 D  
**Client ID:** S-12O-C027-0.0-0.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/15/12 00:54  
**Analyst:** RR  
**Percent Solids:** 97%

**Date Collected:** 10/18/12 13:51  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 11/06/12 13:47  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	4750		ug/kg	391	--	100
CI4-BZ#44	1650		ug/kg	391	--	100
CI5-BZ#101	1270		ug/kg	391	--	100
CI6-BZ#153	1030		ug/kg	391	--	100
CI6-BZ#138	489		ug/kg	391	--	100
CI7-BZ#187	ND		ug/kg	391	--	100
DBOB	87			30-150		
BZ 198	91			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-09  
 Client ID: S-12O-C027-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 03:48  
 Analyst: RR  
 Percent Solids: 91%

Date Collected: 10/18/12 13:51  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	ND		ug/kg	1.43	--	1
CI4-BZ#52	1.83		ug/kg	1.43	--	1
CI4-BZ#44	ND		ug/kg	1.43	--	1
CI4-BZ#66	ND		ug/kg	1.43	--	1
CI5-BZ#101	ND		ug/kg	1.43	--	1
CI5-BZ#118	ND		ug/kg	1.43	--	1
CI5-BZ#105	ND		ug/kg	1.43	--	1
CI6-BZ#138	ND		ug/kg	1.43	--	1
CI7-BZ#187	ND		ug/kg	1.43	--	1
CI6-BZ#128	ND		ug/kg	1.43	--	1
CI7-BZ#180	ND		ug/kg	1.43	--	1
CI7-BZ#170	ND		ug/kg	1.43	--	1
CI8-BZ#195	ND		ug/kg	1.43	--	1
CI10-BZ#209	ND		ug/kg	1.43	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	80		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-09  
 Client ID: S-12O-C027-0.2-0.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 03:48  
 Analyst: RR  
 Percent Solids: 91%

Date Collected: 10/18/12 13:51  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	2.33		ug/kg	1.43	--	1
CI3-BZ#28	ND		ug/kg	1.43	--	1
CI6-BZ#153	ND		ug/kg	1.43	--	1
CI9-BZ#206	ND		ug/kg	1.43	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	77		30-150
DBOB	80		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-10 D  
 Client ID: S-12O-C028-0.7-1.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 18:20  
 Analyst: RR  
 Percent Solids: 94%

Date Collected: 10/18/12 14:52  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	5820		ug/kg	1400	--	1000
CI3-BZ#18	13000		ug/kg	1400	--	1000
CI4-BZ#52	19800		ug/kg	1400	--	1000
CI4-BZ#66	5860		ug/kg	1400	--	1000
CI5-BZ#105	ND		ug/kg	1400	--	1000
CI7-BZ#187	ND		ug/kg	1400	--	1000
CI6-BZ#128	ND		ug/kg	1400	--	1000
CI7-BZ#180	ND		ug/kg	1400	--	1000
CI7-BZ#170	ND		ug/kg	1400	--	1000
CI8-BZ#195	ND		ug/kg	1400	--	1000
CI9-BZ#206	ND		ug/kg	1400	--	1000
CI10-BZ#209	ND		ug/kg	1400	--	1000

DBOB 109 30-150  
 BZ 198 96 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-10 D  
 Client ID: S-12O-C028-0.7-1.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 18:20  
 Analyst: RR  
 Percent Solids: 94%

Date Collected: 10/18/12 14:52  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	12100		ug/kg	1400	--	1000
CI4-BZ#44	6740		ug/kg	1400	--	1000
CI5-BZ#101	3260		ug/kg	1400	--	1000
CI5-BZ#118	1840		ug/kg	1400	--	1000
CI6-BZ#153	2420		ug/kg	1400	--	1000
CI6-BZ#138	ND		ug/kg	1400	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	109		30-150
BZ 198	96		30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-11 D  
 Client ID: S-12O-C028-1.2-1.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 01:37  
 Analyst: RR  
 Percent Solids: 80%

Date Collected: 10/18/12 14:52  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	87.2		ug/kg	33.0	--	20
CI3-BZ#18	162		ug/kg	33.0	--	20
CI4-BZ#52	245		ug/kg	33.0	--	20
CI4-BZ#66	78.6		ug/kg	33.0	--	20
CI5-BZ#118	ND		ug/kg	33.0	--	20
CI5-BZ#105	ND		ug/kg	33.0	--	20
CI7-BZ#187	ND		ug/kg	33.0	--	20
CI6-BZ#128	ND		ug/kg	33.0	--	20
CI7-BZ#180	ND		ug/kg	33.0	--	20
CI7-BZ#170	ND		ug/kg	33.0	--	20
CI8-BZ#195	ND		ug/kg	33.0	--	20
CI9-BZ#206	ND		ug/kg	33.0	--	20
CI10-BZ#209	ND		ug/kg	33.0	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	86		30-150
DBOB	89		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-11 D  
 Client ID: S-12O-C028-1.2-1.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 01:37  
 Analyst: RR  
 Percent Solids: 80%

Date Collected: 10/18/12 14:52  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	164		ug/kg	33.0	--	20
CI4-BZ#44	85.7		ug/kg	33.0	--	20
CI5-BZ#101	48.5		ug/kg	33.0	--	20
CI6-BZ#153	35.6		ug/kg	33.0	--	20
CI6-BZ#138	ND		ug/kg	33.0	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	86		30-150
DBOB	89		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-12 D  
 Client ID: S-12O-C029-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 21:15  
 Analyst: RR  
 Percent Solids: 95%

Date Collected: 10/18/12 13:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	2900		ug/kg	699	--	500
CI3-BZ#18	7900		ug/kg	699	--	500
CI4-BZ#52	9750		ug/kg	699	--	500
CI4-BZ#66	2010		ug/kg	699	--	500
CI5-BZ#105	ND		ug/kg	699	--	500
CI7-BZ#187	ND		ug/kg	699	--	500
CI6-BZ#128	ND		ug/kg	699	--	500
CI7-BZ#180	ND		ug/kg	699	--	500
CI7-BZ#170	ND		ug/kg	699	--	500
CI8-BZ#195	ND		ug/kg	699	--	500
CI9-BZ#206	ND		ug/kg	699	--	500
CI10-BZ#209	ND		ug/kg	699	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	116		30-150
BZ 198	121		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-12 D  
 Client ID: S-12O-C029-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 21:15  
 Analyst: RR  
 Percent Solids: 95%

Date Collected: 10/18/12 13:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	7390		ug/kg	699	--	500
CI4-BZ#44	2270		ug/kg	699	--	500
CI5-BZ#101	1690		ug/kg	699	--	500
CI5-BZ#118	1160		ug/kg	699	--	500
CI6-BZ#153	1500		ug/kg	699	--	500
CI6-BZ#138	ND		ug/kg	699	--	500
DBOB	116			30-150		
BZ 198	121			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-13 D  
 Client ID: S-12O-C030-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 16:53  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/18/12 15:10  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	14000		ug/kg	3460	--	1000
CI3-BZ#18	30100		ug/kg	3460	--	1000
CI4-BZ#52	46300		ug/kg	3460	--	1000
CI4-BZ#66	14700		ug/kg	3460	--	1000
CI5-BZ#118	5660		ug/kg	3460	--	1000
CI5-BZ#105	ND		ug/kg	3460	--	1000
CI6-BZ#128	ND		ug/kg	3460	--	1000
CI7-BZ#180	ND		ug/kg	3460	--	1000
CI7-BZ#170	ND		ug/kg	3460	--	1000
CI8-BZ#195	ND		ug/kg	3460	--	1000
CI9-BZ#206	ND		ug/kg	3460	--	1000
CI10-BZ#209	ND		ug/kg	3460	--	1000

DBOB 93 30-150  
 BZ 198 94 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-13 D  
 Client ID: S-12O-C030-0.0-0.5  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 16:53  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/18/12 15:10  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	34600		ug/kg	3460	--	1000
CI4-BZ#44	16800		ug/kg	3460	--	1000
CI5-BZ#101	10000		ug/kg	3460	--	1000
CI6-BZ#153	7000		ug/kg	3460	--	1000
CI6-BZ#138	3650		ug/kg	3460	--	1000
CI7-BZ#187	ND		ug/kg	3460	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	94		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-14 D  
 Client ID: S-12O-C030-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 02:50  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/18/12 15:10  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	842		ug/kg	141	--	100
CI3-BZ#18	1670		ug/kg	141	--	100
CI4-BZ#52	2410		ug/kg	141	--	100
CI4-BZ#66	847		ug/kg	141	--	100
CI5-BZ#118	334		ug/kg	141	--	100
CI5-BZ#105	ND		ug/kg	141	--	100
CI6-BZ#128	ND		ug/kg	141	--	100
CI7-BZ#170	ND		ug/kg	141	--	100
CI8-BZ#195	ND		ug/kg	141	--	100
CI9-BZ#206	ND		ug/kg	141	--	100
CI10-BZ#209	ND		ug/kg	141	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	101		30-150
BZ 198	99		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-14 D  
 Client ID: S-12O-C030-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 02:50  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/18/12 15:10  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	1900		ug/kg	141	--	100
CI4-BZ#44	970		ug/kg	141	--	100
CI5-BZ#101	582		ug/kg	141	--	100
CI6-BZ#153	391		ug/kg	141	--	100
CI6-BZ#138	206		ug/kg	141	--	100
CI7-BZ#187	ND		ug/kg	141	--	100
CI7-BZ#180	ND		ug/kg	141	--	100

DBOB	101	30-150
BZ 198	99	30-150



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-15 D  
 Client ID: S-12O-C031-0.7-1.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 13:14  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/18/12 15:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	21300		ug/kg	3400	--	1000
CI3-BZ#18	38800		ug/kg	3400	--	1000
CI4-BZ#52	61100		ug/kg	3400	--	1000
CI4-BZ#66	21200		ug/kg	3400	--	1000
CI5-BZ#105	ND		ug/kg	3400	--	1000
CI6-BZ#138	7970		ug/kg	3400	--	1000
CI7-BZ#187	ND		ug/kg	3400	--	1000
CI6-BZ#128	ND		ug/kg	3400	--	1000
CI7-BZ#180	ND		ug/kg	3400	--	1000
CI7-BZ#170	ND		ug/kg	3400	--	1000
CI8-BZ#195	ND		ug/kg	3400	--	1000
CI9-BZ#206	ND		ug/kg	3400	--	1000
CI10-BZ#209	ND		ug/kg	3400	--	1000
DBOB	104			30-150		
BZ 198	107			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-15 D  
 Client ID: S-12O-C031-0.7-1.2  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 13:14  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/18/12 15:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	47700		ug/kg	3400	--	1000
CI4-BZ#44	24800		ug/kg	3400	--	1000
CI5-BZ#101	13300		ug/kg	3400	--	1000
CI5-BZ#118	7160		ug/kg	3400	--	1000
CI6-BZ#153	9320		ug/kg	3400	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	107		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-16 D  
 Client ID: S-12O-C031-1.2-1.7  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 19:04  
 Analyst: RR  
 Percent Solids: 87%

Date Collected: 10/18/12 15:41  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	952		ug/kg	303	--	200
CI3-BZ#18	1540		ug/kg	303	--	200
CI4-BZ#52	2830		ug/kg	303	--	200
CI4-BZ#66	1010		ug/kg	303	--	200
CI5-BZ#105	ND		ug/kg	303	--	200
CI7-BZ#187	ND		ug/kg	303	--	200
CI6-BZ#128	ND		ug/kg	303	--	200
CI7-BZ#180	ND		ug/kg	303	--	200
CI7-BZ#170	ND		ug/kg	303	--	200
CI8-BZ#195	ND		ug/kg	303	--	200
CI9-BZ#206	ND		ug/kg	303	--	200
CI10-BZ#209	ND		ug/kg	303	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	78		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

**Lab ID:** L1219172-16 D  
**Client ID:** S-12O-C031-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/14/12 19:04  
**Analyst:** RR  
**Percent Solids:** 87%

**Date Collected:** 10/18/12 15:41  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 11/06/12 13:47  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	1930		ug/kg	303	--	200
CI4-BZ#44	1180		ug/kg	303	--	200
CI5-BZ#101	688		ug/kg	303	--	200
CI5-BZ#118	370		ug/kg	303	--	200
CI6-BZ#153	522		ug/kg	303	--	200
CI6-BZ#138	ND		ug/kg	303	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	78		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-17 D  
 Client ID: S-12O-C032-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 14:42  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/18/12 14:15  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	12800		ug/kg	1770	--	500
CI4-BZ#66	6320		ug/kg	1770	--	500
CI5-BZ#105	ND		ug/kg	1770	--	500
CI7-BZ#187	ND		ug/kg	1770	--	500
CI6-BZ#128	ND		ug/kg	1770	--	500
CI7-BZ#180	ND		ug/kg	1770	--	500
CI7-BZ#170	ND		ug/kg	1770	--	500
CI8-BZ#195	ND		ug/kg	1770	--	500
CI9-BZ#206	ND		ug/kg	1770	--	500
CI10-BZ#209	ND		ug/kg	1770	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	135		30-150
BZ 198	107		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-17 D  
 Client ID: S-12O-C032-0.6-1.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 14:42  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/18/12 14:15  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	6940		ug/kg	1770	--	500
CI3-BZ#28	14500		ug/kg	1770	--	500
CI4-BZ#52	20500		ug/kg	1770	--	500
CI4-BZ#44	8070		ug/kg	1770	--	500
CI5-BZ#101	3620		ug/kg	1770	--	500
CI5-BZ#118	ND		ug/kg	1770	--	500
CI6-BZ#153	2560		ug/kg	1770	--	500
CI6-BZ#138	ND		ug/kg	1770	--	500

DBOB	135	30-150
BZ 198	107	30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-18  
 Client ID: S-12O-C032-1.1-1.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 02:21  
 Analyst: RR  
 Percent Solids: 92%

Date Collected: 10/18/12 14:15  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	5.40		ug/kg	1.44	--	1
CI3-BZ#18	2.82		ug/kg	1.44	--	1
CI4-BZ#52	2.09		ug/kg	1.44	--	1
CI4-BZ#44	ND		ug/kg	1.44	--	1
CI4-BZ#66	ND		ug/kg	1.44	--	1
CI5-BZ#101	ND		ug/kg	1.44	--	1
CI5-BZ#118	ND		ug/kg	1.44	--	1
CI5-BZ#105	ND		ug/kg	1.44	--	1
CI6-BZ#138	ND		ug/kg	1.44	--	1
CI7-BZ#187	ND		ug/kg	1.44	--	1
CI6-BZ#128	ND		ug/kg	1.44	--	1
CI7-BZ#180	ND		ug/kg	1.44	--	1
CI7-BZ#170	ND		ug/kg	1.44	--	1
CI8-BZ#195	ND		ug/kg	1.44	--	1
CI10-BZ#209	ND		ug/kg	1.44	--	1

DBOB 95 30-150  
 BZ 198 94 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

**Lab ID:** L1219172-18  
**Client ID:** S-12O-C032-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 1,8082A  
**Analytical Date:** 11/15/12 02:21  
**Analyst:** RR  
**Percent Solids:** 92%

**Date Collected:** 10/18/12 14:15  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3570  
**Extraction Date:** 11/06/12 13:47  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	ND		ug/kg	1.44	--	1
CI6-BZ#153	ND		ug/kg	1.44	--	1
CI9-BZ#206	ND		ug/kg	1.44	--	1

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



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-19 D  
 Client ID: S-12O-C033-0.0-0.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 00:10  
 Analyst: RR  
 Percent Solids: 97%

Date Collected: 10/18/12 14:31  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	12200		ug/kg	2500	--	500
CI3-BZ#18	17800		ug/kg	2500	--	500
CI4-BZ#52	41000		ug/kg	2500	--	500
CI4-BZ#66	13600		ug/kg	2500	--	500
CI5-BZ#105	ND		ug/kg	2500	--	500
CI6-BZ#128	ND		ug/kg	2500	--	500
CI7-BZ#180	ND		ug/kg	2500	--	500
CI7-BZ#170	ND		ug/kg	2500	--	500
CI8-BZ#195	ND		ug/kg	2500	--	500
CI9-BZ#206	ND		ug/kg	2500	--	500
CI10-BZ#209	ND		ug/kg	2500	--	500
DBOB	127			30-150		
BZ 198	140			30-150		

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-19 D  
 Client ID: S-12O-C033-0.0-0.1  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 00:10  
 Analyst: RR  
 Percent Solids: 97%

Date Collected: 10/18/12 14:31  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	33300		ug/kg	2500	--	500
CI4-BZ#44	15600		ug/kg	2500	--	500
CI5-BZ#101	8700		ug/kg	2500	--	500
CI5-BZ#118	5320		ug/kg	2500	--	500
CI6-BZ#153	6020		ug/kg	2500	--	500
CI6-BZ#138	3150		ug/kg	2500	--	500
CI7-BZ#187	ND		ug/kg	2500	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	127		30-150
BZ 198	140		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-20 D  
 Client ID: S-12O-C033-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 03:05  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/18/12 14:31  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	10.8		ug/kg	2.83	--	2
CI3-BZ#18	23.0		ug/kg	2.83	--	2
CI4-BZ#52	32.5		ug/kg	2.83	--	2
CI4-BZ#66	11.3		ug/kg	2.83	--	2
CI5-BZ#105	ND		ug/kg	2.83	--	2
CI7-BZ#187	ND		ug/kg	2.83	--	2
CI6-BZ#128	ND		ug/kg	2.83	--	2
CI7-BZ#180	ND		ug/kg	2.83	--	2
CI7-BZ#170	ND		ug/kg	2.83	--	2
CI8-BZ#195	ND		ug/kg	2.83	--	2
CI9-BZ#206	ND		ug/kg	2.83	--	2
CI10-BZ#209	ND		ug/kg	2.83	--	2

DBOB 97 30-150  
 BZ 198 98 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-20 D  
 Client ID: S-12O-C033-0.1-0.6  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/15/12 03:05  
 Analyst: RR  
 Percent Solids: 93%

Date Collected: 10/18/12 14:31  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 13:47  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI3-BZ#28	25.0		ug/kg	2.83	--	2
CI4-BZ#44	11.9		ug/kg	2.83	--	2
CI5-BZ#101	6.77		ug/kg	2.83	--	2
CI5-BZ#118	4.32		ug/kg	2.83	--	2
CI6-BZ#153	4.92		ug/kg	2.83	--	2
CI6-BZ#138	ND		ug/kg	2.83	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	98		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-21 D  
 Client ID: S-12O-C033-0.0-0.2 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 16:09  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/18/12 14:39  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/07/12 08:39  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI2-BZ#8	13000		ug/kg	2860	--	2000
CI3-BZ#18	29300		ug/kg	2860	--	2000
CI4-BZ#52	42600		ug/kg	2860	--	2000
CI4-BZ#66	14000		ug/kg	2860	--	2000
CI5-BZ#118	5040		ug/kg	2860	--	2000
CI5-BZ#105	ND		ug/kg	2860	--	2000
CI6-BZ#128	ND		ug/kg	2860	--	2000
CI7-BZ#180	ND		ug/kg	2860	--	2000
CI7-BZ#170	ND		ug/kg	2860	--	2000
CI8-BZ#195	ND		ug/kg	2860	--	2000
CI9-BZ#206	ND		ug/kg	2860	--	2000
CI10-BZ#209	ND		ug/kg	2860	--	2000

DBOB 98 30-150  
 BZ 198 93 30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-21 D  
 Client ID: S-12O-C033-0.0-0.2 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 16:09  
 Analyst: RR  
 Percent Solids: 96%

Date Collected: 10/18/12 14:39  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/07/12 08:39  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#28	31600		ug/kg	2860	--	2000
CI4-BZ#44	16600		ug/kg	2860	--	2000
CI5-BZ#101	8820		ug/kg	2860	--	2000
CI6-BZ#153	6200		ug/kg	2860	--	2000
CI6-BZ#138	3100		ug/kg	2860	--	2000
CI7-BZ#187	ND		ug/kg	2860	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	98		30-150
BZ 198	93		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-22 D  
 Client ID: S-12O-C033-0.2-0.7 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 05:44  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/18/12 14:39  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/07/12 08:39  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Congeners (NOAA List) - Mansfield Lab</b>						
CI3-BZ#18	382		ug/kg	67.8	--	50
CI4-BZ#52	543		ug/kg	67.8	--	50
CI4-BZ#66	183		ug/kg	67.8	--	50
CI5-BZ#105	ND		ug/kg	67.8	--	50
CI7-BZ#187	ND		ug/kg	67.8	--	50
CI6-BZ#128	ND		ug/kg	67.8	--	50
CI7-BZ#180	ND		ug/kg	67.8	--	50
CI7-BZ#170	ND		ug/kg	67.8	--	50
CI8-BZ#195	ND		ug/kg	67.8	--	50
CI9-BZ#206	ND		ug/kg	67.8	--	50
CI10-BZ#209	ND		ug/kg	67.8	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	88		30-150

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219172**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219172-22 D  
 Client ID: S-12O-C033-0.2-0.7 REP  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 1,8082A  
 Analytical Date: 11/14/12 05:44  
 Analyst: RR  
 Percent Solids: 98%

Date Collected: 10/18/12 14:39  
 Date Received: 10/19/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3570  
 Extraction Date: 11/07/12 08:39  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
CI2-BZ#8	199		ug/kg	67.8	--	50
CI3-BZ#28	461		ug/kg	67.8	--	50
CI4-BZ#44	249		ug/kg	67.8	--	50
CI5-BZ#101	124		ug/kg	67.8	--	50
CI5-BZ#118	ND		ug/kg	67.8	--	50
CI6-BZ#153	79.2		ug/kg	67.8	--	50
CI6-BZ#138	ND		ug/kg	67.8	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	88		30-150



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
Analytical Date: 11/12/12 22:05  
Analyst: RR

Extraction Method: EPA 3570  
Extraction Date: 11/06/12 12:41  
Cleanup Method1: EPA 3630  
Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG572113-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 11/12/12 22:05  
 Analyst: RR

Extraction Method: EPA 3570  
 Extraction Date: 11/06/12 12:41  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG572113-1					
C16-BZ#153	ND		ug/kg	1.33	--

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082A  
Analytical Date: 11/12/12 19:54  
Analyst: RR

Extraction Method: EPA 3570  
Extraction Date: 11/07/12 08:39  
Cleanup Method1: EPA 3630  
Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 21-22 Batch: WG572313-1					
Cl2-BZ#8	ND		ug/kg	1.33	--
Cl3-BZ#18	ND		ug/kg	1.33	--
Cl3-BZ#28	ND		ug/kg	1.33	--
Cl4-BZ#52	ND		ug/kg	1.33	--
Cl4-BZ#44	ND		ug/kg	1.33	--
Cl4-BZ#66	ND		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl5-BZ#118	ND		ug/kg	1.33	--
Cl5-BZ#105	ND		ug/kg	1.33	--
Cl6-BZ#138	ND		ug/kg	1.33	--
Cl7-BZ#187	ND		ug/kg	1.33	--
Cl6-BZ#128	ND		ug/kg	1.33	--
Cl7-BZ#180	ND		ug/kg	1.33	--
Cl7-BZ#170	ND		ug/kg	1.33	--
Cl8-BZ#195	ND		ug/kg	1.33	--
Cl9-BZ#206	ND		ug/kg	1.33	--
Cl10-BZ#209	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
BZ 198	99		30-150
DBOB	114		30-150

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 11/12/12 19:54  
 Analyst: RR

Extraction Method: EPA 3570  
 Extraction Date: 11/07/12 08:39  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/09/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 21-22 Batch: WG572313-1					
C16-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
BZ 198	99		30-150
DBOB	114		30-150

## Matrix Spike Analysis

### Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG572113-4 WG572113-5 QC Sample: L1219172-01 Client ID: S-120-C022-0.0-0.5												
Cl2-BZ#8	464	1670	1740	76		2180	102		40-140	22		30
Cl3-BZ#18	911	1670	2250	80		2920	119		40-140	26		30
Cl4-BZ#52	1230	1670	2320	65		3100	111		40-140	29		30
Cl4-BZ#66	612	1670	2010	84		2740	126		40-140	31	Q	30
Cl6-BZ#128	ND	1670	1370	82		1990	118		40-140	37	Q	30
Cl7-BZ#180	ND	1670	1360	81		2010	119		40-140	39	Q	30
Cl7-BZ#170	ND	1670	1300	78		1950	116		40-140	40	Q	30
Cl8-BZ#195	ND	1670	1200	72		1870	111		40-140	44	Q	30
Cl9-BZ#206	ND	1670	1270	76		2030	121		40-140	46	Q	30
Cl10-BZ#209	ND	1670	1180	71		1780	106		40-140	41	Q	30
Cl3-BZ#28	1340	1670	2520	71		3320	118		40-140	27		30
Cl4-BZ#44	545	1670	1700	69		2310	105		40-140	30		30
Cl5-BZ#101	425	1670	1580	69		2190	105		40-140	32	Q	30
Cl5-BZ#118	332	1670	1550	73		2330	119		40-140	40	Q	30
Cl6-BZ#153	248	1670	1290	62		1800	92		40-140	33	Q	30
Cl5-BZ#105	ND	1670	1320	79		2020	120		40-140	42	Q	30
Cl6-BZ#138	122	1670	1430	78		2070	116		40-140	37	Q	30
Cl7-BZ#187	ND	1670	1080	65		1990	118		40-140	59	Q	30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20    QC Batch ID: WG572113-4    WG572113-5    QC Sample: L1219172-01    Client ID: S-12O-C022-0.0-0.5

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	80		114		30-150
DBOB	85		114		30-150

## Matrix Spike Analysis

### Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG572113-6 WG572113-7 QC Sample: L1219172-02 Client ID: S-120-C023-0.0-0.5												
Cl3-BZ#18	388	1710	1470	63		2290	110		40-140	44	Q	30
Cl7-BZ#187	ND	1710	1240	73		2030	117		40-140	48	Q	30
Cl6-BZ#128	ND	1710	1350	79		2200	127		40-140	48	Q	30
Cl7-BZ#180	ND	1710	1350	79		2240	130		40-140	50	Q	30
Cl7-BZ#170	ND	1710	1290	76		2200	127		40-140	52	Q	30
Cl8-BZ#195	ND	1710	1270	74		2100	121		40-140	49	Q	30
Cl9-BZ#206	ND	1710	1400	82		2320	134		40-140	49	Q	30
Cl10-BZ#209	ND	1710	1240	73		2030	117		40-140	48	Q	30
Cl2-BZ#8	180	1710	1220	61		1900	99		40-140	44	Q	30
Cl3-BZ#28	790	1710	1840	62		2760	114		40-140	40	Q	30
Cl4-BZ#52	899	1710	1730	49		2650	101		40-140	42	Q	30
Cl4-BZ#44	378	1710	1430	62		2260	109		40-140	45	Q	30
Cl4-BZ#66	326	1710	1480	68		2370	118		40-140	46	Q	30
Cl5-BZ#101	271	1710	1370	64		2180	110		40-140	46	Q	30
Cl5-BZ#118	203	1710	1460	74		2360	125		40-140	47	Q	30
Cl6-BZ#153	208	1710	1230	60		1950	101		40-140	45	Q	30
Cl5-BZ#105	ND	1710	1400	82		2280	132		40-140	48	Q	30
Cl6-BZ#138	ND	1710	1420	83		2290	132		40-140	47	Q	30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG572113-6 WG572113-7 QC Sample: L1219172-02 Client ID: S-12O-C023-0.0-0.5

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
BZ 198	60		99		30-150
DBOB	60		94		30-150



## Matrix Spike Analysis

### Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG572113-8 WG572113-9 QC Sample: L1219172-14 Client ID: S-12O-C030-0.5-1.0												
Cl2-BZ#8	842	1780	3130	129		2840	115		40-140	10		30
Cl3-BZ#18	1670	1780	4700	171	Q	3540	107		40-140	28		30
Cl4-BZ#52	2410	1780	5410	169	Q	4760	135		40-140	13		30
Cl4-BZ#66	847	1780	3460	147	Q	2950	121		40-140	16		30
Cl5-BZ#118	334	1780	2890	144	Q	2290	112		40-140	23		30
Cl5-BZ#105	ND	1780	2480	140		1950	112		40-140	24		30
Cl6-BZ#138	ND	1780	2740	135		2180	105		40-140	23		30
Cl6-BZ#128	ND	1780	2370	134		1870	107		40-140	24		30
Cl7-BZ#170	ND	1780	2270	128		1800	103		40-140	23		30
Cl8-BZ#195	ND	1780	2210	124		1700	98		40-140	26		30
Cl9-BZ#206	ND	1780	2390	135		1840	106		40-140	26		30
Cl10-BZ#209	ND	1780	2100	118		1630	94		40-140	25		30
Cl3-BZ#28	1900	1780	4930	171	Q	4680	159	Q	40-140	5		30
Cl4-BZ#44	970	1780	3190	125		2860	108		40-140	11		30
Cl5-BZ#101	582	1780	2720	120		2310	99		40-140	16		30
Cl6-BZ#153	391	1780	2290	107		1880	85		40-140	20		30
Cl7-BZ#187	ND	1780	2120	119		1630	94		40-140	26		30
Cl7-BZ#180	ND	1780	2240	126		1800	103		40-140	22		30

### Matrix Spike Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20    QC Batch ID: WG572113-8    WG572113-9    QC Sample: L1219172-14    Client ID: S-12O-C030-0.5-1.0

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	126		101		30-150
DBOB	126		109		30-150

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Lab Number: L1219172

Project Number: TO-0010-07

Report Date: 11/19/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG572113-2 WG572113-3								
CI2-BZ#8	93		105		40-140	12		30
CI3-BZ#18	99		112		40-140	12		30
CI3-BZ#28	97		107		40-140	10		30
CI4-BZ#52	95		104		40-140	9		30
CI4-BZ#44	97		103		40-140	6		30
CI4-BZ#66	97		104		40-140	7		30
CI5-BZ#101	95		100		40-140	5		30
CI5-BZ#118	102		105		40-140	3		30
CI5-BZ#105	98		102		40-140	4		30
CI6-BZ#138	100		104		40-140	4		30
CI7-BZ#187	93		96		40-140	3		30
CI6-BZ#128	98		102		40-140	4		30
CI7-BZ#180	98		102		40-140	4		30
CI7-BZ#170	96		100		40-140	4		30
CI8-BZ#195	94		97		40-140	3		30
CI9-BZ#206	107		107		40-140	0		30
CI10-BZ#209	95		96		40-140	1		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG572113-2 WG572113-3								

DBOB	95		106		30-150			
BZ 198	95		98		30-150			

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-20 Batch: WG572113-2 WG572113-3								
Cl6-BZ#153	88		92		40-140	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	95		106		30-150
BZ 198	95		98		30-150

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Lab Number: L1219172

Project Number: TO-0010-07

Report Date: 11/19/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 21-22 Batch: WG572313-2 WG572313-3								
CI2-BZ#8	97		108		40-140	11		30
CI3-BZ#18	105		115		40-140	9		30
CI3-BZ#28	99		111		40-140	11		30
CI4-BZ#52	104		107		40-140	3		30
CI4-BZ#44	96		107		40-140	11		30
CI4-BZ#66	98		105		40-140	7		30
CI5-BZ#101	94		102		40-140	8		30
CI5-BZ#118	100		104		40-140	4		30
CI5-BZ#105	99		100		40-140	1		30
CI6-BZ#138	100		103		40-140	3		30
CI7-BZ#187	92		94		40-140	2		30
CI6-BZ#128	97		99		40-140	2		30
CI7-BZ#180	97		98		40-140	1		30
CI7-BZ#170	95		98		40-140	3		30
CI8-BZ#195	95		95		40-140	0		30
CI9-BZ#206	107		107		40-140	0		30
CI10-BZ#209	97		96		40-140	1		30

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 21-22 Batch: WG572313-2 WG572313-3								

DBOB	97	109	30-150
BZ 198	95	94	30-150

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 21-22 Batch: WG572313-2 WG572313-3								
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Cl6-BZ#153	85	94	40-140	7	30
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Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	97	109	30-150		
BZ 198	95	94	30-150		

# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-01  
**Client ID:** S-12O-C022-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 16:03  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.5		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	45.2		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB





**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-02  
**Client ID:** S-12O-C023-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 16:12  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.6		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	50.1		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-03  
**Client ID:** S-12O-C024-0.0-0.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 16:28  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.3		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	31.7		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-04  
**Client ID:** S-12O-C024-0.2-0.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 16:28  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.3		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	43.9		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-05  
**Client ID:** S-12O-C025-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/17/12 16:43  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	96.2		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	40.4		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-06  
**Client ID:** S-12O-C026-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 15:48  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.3		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	32.6		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-07  
**Client ID:** S-12O-C026-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 15:48  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	89.1		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	40.0		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-08  
**Client ID:** S-12O-C027-0.0-0.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 13:51  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.0		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	37.2		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-09  
**Client ID:** S-12O-C027-0.2-0.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 13:51  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	91.2		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	48.2		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB





**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-10  
**Client ID:** S-12O-C028-0.7-1.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 14:52  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.9		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	36.0		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-11  
**Client ID:** S-12O-C028-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 14:52  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	79.6		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	39.7		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-12  
**Client ID:** S-12O-C029-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 13:41  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	94.6		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	42.6		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-13  
**Client ID:** S-12O-C030-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 15:10  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.8		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB
Solids, Total (Pre-Dried)	33.4		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-14  
**Client ID:** S-12O-C030-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 15:10  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.2		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	42.5		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-15  
**Client ID:** S-12O-C031-0.7-1.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 15:41  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.8		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	34.6		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-16  
**Client ID:** S-12O-C031-1.2-1.7  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 15:41  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	87.0		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	44.7		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-17  
**Client ID:** S-12O-C032-0.6-1.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 14:15  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	93.2		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	43.6		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB





**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-18  
**Client ID:** S-12O-C032-1.1-1.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 14:15  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	92.3		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	39.8		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-19  
**Client ID:** S-12O-C033-0.0-0.1  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 14:31  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	97.0		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	29.4		%	0.100	NA	1	-	10/24/12 15:10	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-20  
**Client ID:** S-12O-C033-0.1-0.6  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 14:31  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	92.6		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	48.1		%	0.100	NA	1	-	10/24/12 17:40	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-21  
**Client ID:** S-12O-C033-0.0-0.2 REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 14:39  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	95.8		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	32.0		%	0.100	NA	1	-	10/24/12 17:40	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219172-22  
**Client ID:** S-12O-C033-0.2-0.7 REP  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 14:39  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.0		%	0.100	--	1	-	11/06/12 11:20	30,2540G	KB
Solids, Total (Pre-Dried)	49.2		%	0.100	NA	1	-	10/24/12 17:40	30,2540G	KB



## Lab Duplicate Analysis

Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Project Number: TO-0010-07

Lab Number: L1219172

Report Date: 11/19/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-13 QC Batch ID: WG572082-1 QC Sample: L1219172-02 Client ID: S-12O-C023-0.0-0.5						
Solids, Total	94.6	94.6	%	0		10
General Chemistry - Mansfield Lab Associated sample(s): 14-22 QC Batch ID: WG572091-1 QC Sample: L1219172-14 Client ID: S-12O-C030-0.5-1.0						
Solids, Total	93.2	93.2	%	0		10

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

### 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
D	Absent
C	Absent
E	Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1219172-01A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-01B	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-02A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-02B	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-03A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-04A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-05A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-06A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-07A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-08A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-09A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-10A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-11A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-12A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-13A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-14A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-MS/MSD(),A2-TS-PREDRIED(7)

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1219172-14B	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-MS/MSD(),A2-TS-PREDRIED(7)
L1219172-15A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-16A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-17A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-18A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-19A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-20A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-21A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-22A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1219172-23A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	HOLD()
L1219172-24A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	HOLD()
L1219172-25A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	HOLD()
L1219172-26A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	HOLD()
L1219172-27A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	HOLD()
L1219172-28A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	HOLD()
L1219172-29A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	HOLD()
L1219172-30A	Amber 250ml unpreserved	A	N/A	3.7	Y	Absent	HOLD()
L1219172-31A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	HOLD()
L1219172-32A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	HOLD()
L1219172-33A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	HOLD()
L1219172-34A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	HOLD()
L1219172-35A	Amber 250ml unpreserved	E	N/A	4.8	Y	Absent	HOLD()
L1219172-36A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	HOLD()



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

## 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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: Data Usability Report



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

**Data Qualifiers**

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.
- 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:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219172  
**Report Date:** 11/19/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

## 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.



## Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### **Connecticut Department of Public Health** Certificate/Lab ID: PH-0141.

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### **Florida Department of Health** Certificate/Lab ID: E87814. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### **Louisiana Department of Environmental Quality** Certificate/Lab ID: 03090. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### **New Hampshire Department of Environmental Services** Certificate/Lab ID: 2206. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

### **New Jersey Department of Environmental Protection** Certificate/Lab ID: MA015. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Atmospheric Organic Parameters* (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

*Biological Tissue* (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

*Air & Emissions* (EPA TO-15, TO-10A.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Non-Potable Water* (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D .)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID:460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.

*Air & Emissions* (EPA TO-15.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.



# MANSFIELD CHAIN OF CUSTODY

PAGE 7 OF 10

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

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

### Project Information

Project Name: New Bedford Post-Dredge  
Project Location: New Bedford, MA  
Project #: TO-0010-07  
Project Manager: Dave Walsh  
ALPHA Quote #:

### Date Rec'd in Lab:

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEX  Add'l Deliverables

ALPHA Job #: L1219172

### Billing Information

Same as Client info PO #:

### Client Information

Client: Woods Hole Group  
Address: 81 Technology Park Dr, East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

### Turn-Around Time

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

### Regulatory Requirements/Report Limits

State/Fed Program: MA Criteria: \_\_\_\_\_

### Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before analysis  
**PLEASE NOTE** Project-specific EDD  
MS/MSD (at unit cost) will be omitted unless you check here:

ANALYSIS

PCB Congeners 5082

Percent 5145

**SAMPLE HANDLING**

Filtration \_\_\_\_\_

Done

Not needed

Lab to do Preservation

Lab to do

(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES				
		Date	Time																		
-23	S-120-C021-1.5-2.0	10/17/12	15:51	SE	DS	X	X													PL02 Archive	1
-1	S-120-C022-0.0-0.5		16:03			X	X													LQ19	1
-24	S-120-C022-0.5-1.0		L			X	X													L Archive	1
-2	S-120-C023-0.0-0.5		16:12			X	X													LQ15	1
↓	S-120-C023-0.0-0.5 MSMSD		L			X	X													L MSMSD	1
-25	S-120-C023-0.5-1.0		L			X	X													L Archive	1
-3	S-120-C024-0.0-0.2		16:28			X	X													LM09	1
-4	S-120-C024-0.2-0.7		L			X	X													L	1
-26	S-120-C024-0.7-1.2		L			X	X													L Archive	1
-5	S-120-C025-0.0-0.5		16:43			X	X													LP09	1

Container Type: A  
Preservative: A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
Delivery Order 0010-07  
May 2013

Relinquished By: <u>Dach [Signature]</u> <u>T. Hurdell</u>	Date/Time: <u>10/19/12 1605</u> <u>10/19/12 1705</u>	Received By: <u>[Signature]</u> <u>[Signature]</u>	Date/Time: <u>10/19/12 1605</u> <u>10/19/12 17105</u>
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# MANSFIELD CHAIN OF CUSTODY

PAGE 8 OF 10

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

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

### Client Information

Client: Woods Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

### Project Information

Project Name: New Bedford Post-Dredge  
Project Location: New Bedford, MA  
Project #: TO-0010-07  
Project Manager: Dave Walsh  
ALPHA Quote #:

### Turn-Around Time

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

Date Rec'd in Lab: \_\_\_\_\_

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

ALPHA Job #: L1219172

### Billing Information

Same as Client info PO #: \_\_\_\_\_

### Regulatory Requirements/Report Limits

State/Fed Program \_\_\_\_\_ Criteria \_\_\_\_\_

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before analysis

### PLEASE NOTE

Project-specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

ANALYSIS	PCB Congeners 8062	Percent Solids	PCB Homologs	SAMPLE HANDLING				TOTAL # BOTTLES
				Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation _____ <input type="checkbox"/> Lab to do (Please specify below)				
				Sample Specific Comments				

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS				SAMPLE HANDLING	TOTAL # BOTTLES		
		Date	Time			PCB Congeners 8062	Percent Solids	PCB Homologs	Filtration				
-27	S-120-C025-0.5-1.0	10/17/12	16:43	SE	DS	X	X					LP09 Archive	1
-6	S-120-C026-0.0-0.5	10/18/12	15:48			X	X	X				LI02 <sup>Sample DS</sup> + DS	1
-7	S-120-C026-0.5-1.0					X	X						1
-28	S-120-C026-1.0-1.5					X	X					Archive	1
-8	S-120-C027-0.0-0.2		13:51			X	X					LN02	1
-9	S-120-C027-0.2-0.7					X	X						1
-29	S-120-C027-0.7-1.2					X	X					Archive	1
-10	S-120-C028-0.7-1.2		14:52			X	X					LH08	1
-11	S-120-C028-1.2-1.7					X	X						1
-30	S-120-C028-1.7-2.2					X	X					Archive	1

Container Type A  
Preservative A

Please print clearly and legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side. Delivery Order 0010-07 May 2013

Relinquished By: <u>Dave Walsh</u> <u>T. Hurdle</u>	Date/Time <u>10/19/12 1605</u> <u>10/19/12 1705</u>	Received By: <u>T. Hurdle</u> <u>[Signature]</u>	Date/Time <u>10/19/12 1605</u> <u>10/19/12 1705</u>
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# MANSFIELD CHAIN OF CUSTODY

PAGE 10 OF 10

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

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

### Client Information

Client: WOODS Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before analysis

**PLEASE NOTE**

Project-specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

### Project Information

Project Name: New Bedford Post-Dredge  
Project Location: New Bedford, MA  
Project #: TU-0010-07  
Project Manager: Dave Walsh  
ALPHA Quote #:

### Turn-Around Time

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

Date Rec'd in Lab: \_\_\_\_\_

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

ALPHA Job #: \_\_\_\_\_

### Billing Information

Same as Client info PO #: \_\_\_\_\_

### Regulatory Requirements/Report Limits

State/Fed Program \_\_\_\_\_ Criteria \_\_\_\_\_

ANALYSIS	PCB Congeners 8082	Percent Solids											TOTAL # BOTTLES
												SAMPLE HANDLING	
												Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed Preservation <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do (Please specify below)	
												Sample Specific Comments	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials											Sample Specific Comments	TOTAL # BOTTLES					
		Date	Time																			
- 18	S-120-C032-1.1-1.6	10/18/12	14:15	SE	DS	X	X														LG 04	1
- 34	S-120-C032-1.6-2.1					X	X														↓ Archive	1
- 19	S-120-C033-0.0-0.1		14:31			X	X														LK 06	1
- 20	S-120-C033-0.1-0.6		14:31			X	X														↓ Archive	1
35	S-120-C033-0.6-1.1		14:31			X	X														↓ Archive	1
- 21	S-120-C033-0.0-0.2 REP		14:39			X	X														LK 06-REP	1
- 22	S-120-C033-0.2-0.7 REP					X	X														↓ Archive	1
- 36	S-120-C033-0.7-1.2 REP					X	X														↓ Archive	1

Container Type	A
Preservative	A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
Delivery Order 0010-07  
May 2013

Relinquished By:	Date/Time	Received By:	Date/Time
<u>Dave Walsh</u>	10/19/12 1605	<u>T. Hurdle</u>	10/19/12 1605
<u>T. Hurdle</u>	10/19/12 1705	<u>[Signature]</u>	10/19/12 1715



## ANALYTICAL REPORT

Lab Number:	L1219173
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dack Stuart
Phone:	(508) 540-8080
Project Name:	NEW BEDFORD POST DREDGE
Project Number:	TO-0010-07
Report Date:	11/19/12

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Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1219173-01	S-12O-C003-0.5-1.0	NEW BEDFORD, MA	10/15/12 11:30
L1219173-02	S-12O-C005-0.0-0.4	NEW BEDFORD, MA	10/15/12 09:23
L1219173-03	S-12O-C008-0.7-1.2	NEW BEDFORD, MA	10/16/12 09:30
L1219173-04	S-12O-C026-0.0-0.5	NEW BEDFORD, MA	10/18/12 15:48

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

### 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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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 free of charge for 30 days from the date the project is completed. After 30 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.

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

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

### Case Narrative (continued)

#### Sample Receipt

Refer to the associated PCB Congener data for sample receipt and storage information.

#### PCB Homologs

L1219173-01 through 04 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG572588-1 Method Blank, associated with L1219173-01 through -04, has concentrations above the reporting limits for Heptachlorobiphenyls, Octachlorobiphenyls, and Nonachlorobiphenyls. Since the associated sample concentrations are greater than 5x the blank concentration for this analyte, no qualification of the results was performed.

The surrogate recoveries for WG572588-1 were outside the acceptance criteria for CL3-BZ#19-C13 (49%) and CL8-BZ#202-C13(47%); however, re-extraction could not be performed due to lack of additional sample. It is suspected that this method blank was spiked with half of the required surrogate volume, but this could not be confirmed. Note that the associated LCS/LCSD and all samples have surrogate recoveries within the acceptance limits.

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: 11/19/12

# ORGANICS

# SEMIVOLATILES



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219173**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

Lab ID: L1219173-01 D  
 Client ID: S-12O-C003-0.5-1.0  
 Sample Location: NEW BEDFORD, MA  
 Matrix: Sediment  
 Analytical Method: 105,8270D-SIM/NOAA-M  
 Analytical Date: 11/16/12 09:31  
 Analyst: JD  
 Percent Solids: 99%

Date Collected: 10/15/12 11:30  
 Date Received: 10/15/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3540C  
 Extraction Date: 11/08/12 15:38  
 Cleanup Method1: EPA 3630  
 Cleanup Date1: 11/11/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Homologs by GC/MS-SIM - Mansfield Lab</b>						
Monochlorobiphenyls	18.0		ug/kg	16.5	--	50
Dichlorobiphenyls	1530		ug/kg	16.5	--	50
Trichlorobiphenyls	8630		ug/kg	16.5	--	50
Tetrachlorobiphenyls	11400		ug/kg	16.5	--	50
Pentachlorobiphenyls	9550		ug/kg	16.5	--	50
Hexachlorobiphenyls	3340		ug/kg	16.5	--	50
Heptachlorobiphenyls	466		ug/kg	16.5	--	50
Octachlorobiphenyls	105		ug/kg	16.5	--	50
Nonachlorobiphenyls	67.9		ug/kg	16.5	--	50
Decachlorobiphenyl	ND		ug/kg	16.5	--	50
Total Homologs	35100		ug/kg	16.5	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
C13-BZ#19-C13	86		50-125
C18-BZ#202-C13	86		50-125

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219173**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

**Lab ID:** L1219173-02 D  
**Client ID:** S-12O-C005-0.0-0.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 105,8270D-SIM/NOAA-M  
**Analytical Date:** 11/16/12 10:27  
**Analyst:** JD  
**Percent Solids:** 99%

**Date Collected:** 10/15/12 09:23  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 11/08/12 15:38  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/11/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Homologs by GC/MS-SIM - Mansfield Lab</b>						
Monochlorobiphenyls	90.4		ug/kg	16.4	--	50
Dichlorobiphenyls	2740		ug/kg	16.4	--	50
Trichlorobiphenyls	11700		ug/kg	16.4	--	50
Tetrachlorobiphenyls	15000		ug/kg	16.4	--	50
Pentachlorobiphenyls	8880		ug/kg	16.4	--	50
Hexachlorobiphenyls	5320		ug/kg	16.4	--	50
Heptachlorobiphenyls	2010		ug/kg	16.4	--	50
Octachlorobiphenyls	579		ug/kg	16.4	--	50
Nonachlorobiphenyls	118		ug/kg	16.4	--	50
Decachlorobiphenyl	ND		ug/kg	16.4	--	50
Total Homologs	46400		ug/kg	16.4	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
C13-BZ#19-C13	108		50-125
C18-BZ#202-C13	111		50-125

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219173**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

**Lab ID:** L1219173-03 D  
**Client ID:** S-12O-C008-0.7-1.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 105,8270D-SIM/NOAA-M  
**Analytical Date:** 11/16/12 11:23  
**Analyst:** JD  
**Percent Solids:** 99%

**Date Collected:** 10/16/12 09:30  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 11/08/12 15:38  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/11/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Homologs by GC/MS-SIM - Mansfield Lab</b>						
Monochlorobiphenyls	64.8		ug/kg	16.5	--	50
Dichlorobiphenyls	4040		ug/kg	16.5	--	50
Trichlorobiphenyls	17300		ug/kg	16.5	--	50
Tetrachlorobiphenyls	19000		ug/kg	16.5	--	50
Pentachlorobiphenyls	11700		ug/kg	16.5	--	50
Hexachlorobiphenyls	4230		ug/kg	16.5	--	50
Heptachlorobiphenyls	913		ug/kg	16.5	--	50
Octachlorobiphenyls	223		ug/kg	16.5	--	50
Nonachlorobiphenyls	172		ug/kg	16.5	--	50
Decachlorobiphenyl	ND		ug/kg	16.5	--	50
Total Homologs	57600		ug/kg	16.5	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
C13-BZ#19-C13	87		50-125
C18-BZ#202-C13	100		50-125

**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219173**Project Number:** TO-0010-07**Report Date:** 11/19/12**SAMPLE RESULTS**

**Lab ID:** L1219173-04 D  
**Client ID:** S-12O-C026-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment  
**Analytical Method:** 105,8270D-SIM/NOAA-M  
**Analytical Date:** 11/16/12 12:19  
**Analyst:** JD  
**Percent Solids:** 93%

**Date Collected:** 10/18/12 15:48  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3540C  
**Extraction Date:** 11/08/12 15:38  
**Cleanup Method1:** EPA 3630  
**Cleanup Date1:** 11/11/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PCB Homologs by GC/MS-SIM - Mansfield Lab</b>						
Monochlorobiphenyls	232		ug/kg	94.3	--	200
Dichlorobiphenyls	18600		ug/kg	94.3	--	200
Trichlorobiphenyls	72300		ug/kg	94.3	--	200
Tetrachlorobiphenyls	86500		ug/kg	94.3	--	200
Pentachlorobiphenyls	48800		ug/kg	94.3	--	200
Hexachlorobiphenyls	17800		ug/kg	94.3	--	200
Heptachlorobiphenyls	3410		ug/kg	94.3	--	200
Octachlorobiphenyls	1160		ug/kg	94.3	--	200
Nonachlorobiphenyls	532		ug/kg	94.3	--	200
Decachlorobiphenyl	ND		ug/kg	94.3	--	200
Total Homologs	249000		ug/kg	94.3	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	76		50-125
Cl8-BZ#202-C13	102		50-125

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 105,8270D-SIM/NOAA-M  
Analytical Date: 11/14/12 12:44  
Analyst: JD

Extraction Method: EPA 3540C  
Extraction Date: 11/08/12 15:38  
Cleanup Method1: EPA 3630  
Cleanup Date1: 11/11/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB Homologs by GC/MS-SIM - Mansfield Lab for sample(s): 01-04 Batch: WG572588-1					
Monochlorobiphenyls	ND		ug/kg	0.333	--
Dichlorobiphenyls	ND		ug/kg	0.333	--
Trichlorobiphenyls	ND		ug/kg	0.333	--
Tetrachlorobiphenyls	ND		ug/kg	0.333	--
Pentachlorobiphenyls	ND		ug/kg	0.333	--
Hexachlorobiphenyls	ND		ug/kg	0.333	--
Heptachlorobiphenyls	0.868		ug/kg	0.333	--
Octachlorobiphenyls	1.02		ug/kg	0.333	--
Nonachlorobiphenyls	0.566		ug/kg	0.333	--
Decachlorobiphenyl	ND		ug/kg	0.333	--
Total Homologs	2.45		ug/kg	0.333	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	49	Q	50-125
Cl8-BZ#202-C13	47	Q	50-125

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG572588-2 WG572588-3								
Cl1-BZ#1	86		88		40-140	2		30
CL1-BZ#3	86		88		40-140	2		30
Cl2-BZ#4/#10	112		114		40-140	2		30
Cl2-BZ#8	88		91		40-140	3		30
Cl3-BZ#19	92		94		40-140	2		30
Cl3-BZ#18	87		90		40-140	3		30
Cl2-BZ#15	89		91		40-140	2		30
Cl4-BZ#54	97		99		40-140	2		30
Cl3-BZ#29	89		93		40-140	4		30
Cl4-BZ#50	88		92		40-140	4		30
Cl3-BZ#-31	86		91		40-140	6		30
Cl3-BZ#28	88		92		40-140	4		30
Cl4-BZ#45	88		93		40-140	6		30
Cl4-BZ#52	84		88		40-140	5		30
Cl4-BZ#49	79		83		40-140	5		30
Cl5-BZ#104	86		89		40-140	3		30
Cl4-BZ#47	83		87		40-140	5		30
Cl4-BZ#44	86		91		40-140	6		30
Cl3-BZ#37	58		60		40-140	3		30
Cl5-BZ#121/#95/#88	70		76		40-140	8		30
Cl4-BZ#74	82		87		40-140	6		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Lab Number: L1219173

Project Number: TO-0010-07

Report Date: 11/19/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Homologs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG572588-2 WG572588-3								
Cl6-BZ#155	88		91		40-140	3		30
Cl4-BZ#70	85		89		40-140	5		30
Cl4-BZ#66	86		92		40-140	7		30
Cl5-BZ#101/#90	91		93		40-140	2		30
Cl4-BZ#56	85		89		40-140	5		30
Cl5-BZ#99	84		88		40-140	5		30
Cl6-BZ#154	85		88		40-140	3		30
Cl5-BZ#87/#111	71		72		40-140	1		30
Cl5-BZ#110	81		88		40-140	8		30
Cl4-BZ#81	84		89		40-140	6		30
Cl6-BZ#151	86		92		40-140	7		30
Cl6-BZ#147/#149	82		88		40-140	7		30
Cl4-BZ#77	79		85		40-140	7		30
Cl5-BZ#107/#123	82		89		40-140	8		30
Cl7-BZ#188	80		85		40-140	6		30
Cl5-BZ#118	71		77		40-140	8		30
Cl6-BZ#146	75		81		40-140	8		30
Cl5-BZ#114	70		76		40-140	8		30
Cl6-BZ#153	91		98		40-140	7		30
Cl5-BZ#105	58		60		40-140	3		30
Cl6-BZ#138	73		77		40-140	5		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: NEW BEDFORD POST DREDGE

Lab Number: L1219173

Project Number: TO-0010-07

Report Date: 11/19/12

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
PCB Homologs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG572588-2 WG572588-3								
Cl6-BZ#129/#158	91		94		40-140	3		30
Cl7-BZ#187	80		84		40-140	5		30
Cl7-BZ#183	73		78		40-140	7		30
Cl5-BZ#126	52		55		40-140	6		30
Cl7-BZ#174	83		87		40-140	5		30
Cl6-BZ#128	86		90		40-140	5		30
Cl8-BZ#202	104		109		40-140	5		30
Cl6-BZ#167	98		106		40-140	8		30
Cl7-BZ#177	87		94		40-140	8		30
Cl8-BZ#204/#200-CAL	89		95		40-140	7		30
Cl6-BZ#156	71		74		40-140	4		30
Cl6-BZ#157	88		92		40-140	4		30
Cl7-BZ#180	83		87		40-140	5		30
Cl8-BZ#201	86		88		40-140	2		30
Cl7-BZ#170	80		83		40-140	4		30
Cl6-BZ#169	78		80		40-140	3		30
Cl9-BZ#208	84		86		40-140	2		30
Cl7-BZ#189	77		80		40-140	4		30
Cl8-BZ#195	85		90		40-140	6		30
Cl8-BZ#194	75		76		40-140	1		30
Cl8-BZ#205	75		78		40-140	4		30



### Lab Control Sample Analysis Batch Quality Control

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG572588-2 WG572588-3								
CI9-BZ#206	69		71		40-140	3		30
CI10-BZ#209	71		74		40-140	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
CI3-BZ#19-C13	94		96		50-125
CI8-BZ#202-C13	94		99		50-125

# INORGANICS & MISCELLANEOUS

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219173-01  
**Client ID:** S-12O-C003-0.5-1.0  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 11:30  
**Date Received:** 10/15/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.9		%	0.100	--	1	-	10/29/12 09:37	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219173-02  
**Client ID:** S-12O-C005-0.0-0.4  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/15/12 09:23  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Mansfield Lab</b>										
Solids, Total	98.9		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219173-03  
**Client ID:** S-12O-C008-0.7-1.2  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/16/12 09:30  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	99.2		%	0.100	--	1	-	10/29/12 09:37	30,2540G	NR



**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

**SAMPLE RESULTS**

**Lab ID:** L1219173-04  
**Client ID:** S-12O-C026-0.0-0.5  
**Sample Location:** NEW BEDFORD, MA  
**Matrix:** Sediment

**Date Collected:** 10/18/12 15:48  
**Date Received:** 10/19/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	93.3		%	0.100	--	1	-	11/06/12 10:50	30,2540G	KB



**Project Name:** NEW BEDFORD POST DREDGE**Lab Number:** L1219173**Project Number:** TO-0010-07**Report Date:** 11/19/12**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
D	Absent
B	Absent
C	Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1219173-01A	Amber 250ml unpreserved	A	N/A	3.8	Y	Absent	A2-TS(7),A2-PCBHOMS-SOX(14)
L1219173-02A	Amber 250ml unpreserved	D	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBHOMS-SOX(14)
L1219173-03A	Amber 250ml unpreserved	B	N/A	4.8	Y	Absent	A2-TS(7),A2-PCBHOMS-SOX(14)
L1219173-04A	Amber 250ml unpreserved	C	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBHOMS-SOX(14)

**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

## 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

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 five times (5x) 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.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: Data Usability Report





**Project Name:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

**Data Qualifiers**

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.
- 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:** NEW BEDFORD POST DREDGE  
**Project Number:** TO-0010-07

**Lab Number:** L1219173  
**Report Date:** 11/19/12

## REFERENCES

- 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.



## Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

*Wastewater/Non-Potable Water* (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

*Solid Waste/Soil* (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### Florida Department of Health Certificate/Lab ID: E87814. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

*Solid & Chemical Materials* (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

*Air & Emissions* (EPA TO-15.)

### Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

*Biological Tissue* (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

*Air & Emissions* (EPA TO-15.)

### New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

### New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

*Atmospheric Organic Parameters* (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

*Biological Tissue* (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

**New York Department of Health** Certificate/Lab ID: 11627. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

*Air & Emissions* (EPA TO-15, TO-10A.)

**Pennsylvania** Certificate/Lab ID: 68-02089 **NELAP Accredited**

*Non-Potable Water* (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D .)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

**Texas Commission of Environmental Quality** Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

*Air* (Organic Parameters: EPA TO-15)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID:460194. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

**Washington State Department of Ecology** Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

*Solid & Chemical Materials* (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

**U.S. Army Corps of Engineers**

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.01.

*Non-Potable Water* (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.

*Air & Emissions* (EPA TO-15.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.

L1219173



**MANSFIELD CHAIN OF CUSTODY**

PAGE 1 OF 2

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

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

Date Rec'd in Lab:

ALPHA Job #: L1218556M

**Report Information - Data Deliverables**

FAX  EMAIL  
 ADEX  Add'l Deliverables

**Billing Information**

Same as Client info PO #:

**Client Information**

Client: WOODS Hole Group  
Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
Phone: 508-540-8080  
Fax: 508-540-1001  
Email: DSTUART@WHGRP.COM

**Project Information**

Project Name: New Bedford Port-Dredge  
Project Location: New Bedford, MA  
Project #: T0-0010-07  
Project Manager: Dave Walsh  
ALPHA Quote #:

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved!)

Date Due: Time:

**Regulatory Requirements/Report Limits**

State (Fed) Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before sample analysis

**PLEASE NOTE** Project-specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

ANALYSIS PCB Congener 8082 Percent Total Solids PCB Homologs											TOTAL # BOTTLES
	<p><b>SAMPLE HANDLING</b></p> <p>Filtration _____</p> <p><input type="checkbox"/> Done</p> <p><input type="checkbox"/> Not needed</p> <p><input type="checkbox"/> Lab to do</p> <p><input type="checkbox"/> Preservation</p> <p><input type="checkbox"/> Lab to do</p> <p><small>(Please specify below)</small></p>										

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES		
		Date	Time			PCB Congener 8082	Percent Total Solids	PCB Homologs											
1	S-120-C001-0.6-1.1	10/15/12	12:15	SE	DS	X	X											PX-20	1
2	S-120-C001-1.1-2.6					X	X												1
3	S-120-C001-1.6-2.1					X	X											Archive	1
4	S-120-C001-0.1-0.6-REP		12:25			X	X											PX20-REP	1
5	S-120-C001-0.9-1.4-REP		12:25			X	X												1
6	S-120-C001-1.4-1.9-REP		12:25			X	X											Archive	1
7	S-120-C002-0.3-0.8		9:47			X	X											LC03	1
8	S-120-C002-0.8-1.3		9:47			X	X												1
9	S-120-C002-1.3-1.8		9:47			X	X											Archive	1
10	S-120-C003-0.5-1.0		11:30			X	X	X										PAA18	1

Container Type	A
Preservative	A

Relinquished By:	Date/Time	Received By:	Date/Time
<u>Dave Walsh</u>	<u>10/15/12 1815</u>	<u>[Signature]</u>	<u>10/15/12 1815</u>

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



# MANSFIELD CHAIN OF CUSTODY

PAGE 1 OF 10

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

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

### Project Information

Project Name: New Bedford Post-Dredge

Project Location: New Bedford, MA

Project #: TO-0010-07

Project Manager: Deve Walsh

ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Date Rec'd in Lab:

ALPHA Job #: L1219173

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

### Billing Information

Same as Client info PO #: \_\_\_\_\_

### Client Information

Client: Woods Hole Group

Address: 81 Technology Park Dr  
 East Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize samples before analysis

**PLEASE NOTE** Project-Specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

### Regulatory Requirements/Report Limits

State/Fed Program: MA Criteria: \_\_\_\_\_

ANALYSIS	PCB Congeners 8082	
	Percent Solids	
	PCB Homologs	

**SAMPLE HANDLING**

Filtration \_\_\_\_\_

Done

Not needed

Lab to do

Preservation \_\_\_\_\_

Lab to do

(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS			Sample Specific Comments	TOTAL # BOTTLES
		Date	Time			PCB Congeners 8082	Percent Solids	PCB Homologs		
- 2	S-120-C005-0.0-0.4	10/15/12	9:23	SE	DS	X	X	X	LB03	1
	S-120-C005-0.4-0.9					X	X			1
	S-120-C005-0.9-1.4					X	X		Archive	1
	S-120-C006-0.1-0.6		11:12			X	X		PY16	1
	S-120-C006-0.6-1.1					X	X		Archive	1
	S-120-C007-0.0-0.5		11:51			X	X		PDD19	1
	S-120-C007-0.5-1.0					X	X		Archive	1
3	S-120-C008-0.7-1.2	10/16/12	9:30			X	X	X	PD04	1
	S-120-C008-1.2-1.7					X	X			1
	S-120-C008-1.7-2.2					X	X		Archive	1

Container Type: A  
 Preservative: A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side Delivery Order 0010-07 May 2013

Relinquished By: <u>Daph Stora</u>	Date/Time <u>10/19/12 1605</u>	Received By: <u>J. Smith</u>	Date/Time <u>10/19/12 1605</u>
<u>T. Hurdle</u>	<u>10/19/12 1705</u>	<u>J. Smith</u>	<u>10/19/12 1705</u>



# MANSFIELD CHAIN OF CUSTODY

PAGE 8 OF 10

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

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

### Client Information

Client: Woods Hole Group  
 Address: 81 Technology Park Dr  
East Falmouth, MA 02536  
 Phone: 508-540-8080  
 Fax: 508-540-1001  
 Email: DSTUART@WHGRP.COM

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Homogenize before analysis

### PLEASE NOTE

Project - Specific EDD

MS/MSD (at unit cost) will be omitted unless you check here:

### Project Information

Project Name: New Bedford Post-Dredge  
 Project Location: New Bedford, MA  
 Project #: T0-0010-07  
 Project Manager: Dave Walsh  
 ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Date Rec'd in Lab: \_\_\_\_\_

ALPHA Job #: L12191721

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

### Billing Information

Same as Client info PO #: \_\_\_\_\_

### Regulatory Requirements/Report Limits

State/Fed Program: (C) Criteria: \_\_\_\_\_

ANALYSIS		SAMPLE HANDLING	
<u>PCB Congeners 5082</u>		<input type="checkbox"/> Done	
<u>Percent Solids</u>		<input type="checkbox"/> Not needed	
<u>PCB Homologs</u>		<input type="checkbox"/> Lab to do Preservation	
		<input type="checkbox"/> Lab to do	
		(Please specify below)	
		Sample Specific Comments	

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS				SAMPLE HANDLING	TOTAL # BOTTLES
		Date	Time			PCB Congeners 5082	Percent Solids	PCB Homologs	Other		
<u>- 2*</u>	<u>S-120-C025-0.5-1.0</u>	<u>10/17/12</u>	<u>16:43</u>	<u>SE</u>	<u>DS</u>	<u>X</u>	<u>X</u>			<u>LP09 Archive</u>	<u>1</u>
<u>- 4 - 6</u>	<u>S-120-C026-0.0-0.5</u>	<u>10/18/12</u>	<u>15:48</u>			<u>X</u>	<u>X</u>	<u>X</u>		<u>LI02 <sup>Sample DS</sup> + DS</u>	<u>1</u>
<u>- 7</u>	<u>S-120-C026-0.5-1.0</u>					<u>X</u>	<u>X</u>			<u>↓</u>	<u>1</u>
<u>- 28</u>	<u>S-120-C026-1.0-1.5</u>					<u>X</u>	<u>X</u>			<u>↓ Archive</u>	<u>1</u>
<u>- 8</u>	<u>S-120-C027-0.0-0.2</u>		<u>13:51</u>			<u>X</u>	<u>X</u>			<u>LN02</u>	<u>1</u>
<u>- 9</u>	<u>S-120-C027-0.2-0.7</u>					<u>X</u>	<u>X</u>			<u>↓</u>	<u>1</u>
<u>- 29</u>	<u>S-120-C027-0.7-1.2</u>					<u>X</u>	<u>X</u>			<u>↓ Archive</u>	<u>1</u>
<u>- 10</u>	<u>S-120-C028-0.7-1.2</u>		<u>14:52</u>			<u>X</u>	<u>X</u>			<u>LH08</u>	<u>1</u>
<u>- 11</u>	<u>S-120-C028-1.2-1.7</u>					<u>X</u>	<u>X</u>			<u>↓</u>	<u>1</u>
<u>- 30</u>	<u>S-120-C028-1.7-2.2</u>					<u>X</u>	<u>X</u>			<u>↓ Archive</u>	<u>1</u>

Container Type A

Preservative A

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

Relinquished By: <u>Dave Walsh</u> <u>T. Hendell</u>	Date/Time <u>10/19/12 1605</u> <u>10/19/12 1705</u>	Received By: <u>T. Hendell</u> <u>[Signature]</u>	Date/Time <u>10/19/12 1605</u> <u>10/19/12 1705</u>
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**SDMS REPOSITORY TARGET SHEET**

US EPA New England  
Superfund Document Management System /  
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**APPENDIX C. NEW ENVIRONMENTAL HORIZONS, INC. DATA  
VALIDATION REPORTS**

(See Electronic Attachment)

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## INTRODUCTION

Data were validated by New Environmental Horizons. A data validation (DV) report was produced for each sample delivery group (SDG). Alpha Analytical Laboratories divided samples into SDGs upon receipt, which were assigned a unique 7-digit number preceded by the letter L. One SDG typically consists of 20 samples. Refer to Appendix B for a summary of which SDGs are associated with each sampling event (pre- vs. post-dredge) as well as the analytes reported.

A DV report is made up of three data files. A DV report only had checklists for the analyses reported in its associated SDG. For example, if PCB Aroclors were the only analyte in an SDG, then there would only be a checklist for PCB Aroclors. The table below, using SDG L1204588 as an example, describes the contents of each DV file.

<b>File name</b>	<b>File type</b>	<b>Description</b>
dbval_L1204588dv	.CSV	Comma-delimited database file of validated sample results
NBH_OU1_DV_Report_L1204588	.PDF	Data validation report letter summarizing actions taken
18NOAACongeners_GCECD_Tier1+Checklist_L1204588	.PDF	Data review checklist for NOAA-18 PCB Congener analyses

This Appendix document includes the DV validation report letters only. All other data files associated with each SDG are included as electronic attachments on the accompanying CD.



**Data Validation Report**  
**EPA Region I Tier I+**  
**NOAA Congeners by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1204588

**Date(s) of Collection:** March 7, 2012 and March 9, 2012

**Number / Type  
Samples & Analyses** 20 pre-dredge sediment core samples for 18 NOAA Congeners by EPA  
SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** May 14, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 4.0*, prepared by Woods Hole Group, Inc., July 2011 (NBH OU1 QAPP Addendum 2011); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C001-2.8-3.4	L1204588-01	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C001-2.3-2.8	L1204588-02	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C002-0.0-0.3	L1204588-03	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C002-0.3-0.8	L1204588-04	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C003-1.7-2.2	L1204588-05	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C003-2.2-2.7	L1204588-06	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C004-0.2-0.7	L1204588-07	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C004-0.7-1.2	L1204588-08	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C005-0.1-0.6-REP	L1204588-09	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C005-0.6-1.1-REP	L1204588-10	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C006-0.7-1.2	L1204588-11	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Table 1. Sample Descriptions and Analytical Parameters Validated - *continued*

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C006-1.2-1.7	L1204588-12	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C007-2.9-3.4	L1204588-13	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C007-3.4-3.9	L1204588-14	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C008-2.0-2.5	L1204588-15	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C008-2.5-3.0	L1204588-16	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C009-2.4-2.9	L1204588-18	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C009-2.9-3.4	L1204588-17	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample used for MS/MSD
S-12M-C010-1.9-2.4	L1204588-19	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C010-2.4-2.9	L1204588-20	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2011 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries

- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2011 requirements and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2011 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The pre-dredge sediment cores were collected on March 7<sup>th</sup> and March 9<sup>th</sup>, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The cores and aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The pre-dredge sediment core samples were received intact cold on March 16, 2012 and were maintained frozen at the laboratory until March 20, 2012, at which time aliquots of the “as received” samples were analyzed for percent solids. All samples had percent solids content of 29 to 50%; therefore, these sediment core samples were air-dried, as required by the QAPP, prior to Congener analysis. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 74%. These air-dried samples were extracted on March 22, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

Twelve additional sediment core samples were received and “Archived” at the laboratory, as requested on the Chain-of-Custody (COC).



## Accuracy

The Method Blank was non-detect for all Congeners; therefore, blank action to negate sample data was not required. There was no Equipment Blank required to be collected with these core samples.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike so the concentrations were appropriate for the expected sample concentrations (see QAPP 2011 for further discussion of surrogate spiking solution levels). Therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix. All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

MS/MSD was performed on sample S-12M-C009-2.9-3.4. Recoveries were acceptable for all NOAA Congeners except 2,2',5'-Trichlorobiphenyl (BZ#18), 2,4,4'-Trichlorobiphenyl (BZ#28), and 2,2',5,5'-Tetrachlorobiphenyl (BZ#52), which reported high MSD recoveries. The results for these three Congeners were estimated (J) in sample S-12M-C009-2.9-3.4 as shown in Table 2. These results indicate variable accuracy for the method of analysis in the site matrix.

## Precision

LCS/LCSD precision was unacceptable for 2,4'-Dichlorobiphenyl (BZ#8). All 2,4'-Dichlorobiphenyl (BZ#8) results were estimated (J or UJ) with indeterminate bias as listed in Table 2. These results indicate variable laboratory precision for the method of analysis in the absence of the site matrix.

Precision in the MS/MSD analysis of sample S-12M-C009-2.9-3.4 was unacceptable for 2,2',5'-Trichlorobiphenyl (BZ#18), 2,4,4'-Trichlorobiphenyl (BZ#28), 2,2',5,5'-Tetrachlorobiphenyl (BZ#52), and 2,2',3,5'-Tetrachlorobiphenyl (BZ#44). The results for these four Congeners were estimated (J) with indeterminate bias as shown in Table 2. These results indicate variable precision and representativeness for PCB Congeners in the site matrix likely due to sample heterogeneity.

The COC identified Field Duplicate (FD) samples analyzed in this SDG as S-12M-C005-0.1-0.6-REP and S-12M-C005-0.6-1.1-REP. WHG was contacted to find out what the original core samples were for these FDs and they were identified as: S-12M-C005-0.1-0.6-REP as the co-located core for S-12M-C006-0.7-1.2 and S-12M-C005-0.6-1.1-REP as the co-located core for S-12M-C006-1.2-1.7. NEH contacted WHG to discuss why the FD samples were taken from different depth horizons in each of the paired co-located cores. It was explained that the co-located cores at these locations appeared heterogeneous from each-other and that the visually contaminated (darker) horizon was at different depths in each of the paired cores; therefore, the field sampler collected the FD sample in the "REP" core at a different depth than in the original core. Based on this information, NEH concludes that these paired samples cannot be considered "field duplicates" since the field sampler used visual information to collect the samples differently in each of the co-located samples. Therefore, these 4 samples are considered discrete (separate) samples and FD precision was not evaluated.

## Sensitivity & Reporting

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 2 to over 3300 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2011). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12M-C001-2.3-2.8 S-12M-C001-2.8-3.4 S-12M-C002-0.0-0.3 S-12M-C002-0.3-0.8 S-12M-C003-2.2-2.7 S-12M-C004-0.2-0.7 S-12M-C004-0.7-1.2 S-12M-C005-0.1-0.6-REP S-12M-C005-0.6-1.1-REP S-12M-C006-0.7-1.2 S-12M-C007-2.9-3.4 S-12M-C007-3.4-3.9 S-12M-C008-2.0-2.5 S-12M-C008-2.5-3.0 S-12M-C009-2.9-3.4 S-12M-C010-1.9-2.4 S-12M-C010-2.4-2.9	2,4'-Dichlorobiphenyl	DJ	I	LCS/LCSD imprecision
S-12M-C003-1.7-2.2 S-12M-C009-2.4-2.9	2,4'-Dichlorobiphenyl	DUJ	I	LCS/LCSD imprecision
S-12M-C006-1.2-1.7	2,4'-Dichlorobiphenyl	J	I	LCS/LCSD imprecision
S-12M-C009-2.9-3.4 S-12M-C009-2.9-3.4 S-12M-C009-2.9-3.4	2,2',5'-Trichlorobiphenyl	DJ	I	High MSD recovery + MS/MSD imprecision
S-12M-C009-2.9-3.4	2,2',3,5'-Tetrachlorobiphenyl	DJ	I	MS/MSD imprecision

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

*Abbreviations used in Table 2:*

*LCS = Laboratory Control Sample*

*LCSD = Laboratory Control Sample Duplicate*

*MS = Matrix Spike*

*MSD = Matrix Spike Duplicate*



**Data Validation Report**  
**EPA Region I Tier I+**  
**NOAA Congeners by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1204594

**Date(s) of Collection:** March 7, 2012 through March 12, 2012

**Number / Type  
Samples & Analyses** 20 pre-dredge sediment core samples for 18 NOAA Congeners by EPA  
SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** May 21, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 4.0*, prepared by Woods Hole Group, Inc., July 2011 (NBH OU1 QAPP Addendum 2011); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C011-2.2-2.7	L1204594-01	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C011-2.7-3.2	L1204594-02	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C012-2.2-2.7	L1204594-03	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C012-2.7-3.2	L1204594-04	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C012-2.7-3.2-REP	L1204594-05	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-12M-C012-2.7-3.2
S-12M-C013-2.0-2.5	L1204594-06	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C013-2.5-3.0	L1204594-07	3/9/12	Air-dried Sediment	18 NOAA Congeners	Field Sample used for MS/MSD
S-12M-C014-1.9-2.4	L1204594-08	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C014-2.4-2.9	L1204594-09	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C015-1.8-2.3	L1204594-10	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C015-1.8-2.3-REP	L1204594-11	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-12M-C015-1.8-2.3

Table 1. Sample Descriptions and Analytical Parameters Validated - *continued*

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C015-2.3-2.8	L1204594-12	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C016-0.0-0.2	L1204594-13	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C016-0.2-0.7	L1204594-14	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C017-0.0-0.5	L1204594-15	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C017-0.5-1.0	L1204594-16	3/7/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C018-2.4-2.9	L1204594-17	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C018-2.9-3.4	L1204594-18	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C019-1.9-2.4	L1204594-19	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C021-0.2-0.7	L1204594-20	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2011 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries

- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2011 requirements and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2011 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The pre-dredge sediment cores were collected on March 7<sup>th</sup> through March 12<sup>th</sup>, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The cores and aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The pre-dredge sediment core samples were received intact cold on March 16, 2012 and were maintained frozen at the laboratory until March 23, 2012, at which time aliquots of the “as received” samples were analyzed for percent solids. All samples had percent solids content of 29 to 64%; therefore, these sediment core samples were air-dried, as required by the QAPP, prior to Congener analysis. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 94%. These air-dried samples were extracted on March 27, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

An e-mail from WHG to Alpha indicates that there were sample IDs reported on the Chain-of-Custody (COC) that were incorrect and Alpha was asked to change the following sample IDs: sample ID on COC listed as S-12M-C018-3.4-3.9 changed to S-12M-C018-2.4-2.9 and sample S-12M-C018-2.9-3.4 on the COC changed to S-12M-C018-3.4-3.9. The e-mail also indicated that sample S-12M-

C018-3.4-3.9 should be archived rather than sample S-12M-C018-2.9-3.4 as listed on the COC. Alpha over-wrote the sample IDs on the COC with these changes; therefore, it was not possible to verify the COC as it was originally received at the lab for these samples.

### **Accuracy**

The Method Blank was non-detect for all Congeners; therefore, blank action to negate sample data was not required. There was no Equipment Blank required to be collected with these core samples.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike so the concentrations were appropriate for the expected sample concentrations (see QAPP 2011 for further discussion of surrogate spiking solution levels). Therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix. All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

MS/MSD was performed on sample S-12M-C013-2.5-3.0. Recoveries were acceptable for all NOAA Congeners. These results indicate acceptable accuracy for the method of analysis in the site matrix.

### **Precision**

LCS/LCSD and MS/MSD precision were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory precision for the method of analysis.

There were two Field Duplicates associated with this SDG: S-12M-C012-2.7-3.2 / S-12M-C012-2.7-3.2-REP and S-12M-C015-1.8-2.3 / S-12M-C015-1.8-2.3-REP. FD precision was acceptable for all Congeners in the FD pair of S-12M-C015-1.8-2.3 / S-12M-C015-1.8-2.3-REP indicating acceptable representativeness of these samples for Congener analysis at this site location. FD precision was not acceptable for nine of the 18 NOAA in the FD pair of S-12M-C012-2.7-3.2 / S-12M-C012-2.7-3.2-REP. Nine Congeners were estimated (J) with indeterminate bias in these two samples as indicated in Table 2. The results for this FD pair indicate variable precision and representativeness of these samples at this site location for Congener analysis.

### **Sensitivity & Reporting**

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 1.1 to over 1110 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2011). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.



Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12M-C012-2.7-3.2 S-12M-C012-2.7-3.2-REP	2,2',5'-Trichlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,2',5,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,3',4,4',5'-Pentachlorobiphenyl 2,2',3,4,4',5'-Hexachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl DecaCB - Homologue	DJ	I	FD imprecision

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

*Abbreviations used in Table 2:*

*FD = Field Duplicate*



**Data Validation Report**  
**EPA Region I Tier I+**  
**NOAA Congeners by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1204599

**Date(s) of Collection:** March 12, 2012 and March 13, 2012

**Number / Type  
Samples & Analyses** 19 pre-dredge sediment core samples for 18 NOAA Congeners by EPA  
SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** May 22, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 4.0*, prepared by Woods Hole Group, Inc., July 2011 (NBH OU1 QAPP Addendum 2011); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C020-1.2-1.7	L1204599-01	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample used for MS/MSD
S-12M-C021-0.7-1.2	L1204599-02	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C022-0.0-0.5	L1204599-03	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C022-0.5-0.8	L1204599-04	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C023-0.1-0.6	L1204599-05	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C024-0.4-0.9	L1204599-06	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C025-0.5-1.0	L1204599-07	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C025-0.5-1.0-REP	L1204599-08	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-12M-C025-0.5-1.0
S-12M-C025-1.0-1.5	L1204599-09	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C026-1.1-1.6	L1204599-10	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C026-1.6-2.1	L1204599-11	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Table 1. Sample Descriptions and Analytical Parameters Validated - continued

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C027-0.2-0.7	L1204599-12	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C028-0.1-0.6	L1204599-13	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C028-0.6-1.1	L1204599-14	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C029-0.8-1.3	L1204599-15	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C030-0.1-0.6	L1204599-16	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C030-0.6-1.1	L1204599-17	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C031-0.1-0.6	L1204599-19	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C031-0.6-1.1	L1204599-20	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample used for MS/MSD

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2011 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)

- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, the results for 2,2',3,3',4,4',5,6-Octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl, and Decachlorobiphenyl (called DecaCB – Homologue in database file) in sample S-12M-C020-1.2-1.7 were rejected and are not usable for project decisions. All other results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2011 requirements and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2011 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The pre-dredge sediment cores were collected on March 12<sup>th</sup> and March 13<sup>th</sup>, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The cores and aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The pre-dredge sediment core samples were received intact cold on March 16, 2012 and were maintained frozen at the laboratory until March 27, 2012, at which time aliquots of the “as received” samples were analyzed for percent solids. All samples had percent solids content of 35 to 83%; therefore, these sediment core samples were air-dried, as required by the QAPP, prior to Congener analysis. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 91%. These air-dried samples were extracted on March 29, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

## Accuracy

The Method Blank was non-detect for all Congeners; therefore, blank action to negate sample data was not required. There was no Equipment Blank required to be collected with these core samples.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike so the concentrations were appropriate for the expected sample concentrations (see QAPP 2011 for further discussion of surrogate spiking solution levels). Therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix. All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

MS/MSD analyses were performed on samples S-12M-C031-0.6-1.1 and S-12M-C020-1.2-1.7. In the MS/MSD analyses of S-12M-C031-0.6-1.1, recoveries were acceptable for all NOAA Congeners except 2,4'-Dichlorobiphenyl, which recovered slightly low compared to criteria in the MS and 2,2',5-Trichlorobiphenyl, which recovered low, but above 10%, in both the MS and MSD. Professional judgment was used to take no action based on the slightly low MS recovery for 2,4'-Dichlorobiphenyl since the MSD recovery and MS/MSD precision were both acceptable. The result for 2,2',5-Trichlorobiphenyl was estimated (J) with possible low bias in sample S-12M-C031-0.6-1.1 due to low MS/MSD recoveries as shown in Table 2. These results indicate variable accuracy for the method of analysis in this site matrix.

In the MS/MSD analyses of S-12M-C020-1.2-1.7, recoveries were unacceptable for all but three of the 18 NOAA Congeners. 2',3,3',4,4',5,6-Octachlorobiphenyl, 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl, and Decachlorobiphenyl (called DecaCB – Homologue in database file) in sample S-12M-C020-1.2-1.7 were non-detect; however, 0% recoveries for these in the MS/MSD were reported. These results suggest that these non-detects may be false negatives; therefore, the non-detects for these three Congeners were rejected (R) and are not usable for project decisions. Recoveries for the MSD were high for 12 Congeners; however, two of these Congeners (2,3,3',4,4'-Pentachlorobiphenyl and 2,2',3,4',5,5',6-Heptachlorobiphenyl) were non-detect sample S-12M-C020-1.2-1.7 so no action was required. The other 10 Congeners were estimated (J) in S-12M-C020-1.2-1.7 with possible high bias unless other QC issues affected the results. Table 2 shows the Congeners affected and overall bias associated with these data. These results indicate variable accuracy for the method of analysis in this site matrix.

## Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory precision for the method of analysis.

MS/MSD precision was acceptable for all 18 NOAA Congeners in the analysis of sample S-12M-C031-0.6-1.1. MS/MSD precision was not acceptable for nine of the Congeners in the QC analyses of sample S-12M-C020-1.2-1.7, as indicated in Table 2. These results indicate variable precision for the method of analysis in this site matrix.

There was one Field Duplicate (FD) pair associated with this SDG: S-12M-C025-0.5-1.0 / S-12M-C025-0.5-1.0-REP. FD precision was acceptable for all Congeners in this FD pair indicating acceptable precision and representativeness of these samples from sample collection through analysis at this site location for Congener analysis.

### Sensitivity & Reporting

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 13 to over 550 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2011). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12M-C020-1.2-1.7	2,2',3,3',4,4',5,6-Octachlorobiphenyl 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl DecaCB - Homologue	R		Unusable: < 10% MS recovery
S-12M-C020-1.2-1.7	2,4'-Dichlorobiphenyl 2,2',5-Trichlorobiphenyl 2,4,4'-Trichlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,2',5,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,2',3,4,4',5'-Hexachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	I	High MS recovery + MS/MSD imprecision
S-12M-C020-1.2-1.7	2,3',4,4',5-Pentachlorobiphenyl	DJ	H	High MS recovery
S-12M-C031-0.6-1.1	2,2',5-Trichlorobiphenyl	DJ	L	Low MS recovery

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

*Abbreviations used in Table 2: MS = Matrix Spike  
MSD = Matrix Spike Duplicate*



**Data Validation Report**  
**EPA Region I Tier I+**  
**NOAA Congeners by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1204600

**Date(s) of Collection:** March 12, 2012 and March 13, 2012

**Number / Type  
Samples & Analyses** 9 pre-dredge sediment core samples for 18 NOAA Congeners by EPA  
SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** May 23, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 4.0*, prepared by Woods Hole Group, Inc., July 2011 (NBH OU1 QAPP Addendum 2011); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.



The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C033-0.0-0.2	L1204600-01	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C033-0.2-0.7	L1204600-02	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C034-0.1-0.6	L1204600-03	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C034-0.6-1.1	L1204600-04	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample used for MS/MSD
S-12M-C035-1.1-1.6	L1204600-05	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C035-1.1-1.6-REP	L1204600-06	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-12M-C035-1.1-1.6
S-12M-C035-1.6-2.1	L1204600-07	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C036-0.0-0.4	L1204600-08	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C036-0.4-0.9	L1204600-09	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2011 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2011 requirements. The data reported by the laboratory were unchanged as a consequence of this review. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2011 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### Sample Collection, Receipt, and Holding Time

The pre-dredge sediment cores were collected on March 12<sup>th</sup> and March 13<sup>th</sup>, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The cores and aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The pre-dredge sediment core samples were received intact cold on March 16, 2012 and were maintained frozen at the laboratory until April

2, 2012, at which time aliquots of the “as received” samples were analyzed for percent solids. All samples had percent solids content of 47 to 84%; therefore, these sediment core samples were air-dried, as required by the QAPP, prior to Congener analysis. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 98%. These air-dried samples were extracted on April 4, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

### **Accuracy**

The Method Blank was non-detect for all Congeners; therefore, blank action to negate sample data was not required. There was no Equipment Blank required to be collected with these core samples.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike so the concentrations were appropriate for the expected sample concentrations (see QAPP 2011 for further discussion of surrogate spiking solution levels). Therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix. All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

MS/MSD analyses were performed on sample S-12M-C034-0.6-1.1. MS/MSD recoveries were acceptable for all 18 NOAA Congeners indicating acceptable accuracy for the method of analysis in this site matrix.

### **Precision**

LCS/LCSD and MS/MSD precision were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory precision for the method of analysis in the site matrix.

There was one Field Duplicate (FD) pair associated with this SDG: S-12M-C035-1.1-1.6 / S-12M-C035-1.1-1.6-REP. FD precision was acceptable for all Congeners in this FD pair indicating acceptable precision and representativeness of these samples from sample collection through analysis at this site location for Congener analysis.

### **Sensitivity & Reporting**

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 1.3 to over 260 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2011). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results for samples analyzed with dilutions (i.e.,  $DF > 1$ ) with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.



**Data Validation Report**  
**EPA Region I Tier I+**  
**PCB Aroclors by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1204603

**Date(s) of Collection:** March 13, 2012

**Number / Type  
Samples & Analyses** 15 pre-dredge sediment core samples for 7 PCB Aroclors by SW-846  
Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** May 11, 2012

This EPA Region I Tier I+ validation for PCB Aroclors and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 4.0*, prepared by Woods Hole Group, Inc., July 2011 (NBH OU1 QAPP Addendum 2011); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C032-0.0-0.5	L1204603-01	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C032-0.5-1.0	L1204603-02	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C037-0.0-0.5	L1204603-03	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C037-0.0-0.5-REP	L1204603-04	3/13/12	Air-dried Sediment	PCB Aroclors	Field Duplicate of S-12M-C037-0.0-0.5
S-12M-C037-0.5-1.0	L1204603-05	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C038-0.0-0.5	L1204603-06	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C038-0.5-1.0	L1204603-07	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample [used for MS/MSD]
S-12M-C039-0.0-0.5	L1204603-08	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C039-0.5-1.0	L1204603-09	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C040-0.0-0.5	L1204603-10	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C040-0.5-1.0	L1204603-11	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample

Table 1. Sample Descriptions and Analytical Parameters Validated - *continued*

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C041-0.0-0.5	L1204603-12	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C041-0.5-1.0	L1204603-13	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C042-0.0-0.5	L1204603-14	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample
S-12M-C042-0.5-1.0	L1204603-15	3/13/12	Air-dried Sediment	PCB Aroclors	Field Sample

Analytical method references:

PCB Aroclors: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of PCB Aroclor sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2011 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of the PCB Aroclors, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2011 requirements, where applicable (since the 2011 QAPP does not include PCB Aroclor analysis in sediments, EPA method requirements were also used to evaluate acceptability of results), and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2011 criteria (or EPA method criteria) or clarifications of data reported. QC elements not discussed below met all acceptance criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Receipt and Holding Time**

The pre-dredge sediment cores were collected on March 13, 2012 and aliquots of the cores were generated by WHG for PCB Aroclor analysis. The cores and aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The pre-dredge sediment core samples were received intact cold on March 16, 2012 and were maintained frozen at the laboratory until March 20, 2012, at which time aliquots of the “as received” samples were analyzed for percent solids. All samples had percent solids content of 23 to 57%; therefore, these sediment core samples were air-dried, as required by the QAPP, prior to Aroclor analysis. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 79%. These air-dried samples were extracted on March 22, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

### **Accuracy**

The Method Blank was non-detect for all Aroclors; therefore, blank action to negate sample data was not required. There was no Equipment Blank required to be collected these core samples.

The LCS/LCSD recoveries were acceptable for Aroclor 1016 and 1260. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

MS/MSD was performed on sample S-12M-C038-0.5-1.0. Recoveries were high outside of acceptance limits for Aroclor 1016 and Aroclor 1260 in the MS and MSD, possibly due to positive interference from other Aroclors detected in sample S-12M-C038-0.5-1.0. Since Aroclor 1016 and 1260 were non-detect in sample S-12M-C038-0.5-1.0, no action was required.



**Precision**

LCS/LCSD precision was acceptable for Aroclor 1016 and 1260 indicating acceptable laboratory precision for the method of analysis in the absence of the site matrix.

Precision in the MS/MSD analysis of sample S-12M-C038-0.5-1.0 was acceptable for both Aroclors 1016 and 1260 indicating acceptable precision and representativeness for the method of analysis in the site matrix.

There was one Field Duplicate pair reported in this SDG: S-12M-C037-0.0-0.5 / S-12M-C037-0.0-0.5-REP. FD precision was unacceptable for one of the seven PCB Aroclors. The results for Aroclor 1254 in samples S-12M-C037-0.0-0.5 and S-12M-C037-0.0-0.5-REP were estimated (J) with indeterminate bias due to the observed FD imprecision as shown in Table 2. These FD results are an indication of variable precision and representativeness of PCB Aroclor data due to possible sample heterogeneity in these pre-dredge core samples.

**Sensitivity & Reporting**

All samples except S-12M-C032-0.5-1.0 were analyzed at various dilutions (DF = 50 to DF=500) to report Aroclors within the instrument calibration range. For all diluted samples, the RLs were increased as a consequence of the dilutions made. The 2011 QAPP does not contain sensitivity requirements for PCB Aroclors in sediments; however, since Total PCBs (as the sum of all detected Aroclor results) for all diluted samples were detected at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15 and since PCB Aroclor RLs in the undiluted sample were consistent with EPA Method expectations, sensitivity was considered acceptable.

The laboratory reported all results with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12M-C037-0.0-0.5 S-12M-C037-0.0-0.5-REP	Aroclor 1254	DJ	I	FD imprecision

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

*Abbreviations used in Table 2:*

*FD = Field Duplicate*



**Data Validation Report**  
**EPA Region I Tier I+**  
**NOAA Congeners by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1207312

**Date(s) of Collection:** March 12, 2012 and March 13, 2012

**Number / Type  
Samples & Analyses** 6 pre-dredge sediment core samples for 18 NOAA Congeners by EPA  
SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** May 29, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 4.0*, prepared by Woods Hole Group, Inc., July 2011 (NBH OU1 QAPP Addendum 2011); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-12M-C019-2.4-2.9	L1207312-01	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C019-3.7-3.9	L1207312-02	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample used for MS/MSD
S-12M-C020-1.7-2.2	L1207312-03	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C021-1.2-1.7	L1207312-04	3/12/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C024-0.9-1.4	L1207312-05	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-12M-C028-1.1-1.6	L1207312-06	3/13/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2011 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2011 requirements. The data reported by the laboratory were unchanged as a consequence of this review. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2011 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The pre-dredge sediment cores were collected on March 12<sup>th</sup> and March 13<sup>th</sup>, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The cores and aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The pre-dredge sediment core samples were received intact cold on March 16, 2012 and were placed into “Archive” as requested on the Chain-of-Custody (COC) pending results of other samples. The six samples reported herein were taken out of the “Archive” for analysis on April 27, 2012, at which time aliquots of the “as received” samples were analyzed for percent solids. All samples had percent solids content of 37 to 46%; therefore, these sediment core samples were air-dried, as required by the QAPP, prior to Congener analysis. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 98%. These air-dried samples were extracted on May 1, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

### **Accuracy**

The Method Blank was non-detect for all Congeners; therefore, blank action to negate sample data was not required. There was no Equipment Blank required to be collected with these core samples.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike so the concentrations were appropriate for the expected sample concentrations (see QAPP 2011 for further discussion of surrogate spiking solution levels). Therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix. All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

MS/MSD analyses were performed on sample S-12M-C019-3.7-3.9. MS/MSD recoveries were acceptable for all 18 NOAA Congeners indicating acceptable accuracy for the method of analysis in this site matrix.

### **Precision**

LCS/LCSD and MS/MSD precision were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory precision for the method of analysis in the site matrix.

There were no Field Duplicate (FD) samples associated with the samples in this SDG. Please see results for the other pre-dredge sediment core samples for FD evaluation.

### **Sensitivity & Reporting**

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 1.3 to over 260 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2011). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results for samples analyzed with dilutions (i.e., DF > 1) with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.



**Data Validation Report**  
**EPA Region I Tier I+**  
**NOAA Congeners by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1218556

**Date(s) of Collection:** October 15, 2012

**Number / Type  
Samples & Analyses** 10 Post-dredge sediment core samples + 4 equipment blanks for 18  
NOAA Congeners by EPA SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** December 17, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 5.0*, prepared by Woods Hole Group, Inc., August 2012 (NBH OU1 QAPP Addendum 2012); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-120-C001-0.6-1.1	L1218556-01	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C001-1.1-1.6	L1218556-02	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C001-0.1-0.6-REP	L1218556-04	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-120-C001-0.6-1.1
S-120-C001-0.9-1.4-REP	L1218556-05	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-120-C001-1.1-1.6
S-120-C002-0.3-0.8	L1218556-07	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C002-0.8-1.3	L1218556-08	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C003-0.5-1.0	L1218556-10	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C003-1.0-1.5	L1218556-11	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C004-0.0-0.5	L1218556-13	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C004-0.5-1.0	L1218556-14	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
EB-101712-01	L1218556-16	10/16/12	Water	18 NOAA Congeners	Equipment Blank

Table 1. Sample Descriptions and Analytical Parameters Validated - continued

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
EB-101712-02	L1218556-17	10/16/12	Water	18 NOAA Congeners	Equipment Blank
EB-101712-03	L1218556-18	10/16/12	Water	18 NOAA Congeners	Equipment Blank
EB-101712-04	L1218556-19	10/16/12	Water	18 NOAA Congeners	Equipment Blank

Note: EB results were reviewed for potential blank actions; however, full data review of this field QC sample was not performed as these results are not directly used for project decisions.

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2012 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative



\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2012 requirements and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2012 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The post-dredge sediment cores were collected on October 15, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The post-dredge sediment core samples were received intact cold on October 15, 2012 and aliquots of the “as received” samples were analyzed for percent solids and then frozen to arrest holding time. All samples had percent solids content of 37 to 51%; therefore, on October 23, 2012 these sediment core samples were removed from frozen storage and air-dried, as required by the QAPP, prior to Congener analysis. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 92%. These air-dried samples were extracted on October 24, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

Five additional sediment core samples were received and “Archived” at the laboratory, as requested on the Chain-of-Custody (COC).

### **Accuracy**

The Method and Equipment Blanks were non-detect for all Congeners; therefore, blank action was not required.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike; therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix (see QAPP 2012 for further discussion of surrogate spiking solution levels). All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

There were no MS/MSD analyses performed on the samples in this SDG; therefore, accuracy for analysis of the 18 NOAA Congeners for the site matrix could not be evaluated.

### **Precision**

LCS/LCSD precision was acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory precision for the method of analysis in the absence of the site matrix.

There were two Field Duplicate pairs reported in this SDG: S-12O-C001-0.6-1.1 / S-12O-C001-0.1-0.6-REP and S-12O-C001-1.1-1.6 / S-12O-C001-0.9-1.4-REP. FD precision was acceptable for all 18 NOAA Congeners in the FD pair S-12O-C001-0.6-1.1 / S-12O-C001-0.1-0.6-REP. FD precision was unacceptable (RPD > 50%) for 10 of the 18 NOAA Congeners in the FD pair S-12O-C001-1.1-1.6 / S-12O-C001-0.9-1.4-REP. These 10 Congener results were estimated (J) with indeterminate bias due to FD imprecision in both samples of the FD pair as listed in Table 2. These FD results are an indication of acceptable precision at the core surface horizon but unacceptable precision and evidence of sample matrix heterogeneity at the sub-surface horizon at this site location, which may impact representativeness of the 18 NOAA PCB Congener results in these post-dredge core samples.

### **Sensitivity & Reporting**

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 1 to over 280 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2012). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results for samples analyzed with dilutions with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12O-C001-1.1-1.6 S-12O-C001-0.9-1.4-REP	2,4'-Dichlorobiphenyl 2,2',5'-Trichlorobiphenyl 2,4,4'-Trichlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,2',5,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,3',4,4',5'-Pentachlorobiphenyl 2,2',3,4,4',5'-Hexachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	I	FD imprecision

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

*Abbreviations used in Table 2:  
 FD = Field Duplicate*



**Data Validation Report**  
**EPA Region I Tier I+**  
**NOAA Congeners by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1219169

**Date(s) of Collection:** October 15, 2012 & October 16, 2012

**Number / Type  
Samples & Analyses** 15 post-dredge sediment core samples for 18 NOAA Congeners by EPA  
SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** December 17, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 5.0*, prepared by Woods Hole Group, Inc., August 2012 (NBH OU1 QAPP Addendum 2012); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-120-C005-0.0-0.4	L1219169-01	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C005-0.4-0.9	L1219169-02	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C006-0.1-0.6	L1219169-03	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C007-0.0-0.5	L1219169-04	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C008-0.7-1.2	L1219169-05	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C008-1.2-1.7	L1219169-06	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C009-0.9-1.4	L1219169-07	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C009-1.4-1.9	L1219169-08	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C010-0.0-0.5	L1219169-09	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C010-0.5-1.0	L1219169-10	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C011-0.4-0.9	L1219169-11	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Table 1. Sample Descriptions and Analytical Parameters Validated - *continued*

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-120-C011-0.9-1.4	L1219169-12	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C012-0.0-0.3	L1219169-13	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C012-0.3-0.8	L1219169-14	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-120-C013-0.0-0.5	L1219169-15	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Note: EB results were reviewed for potential blank actions; however, full data review of this field QC sample was not performed as these results are not directly used for project decisions.

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA’s Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2012 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2012 requirements and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2012 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The post-dredge sediment cores were collected on October 15, 2012 and October 16, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The post-dredge sediment core samples were received intact cold on October 16, 2012 and aliquots of the “as received” samples were analyzed for percent solids and then frozen to arrest holding time. All samples had percent solids content of 35 to 81%; therefore, on October 29, 2012 these sediment core samples were removed from frozen storage and air-dried, as required by the QAPP, prior to Congener analysis. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 88%. These air-dried samples were extracted on October 30, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

Nine additional sediment core samples were received and “Archived” at the laboratory, as requested on the Chain-of-Custody (COC).

### **Accuracy**

The Method and Equipment Blanks (reported in SDG L1218556) were non-detect for all Congeners; therefore, blank action to negate sample data was not required.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike; therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix (see QAPP 2012 for further discussion of surrogate spiking solution levels). All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

The MS/MSD analyses were performed on sample S-12O-C012-0.3-0.8. The MS/MSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis for the site matrix.

The narrative indicated that one Internal Standard recovered low compared to criteria in the analysis and re-analysis of sample S-12O-C008-1.2-1.7. The affected Congener, 2,4,4'-Trichlorobiphenyl, was estimated (J) with indeterminate bias in this one sample due to low IS recovery as shown in Table 2.

### **Precision**

LCS/LCSD and MS/MSD precision were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory precision for the method of analysis for the site matrix.

There were two Field Duplicate pairs associated with this SDG: S-12O-C012-0.0-0.3 / S-12O-C012-0.0-0.2-REP and S-12O-C012-0.3-0.8 / S-12O-C012-0.2-0.7-REP. Samples S-12O-C012-0.0-0.3 and S-12O-C012-0.3-0.8 were reported in this SDG L1219169 whereas samples S-12O-C012-0.0-0.2-REP and S-12O-C012-0.2-0.7-REP were reported in SDG L1219170. FD precision was acceptable for all 18 NOAA Congeners in the FD pair S-12O-C012-0.0-0.3 / S-12O-C012-0.0-0.2-REP except 2,2',5-Trichlorobiphenyl, which reported unacceptable FD precision (RPD > 50%). Results for this Congener were estimated (J) with indeterminate bias due to FD imprecision in sample S-12O-C012-0.0-0.3 as listed in Table 2 and sample S-12O-C012-0.0-0.2-REP (see SDG L1219170 for actions). FD precision was unacceptable for nine of the 18 NOAA Congeners in the FD pair S-12O-C012-0.3-0.8 / S-12O-C012-0.2-0.7-REP. These nine Congener results were estimated (J) with indeterminate bias due to FD imprecision in sample S-12O-C012-0.3-0.8 as listed in Table 2 and sample S-12O-C012-0.2-0.7-REP (see SDG L1219170 for actions). These FD results are an indication of generally acceptable precision at the core surface horizon but unacceptable precision and evidence of sample matrix heterogeneity at the sub-surface horizon at this site location, which may impact representativeness of the 18 NOAA PCB Congeners in these post-dredge core samples.

### **Sensitivity & Reporting**

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 1 to over 280 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2012). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results for samples analyzed with dilutions with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.



Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12O-C008-1.2-1.7	2,4,4'-Trichlorobiphenyl	DJ	I	Low IS recovery
S-12O-C012-0.0-0.3	2,2',5-Trichlorobiphenyl	DJ	I	FD imprecision
S-12O-C012-0.3-0.8	2,4'-Dichlorobiphenyl 2,2',5-Trichlorobiphenyl 2,4,4'-Trichlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,2',5,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,3',4,4',5-Pentachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	I	FD imprecision

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

*Abbreviations used in Table 2:*

*IS = Internal Standard*

*FD = Field Duplicate*



**Data Validation Report**  
**EPA Region I Tier I+**  
**NOAA Congeners by 8082**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1219170

**Date(s) of Collection:** October 16, 2012 & October 17, 2012

**Number / Type  
Samples & Analyses** 20 post-dredge sediment core samples for 18 NOAA Congeners by EPA  
SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** December 18, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 5.0*, prepared by Woods Hole Group, Inc., August 2012 (NBH OU1 QAPP Addendum 2012); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
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- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-120-C012-0.0-0.2-REP	L1219170-01	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-120-C012-0.0-0.3 (reported in SDG L1219169)
S-120-C012-0.2-0.7-REP	L1219170-02	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-120-C012-0.3-0.8 (reported in SDG L1219169)
S-120-C014-0.9-1.4	L1219170-03	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C014-1.4-1.9	L1219170-04	10/15/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C015-0.0-0.5	L1219170-05	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C015-0.5-1.0	L1219170-06	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C016-0.6-1.1	L1219170-07	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C016-1.1-1.6	L1219170-08	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-120-C017-0.4-0.9	L1219170-09	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C017-0.9-1.4	L1219170-10	10/16/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Table 1. Sample Descriptions and Analytical Parameters Validated - continued

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-120-C018-0.0-0.5	L1219170-11	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C018-0.5-1.0	L1219170-12	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C018-0.0-0.3-REP	L1219170-13	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-120-C018-0.0-0.5
S-120-C018-0.3-0.8-REP	L1219170-14	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-120-C018-0.5-1.0
S-120-C019-0.5-1.0	L1219170-15	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C019-1.0-1.5	L1219170-16	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C020-0.6-1.1	L1219170-17	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C020-1.1-1.6	L1219170-18	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C021-0.5-1.0	L1219170-19	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C021-1.0-1.5	L1219170-20	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2012 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria
- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries

- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2012 requirements and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2012 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The post-dredge sediment cores were collected on October 16, 2012 and October 17, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The post-dredge sediment core samples were received intact cold on October 19, 2012 and aliquots of the “as received” samples were analyzed for percent solids and then frozen to arrest holding time. All samples had percent solids content of 34 to 60%; therefore, these sediment core samples were air-dried, as required by the QAPP, and placed in frozen storage. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 88%. These air-dried samples were extracted on November 1, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

Nine additional sediment core samples were received and “Archived” at the laboratory, as requested on the Chain-of-Custody (COC).

## Accuracy

The Method and Equipment Blanks (reported in SDG L1218556) were non-detect for all Congeners; therefore, blank action was not required.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike; therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix (see QAPP 2012 for further discussion of surrogate spiking solution levels). All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners except 2,4,4'-Trichlorobiphenyl and 2,2',5,5'-Tetrachlorobiphenyl, which recovered high compared to criteria in the LCSD. The results for these two Congeners in all samples were estimated (J) with indeterminate due to other QC issues, as listed in Table 2. These results indicate variable laboratory accuracy for the method of analysis in the absence of the site matrix.

The MS/MSD analyses were performed on sample S-12O-C016-1.1-1.6. The MS/MSD recoveries were acceptable for all 18 NOAA Congeners except 2,4,4'-Trichlorobiphenyl, which recovered high above criteria in the MS and MSD. The result for this one Congener was estimated (J) in sample S-12O-C016-1.1-1.6 with indeterminate bias due to additional QC issues as listed in Table 2. These results indicate acceptable laboratory accuracy for analysis of all Congeners except for 2,4,4'-Trichlorobiphenyl for the site matrix.

## Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners except 2,4,4'-Trichlorobiphenyl and 2,2',5,5'-Tetrachlorobiphenyl. The results for these two Congeners were estimated (J) in all samples with indeterminate bias as listed in Table 2. These results indicate variable laboratory precision for the method of analysis.

MS/MSD precision was acceptable for all 18 NOAA Congeners indicating acceptable laboratory precision for the method of analysis in the site matrix.

There were four Field Duplicate pairs associated with this SDG: S-12O-C012-0.0-0.3 / S-12O-C012-0.0-0.2-REP, S-12O-C012-0.3-0.8 / S-12O-C012-0.2-0.7-REP, S-12O-C018-0.0-0.5 / S-12O-C018-0.0-0.3-REP, and S-12O-C018-0.5-1.0 / S-12O-C018-0.3-0.8-REP. Samples S-12O-C012-0.0-0.3 and S-12O-C012-0.3-0.8 were reported in SDG L1219169 whereas all of the other samples were reported in this SDG L1219170. Actions taken are listed in Table 2 for samples included in this SDG and in the validation report for SDG L1219169 for the two samples in that SDG. The following actions were taken for FD imprecision (RPD > 50%):

- S-12O-C012-0.0-0.3 / S-12O-C012-0.0-0.2-REP: 2,2',5-Trichlorobiphenyl results were estimated (J) with indeterminate bias
- S-12O-C012-0.3-0.8 / S-12O-C012-0.2-0.7-REP: nine Congener results were estimated (J or UJ) with indeterminate bias
- S-12O-C018-0.0-0.5 / S-12O-C018-0.0-0.3-REP: ten Congener results were estimated (J) with indeterminate bias

- S-12O-C018-0.5-1.0 / S-12O-C018-0.3-0.8-REP: seven Congener results were estimated (J) with indeterminate bias

These FD results are an indication of generally unacceptable precision and evidence of sample matrix heterogeneity at the site locations, which may impact representativeness of the 18 NOAA PCB Congeners in these post-dredge core samples.

### Sensitivity & Reporting

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 3 to over 4,100 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2012). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results for samples analyzed with dilutions with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
All samples except: S-12O-C012-0.2-0.7-REP S-12O-C016-1.1-1.6 S-12O-C018-0.0-0.3-REP S-12O-C018-0.0-0.5	2,4,4'-Trichlorobiphenyl	DJ	I	High LCS recovery + LCS/LCSD imprecision
S-12O-C016-1.1-1.6	2,4,4'-Trichlorobiphenyl	DJ	I	High LCS recovery + LCS/LCSD imprecision + High MS recovery
S-12O-C012-0.2-0.7-REP S-12O-C018-0.0-0.3-REP S-12O-C018-0.0-0.5	2,4,4'-Trichlorobiphenyl	DJ	I	High LCS recovery + LCS/LCSD imprecision + FD imprecision
All samples except: S-12O-C012-0.2-0.7-REP S-12O-C018-0.0-0.3-REP S-12O-C018-0.0-0.5 S-12O-C018-0.3-0.8-REP S-12O-C018-0.5-1.0	2,2',5,5'-Tetrachlorobiphenyl	DJ	I	High LCS recovery + LCS/LCSD imprecision
S-12O-C012-0.2-0.7-REP S-12O-C018-0.0-0.3-REP S-12O-C018-0.0-0.5 S-12O-C018-0.3-0.8-REP S-12O-C018-0.5-1.0	2,2',5,5'-Tetrachlorobiphenyl	DJ	I	High LCS recovery + LCS/LCSD imprecision + FD imprecision
S-12O-C012-0.0-0.2-REP	2,2',5-Trichlorobiphenyl	DJ	I	FD imprecision

Table 2. Summary of Data Validation Actions - *continued*

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12O-C012-0.2-0.7-REP	2,4'-Dichlorobiphenyl 2,2',5'-Trichlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,3',4,4',5'-Pentachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl	D / DUJ	I	FD precision
S-12O-C018-0.0-0.5 S-12O-C018-0.0-0.3-REP	2,4'-Dichlorobiphenyl 2,2',5'-Trichlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,3',4,4',5'-Pentachlorobiphenyl 2,2',3,4,4',5'-Hexachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	I	FD imprecision
S-12O-C018-0.5-1.0 S-12O-C018-0.3-0.8-REP	2,2',5'-Trichlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,3',4,4',5'-Pentachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	I	FD imprecision

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

*Abbreviations used in Table 2:*

*FD = Field Duplicate*

*LCS = Laboratory Control Sample*

*LCSD = Laboratory Control Sample Duplicate*

*MS = Matrix Spike*





## Data Validation Report EPA Region I Tier I+ NOAA Congeners by 8082

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1219172

**Date(s) of Collection:** October 17, 2012 – October 18, 2012

**Number / Type  
Samples & Analyses** 22 Post-dredge sediment core samples for 18 NOAA Congeners by EPA  
SW-846 Method 8082

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** December 19, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA*, Rev. 5.0, prepared by Woods Hole Group, Inc., August 2012 (NBH OU1 QAPP Addendum 2012); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.

The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-120-C022-0.0-0.5	L1219172-01	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-120-C023-0.0-0.5	L1219172-02	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-120-C024-0.0-0.2	L1219172-03	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C024-0.2-0.7	L1219172-04	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C025-0.0-0.5	L1219172-05	10/17/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C026-0.0-0.5	L1219172-06	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C026-0.5-1.0	L1219172-07	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C027-0.0-0.2	L1219172-08	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C027-0.2-0.7	L1219172-09	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C028-0.7-1.2	L1219172-10	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C028-1.2-1.7	L1219172-11	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample

Table 1. Sample Descriptions and Analytical Parameters Validated - continued

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-120-C029-0.0-0.5	L1219172-12	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C030-0.0-0.5	L1219172-13	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C030-0.5-1.0	L1219172-14	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-120-C031-0.7-1.2	L1219172-15	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C031-1.2-1.7	L1219172-16	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C032-0.6-1.1	L1219172-17	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C032-1.1-1.6	L1219172-18	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C033-0.0-0.1	L1219172-19	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C033-0.1-0.6	L1219172-20	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-120-C033-0.0-0.2-REP	L1219172-21	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-120-C033-0.0-0.1
S-120-C033-0.2-0.7-REP	L1219172-22	10/18/12	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-120-C033-0.1-0.6

Analytical method references:

18 NOAA Congeners: *Polychlorinated Biphenyls (PCBs) by Gas Chromatography* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8082, Rev. 1, February 2007.

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2012 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria

- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of 18 NOAA PCB Congeners, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2012 requirements and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2012 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The post-dredge sediment cores were collected on October 17, 2012 and October 18, 2012 and aliquots of the cores were generated by WHG for PCB Congener analysis. The post-dredge sediment core samples were received intact cold on October 19, 2012 and aliquots of the “as received” samples were analyzed for percent solids and then frozen to arrest holding time. All samples had percent solids content of 29 to 50%; therefore, these sediment core samples were air-dried, as required by the QAPP, and placed in frozen storage. The laboratory maintained the same Lab Sample ID for both the “as received” and “air-dried” sediment aliquots.

After air-drying, the percent solids content for all samples was greater than 79%. These air-dried samples were extracted by November 7, 2012. As a consequence of the freezing of the aliquots by WHG and Alpha, these samples were considered to have been extracted and analyzed within holding time.

Fourteen additional sediment core samples were received and “Archived” at the laboratory, as requested on the Chain-of-Custody (COC).

### **Accuracy**

The Method and Equipment Blanks were non-detect for all Congeners; therefore, blank action was not required.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike; therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix (see QAPP 2012 for further discussion of surrogate spiking solution levels). All surrogate recoveries met acceptance criteria for the samples in this SDG.

The LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory accuracy for the method of analysis in the absence of the site matrix.

MS/MSD analyses were performed on the samples S-12O-C022-0.0-0.5 (not requested on COC), S-12O-C023-0.0-0.5, and S-12O-C030-0.5-1.0. Accuracy was acceptable for all 18 NOAA Congeners in all three sets of MS/MSD analyses except 2,2',5-Trichlorobiphenyl, 2,4,4'-Trichlorobiphenyl, 2,2',5,5'-Tetrachlorobiphenyl, 2,3',4,4'-Tetrachlorobiphenyl, and 2,3',4,4',5-Pentachlorobiphenyl recovered high compared to criteria in the MS and/or MSD in the analysis performed on sample S-12O-C030-0.5-1.0. The results for these five Congeners were estimated (J) with possible high bias in S-12O-C030-0.5-1.0 as shown in Table 2. Overall, the MS/MSD results indicate variable accuracy for analysis of the 18 NOAA Congeners in the site matrix.

### **Precision**

LCS/LCSD precision was acceptable for all 18 NOAA Congeners. These results indicate acceptable laboratory precision for the method of analysis in the absence of the site matrix.

MS/MSD precision was acceptable for the analyses performed on sample S-12O-C030-0.5-1.0 but unacceptable for 13 out of 18 NOAA Congeners in the MS/MSD analyses performed on sample S-12O-C022-0.0-0.5 and all 18 NOAA Congeners performed on sample S-12O-C023-0.0-0.5. The 31 affected Congeners in these two samples were estimated (J or UJ) with indeterminate bias as shown in Table 2. These results suggest sample heterogeneity may be affecting the results reported for the method of analysis in the site sediment matrix.

There were two Field Duplicate pairs reported in this SDG: S-12O-C033-0.0-0.1 / S-12O-C033-0.0-0.2-REP and S-12O-C033-0.1-0.6 / S-12O-C033-0.2-0.7-REP. FD precision was acceptable for all 18 NOAA Congeners in the FD pair S-12O-C033-0.0-0.1 / S-12O-C033-0.0-0.2-REP. FD precision was unacceptable (RPD > 50%) for eight of the 18 NOAA Congeners in the FD pair S-12O-C033-0.1-0.6 / S-12O-C033-0.2-0.7-REP. These eight Congener results were estimated (J) with indeterminate bias due to FD imprecision in both samples of the FD pair as listed in Table 2. These FD results are an indication of acceptable precision at the core surface horizon but unacceptable precision and evidence of sample matrix heterogeneity at the sub-surface horizon at this site location, which may impact representativeness of the 18 NOAA PCB Congener results in these post-dredge core samples.

### Sensitivity & Reporting

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made (RLs were 1 to over 570 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2012). However, Total PCBs (as the sum of all detected Congener results) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported all results for samples analyzed with dilutions with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12O-C030-0.5-1.0	2,2',5'-Trichlorobiphenyl 2,4,4'-Trichlorobiphenyl 2,2',5,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,3',4,4',5'-Pentachlorobiphenyl	DJ	H	High MS recovery
S-12O-C022-0.0-0.5	2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,3,3',4,4'-Pentachlorobiphenyl 2,3',4,4',5'-Pentachlorobiphenyl 2,2',3,3',4,4'-Hexachlorobiphenyl 2,2',3,4,4',5'-Hexachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl 2,2',3,3',4,4',5'-Heptachlorobiphenyl 2,2',3,4,4',5,5'-Heptachlorobiphenyl 2,2',3,4',5,5',6-Heptachlorobiphenyl 2,2',3,3',4,4',5,6-Octachlorobiphenyl 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl DecaCB - Homologue	DJ / DUJ	I	MS/MSD imprecision
S-12O-C033-0.1-0.6 S-12O-C033-0.2-0.7- REP	2,4'-Dichlorobiphenyl 2,2',5'-Trichlorobiphenyl 2,4,4'-Trichlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,2',5,5'-Tetrachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	I	FD imprecision

Table 2. Summary of Data Validation Actions - continued

<b>Field Sample ID</b>	<b>Analyte</b>	<b>Qualifier</b>	<b>Bias</b>	<b>Validation Comments</b>
S-12O-C023-0.0-0.5	All 18 NOAA Congeners	DJ / DUJ	I	MS/MSD imprecision

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

*Abbreviations used in Table 2:*

*FD = Field Duplicate*

*MS = Matrix Spike*

*MSD = Matrix Spike Duplicate*



**Data Validation Report**  
**EPA Region I Tier I+**  
**PCB Homologues by 8270C-SIM**

**Client/Company:** Woods Hole Group, Inc. (WHG)

**Site/Project Name:** New Bedford Harbor Superfund Site – OU1

**Laboratory:** Alpha Analytical – Mansfield, MA

**Lab Project Number(s):** L1219173

**Date(s) of Collection:** October 15, 2012, October 16, 2012, & October 18, 2012

**Number / Type  
Samples & Analyses** 4 Post-dredge sediment core samples for PCB Homologues by EPA SW-846 Method 8270C-SIM

**Senior Data Reviewers:** Nancy C. Rothman, PhD, New Environmental Horizons, Inc.  
Susan D. Chapnick, New Environmental Horizons, Inc.

**Date Completed:** December 21, 2012

This EPA Region I Tier I+ validation for PCB Congeners and was performed with the following intentions: 1) to determine if the data were generated and reported in accordance with the *Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 5.0*, prepared by Woods Hole Group, Inc., August 2012 (NBH OU1 QAPP Addendum 2012); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004; 2) to determine if the data met project data quality objectives for acceptable accuracy, precision, sensitivity; and technical usability; and 3) to generate an electronic deliverable of validated results with project-specific data validation qualifiers added.



The Data Validation Report consists of three parts:

- This Data Validation Report letter summarizing the actions taken;
- The database file of validated sample results with validation qualifiers, bias, and comments added based on actions taken; and
- The Data Review Checklist completed during this validation to document the Tier I+ review. The Checklist is an integral part of the DV Report as it contains comprehensive details of all quality control (QC) reviewed, the acceptance criteria used, and the professional judgment and actions taken.

## I. Sample Descriptions and Analytical Parameters

The sample IDs, date of sampling, identification analytical parameters reviewed and the quality control (QC) results (as applicable) of Matrix Spike (MS), Matrix Spike Duplicate (MSD), Matrix Duplicate (MD), Field Duplicate (FD), Field Equipment Blank (EB), and Trip Blank (TB), are listed below in Table 1.

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-120-C003-0.5-1.0	L1219173-01	10/15/12	Air-dried Sediment	PCB Homologues	Field Sample
S-120-C005-0.0-0.4	L1219173-02	10/15/12	Air-dried Sediment	PCB Homologues	Field Sample
S-120-C008-0.7-1.2	L1219173-03	10/16/12	Air-dried Sediment	PCB Homologues	Field Sample
S-120-C026-0.0-0.5	L1219173-04	10/18/12	Air-dried Sediment	PCB Homologues	Field Sample

Analytical method references:

PCB Homologues: *Determination of PCB Homologs, Individual Congeners, and Pesticides by Gas Chromatography/Mass Spectrometry in the Select Ion Monitoring (SIM) Mode (EPA 680 & 8270D)*, Alpha SOP O-015, Issue No. 5, March 21, 2011

## II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of 18 NOAA PCB Congener sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2012 requirements.

The following QC elements, as applicable to the analytical methods, were reviewed:

- Data package completeness and reporting protocols
- Sample receipt, holding times and preservation criteria

- Blank results including Method Blanks, Equipment Blanks, & Trip blanks
- Laboratory Control Sample (LCS) recoveries / LCS Duplicate Recoveries
- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
- MS/MSD, LCS/LCSD, sample/Laboratory Duplicate (LD), or sample/Field Duplicate (FD) Relative Percent Differences (RPDs)
- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria\* (including tune criteria, initial calibration and continuing calibration verification)
- Internal Standard (IS) Recoveries\*
- Retention Time windows\*
- Other method-specific QC if applicable and reported\* (e.g., serial dilution results for metals)
- Deficiencies or protocol deviations as noted in the Laboratory Narrative

\* This QC element is reviewed associated with the Tier II-type validation only. For Tier I+ validations this QC element is assumed to be acceptable unless otherwise noted in the laboratory narrative.

Based on this Tier I+ validation of PCB Homologues, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2012 requirements and with the understanding of the potential uncertainty (bias) in the qualified results summarized in Table 2. NEH generated electronic validated results based on the project database file received from WHG for these data, by updating the following database fields for field samples and field QC only: VALID\_QUAL, VALIDATION\_LEVEL, VALIDATION, VALID\_DATE, BIAS, and DV\_COMMENT.

The remainder of this report documents “exceptions” to the NBH OU1 QAPP Addendum 2012 criteria or clarifications of data reported. QC elements not discussed below met all QAPP criteria. The full documentation of all QC elements reviewed during the Tier I+ validation are presented in the attached Data Review Checklist.

### **Sample Collection, Receipt, and Holding Time**

The samples reported in this SDG for PCB Homologues were also analyzed for the 18 NOAA PCB Congeners as follows: S-12O-C003-0.5-1.0 was reported in SDG L1218556; S-12O-C005-0.0-0.4 and S-12O-C008-0.7-1.2 were reported in SDG L1219169; and S-12O-C026-0.0-0.5 was reported in SDG L1219172. The data user is directed to these reports for details on sample receipt and handling.

### **Accuracy**

The Method Blank reported detected result for three Homologues. A comparison between the levels reported in the Method Blank with the levels reported in the samples, lead to the following actions as shown in Table 2:

- Total Octachlorobiphenyls (reported as Total OctaCB in the EDD) were negated (U) at the level found in samples S-12O-C003-0.5-1.0 and S-12O-C008-0.7-1.2
- Total Nonachlorobiphenyls (reported as Total NonaCB in the EDD) were negated (U) at the level found in samples S-12O-C003-0.5-1.0, S-12O-C005-0.0-0.4, and S-12O-C026-0.0-0.5

The Equipment Blanks were not analyzed for PCB Homologues. However, they were nondetect for all 18 NOAA Congeners (as reported in SDG L1218556); therefore, no equipment blank action was required.

Based on the high levels of PCB Congeners observed in previous site sediments, the laboratory used a “high level” surrogate spike; therefore, appropriate surrogate spike recoveries could be evaluated for accuracy in the sample matrix (see QAPP 2012 for further discussion of surrogate spiking solution levels). All surrogate recoveries met acceptance criteria for the samples in this SDG.

Seventy-four representative Congeners were spiked into the LCS/LCSD, which is consistent with QAPP requirements. All spiked Congeners recovered within criteria in the LCS/LCSD indicating acceptable accuracy for PCB Homologue analysis in the absence of the site matrix.

There were no MS/MSD analyses performed on the samples in this SDG; therefore, accuracy for PCB Homologue analysis for the site matrix could not be evaluated.

### **Precision**

LCS/LCSD precision was acceptable for all 74 PCB Congeners. These results indicate acceptable laboratory precision for the method of analysis in the absence of the site matrix.

There were no Field Duplicates associated with the samples in this SDG; therefore it was not possible to evaluate precision from field collection through analysis for PCB Homologues.

### **Sensitivity & Reporting**

All samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all reporting limits (RLs), reported as DETECT\_LIMIT in the validated EDD, were increased as a consequence of the dilutions made; however, only sample S-12O-C026-0.0-0.5, which was analyzed at DF=200, had RLs > PQLs given in the QAPP (RLs were 4.7 times higher than 20 µg/Kg PQL given in QAPP Worksheet #15 for this one sample). However, Total PCBs (as the sum of PCB Homologues) for these samples were detected in all sediment samples at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

During data validation, the data originally reported for 18 NOAA Congeners and PCB Homologue results reported in this SDG were compared for each sample to evaluate reasonableness of the two sets of results. Based on professional judgment, the 18 NOAA PCB Congener results and the PCB Homologue results are considered reasonably comparable (e.g., Total TriCB was higher than the sum of the two Trichlorobiphenyl isomers reported as part of the 18 NOAA Congeners, as would be expected).

The laboratory reported all results for samples analyzed with dilutions with a “D” qualifier. At Battelle’s request, these “D” qualifiers were maintained during the DV process.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-12O-C003-0.5-1.0 S-12O-C008-0.7-1.2	Total OctaCB	DU		Negated due to Blank Action
S-12O-C003-0.5-1.0 S-12O-C005-0.0-0.4 S-12O-C026-0.0-0.5	Total NonaCB	DU		Negated due to Blank Action

*Qualifiers: U = Analyte is non-detect at or above the sample-specific reporting limit (RL); UJ = Non-detect is estimated at the RL; J = Result is estimated; EB = analyte detected in associated equipment blank; EMPC = estimated maximum possible concentration (PCB congeners only); R = Result is rejected and is unusable for project decisions.*

*Bias: L = Low; H = High; I = Indeterminate*

**SDMS REPOSITORY TARGET SHEET**

US EPA New England  
Superfund Document Management System /  
RCRA Document Management System  
**Native Files Target Sheet**

SDMS Document ID #: 540301

Site Name: New Bedford

File Type(s) Attached (examples: Excel file or .jpg):

.xls

Document Type this Target Sheet Represents:


Map       Photograph       Graph/Chart

Video       Compact Disc       Other (Specify below)

Description or Comments:

Spreadsheets for New Environmental Horizons Data Validation Reports

**To view the attached files, open the "Attachment Panel"**

**by clicking the paper clip -  - in the left side panel of this window.**

**\*\* Please note to view attachments the software corresponding with the specified file type is necessary. \*\***

For any additional assistance please contact the EPA New England Office of Site Remediation and Restoration Records and Information Center-  
Telephone (617) 918 1440