WOODS HOLE GROUP

US Army Corps of Engineers
New England District

FINAL REPORT

2010 Environmental Monitoring, Sampling, and Analysis Reports

NEW BEDFORD HARBOR SUPERFUND SITE
NEW BEDFORD, MASSACHUSETTS

Contract No. W912WJ-09-D-0001-0010-03



Superfund Records Center
SITE: New Bedford
BREAK: 7.5
OTHER: 491737

I. Water Quality Monitoring Summary Report
II. Sediment Monitoring Summary Report
III. 2010 Biannual Groundwater Monitoring at the Sawyer Street Confined Disposal Facility
IV. Sediment Trap Study Summary Report
V. North of Wood Street Post-Remediation Monitoring

Prepared For:
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July 2011

SDMS DocID 491737

2010

FINAL REPORT NEW BEDFORD HARBOR SUPERFUND SITE

2010 Environmental Monitoring, Sampling, and Analysis Reports

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FINAL
WATER QUALITY MONITORING SUMMARY REPORT
2010 REMEDIAL DREDGING
NEW BEDFORD HARBOR SUPERFUND SITE, OU #1

Contract No. W912WJ-09-D-0001-0010-03



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April 2011

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FINAL
WATER QUALITY MONITORING SUMMARY REPORT
2010 REMEDIAL DREDGING
NEW BEDFORD HARBOR SUPERFUND SITE
OPERATIONAL UNIT #1
NEW BEDFORD, MASSACHUSETTS

Contract No. W912WJ-09-D-0001-0010-03

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Table of Contents

EXECUTIVE SUMMARY ES-1

1.0 INTRODUCTION 1

1.1 SITE LOCATION AND DESCRIPTION 1

1.2 PROJECT OBJECTIVES 3

1.3 WATER QUALITY MONITORING PROGRAM 3

2.0 METHODS 9

2.1 MONITORING APPROACH 9

2.1.1 Boat-Based Water Quality Monitoring 10

2.1.2 Fixed Station Water Quality Monitoring 12

2.1.3 Discrete Water Samples 16

2.2 LABORATORY ANALYSIS 16

2.2.1 Total Suspended Solids and Turbidity 17

2.2.2 Polychlorinated Biphenyl Congeners (NOAA-18) 17

2.2.3 Toxicity 18

2.2.3.1 Test Species 18

2.2.3.2 Site Water Samples and Laboratory Control Water 19

2.2.3.3 Bioassay Tests 19

2.2.3.4 Data Analysis 20

2.2.3.5 Quality Control 20

3.0 CHRONOLOGY OF BOAT-BASED OBSERVATIONS 21

4.0 DREDGING SUMMARY 33

5.0 RESULTS 35

5.1 FIELD MONITORING SUMMARY 35

5.1.1 Boat-Based Monitoring 35

5.1.1.1 Turbidity Summary 35

5.1.1.2 Dissolved Oxygen Summary 36

5.1.2 Fixed-Station Continuous Monitoring 37

5.1.3 Collection of Discrete Water Samples 41

5.1.3.1 Baseline Water Quality Samples 41

5.1.3.2 Level I Water Quality Samples 42

5.1.3.3 Level II Toxicity Evaluation Dilution Study Samples 43
5.2 LABORATORY TESTING SUMMARY 43
5.2.1 Total Suspended Solids and Turbidity 44
5.2.2 Polychlorinated Biphenyl Congeners (NOAA-18) 45
5.2.3 Toxicity 46
5.2.4 Quality Control 48
6.0 DISCUSSION 49
6.1 FISHERY AND WILDLIFE OBSERVATIONS 49
6.2 SEDIMENT RESUSPENSION RELATED TO REMEDIAL DREDGING ACTIVITIES 50
REFERENCES 53
APPENDIX A. WATER QUALITY MONITORING FIELD LOGS AND DAILY REPORTS (ON CD) A-1
APPENDIX B. CONTINUOUS *IN-SITU* FIXED STATION WATER QUALITY TIME SERIES DATA (ON CD) B-1
APPENDIX C. ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA (ON CD) C-1
APPENDIX D. ENVIROSYSTEMS, INC. REPORTS AND ANALYTICAL DATA (ON CD) D-1

List of Figures

Figure 1. Basemap of New Bedford Harbor Superfund Site in Southeastern, MA ... 1
Figure 2. Basemap of 2010 Remedial Dredging Areas ... 5
Figure 3. Decision Sequence for 2010 Water Quality Monitoring ... 6
Figure 4. Decision Sequence for Level III Water Quality Sample Analysis ... 7
Figure 5. Monitoring Transects for the Turbidity Criteria Compliance Threshold.. 11
Figure 6. 2010 Fixed Station *In-Situ* Water Quality Mooring Locations ... 13
Figure 7. Diagram of Fixed Station Water Quality Moorings ... 14
Figure 8. Data Telemetry Buoy System that was Coupled with the YSI Sonde ... 15
Figure 9. Mud CatTM Hydraulic Dredge ... 33
Figure 10. Debris Removal Excavator and Debris Storage Scow ... 34
Figure 11. Example of Turbidity Levels Related to Dredging and Support Operations in the Northern Part of the Estuary, July 8–15, 2010 ... 39
Figure 12. Example of Rapid Changes in Dissolved Oxygen, August 26–September 3, 2010 ... 40
Figure 13. Average Monthly Water Temperature at the SAJ/SAK Fixed-Station *in-situ* YSI sonde, March 25 – November 22, 2010. ... 41
Figure 14. Correlation Between TSS and Turbidity Results from 2010 Baseline and Level I Samples ... 44
Figure 15. Cormorants and Gulls Observed in Northern Active Dredge Zone ... 50

List of Tables

Table 1. Fixed-station IDs and positions for *in-situ* instruments ... 12
Table 2. Sample collection requirements and participating laboratories ... 16
Table 3. Summary of discrete water sampling events ... 42
Table 4. Summary of TSS and turbidity results ... 45
Table 5. Summary of Total and Dissolved PCB (NOAA-18 Congeners) results ... 46
Table 6. Summary of toxicity results for Level I samples ... 47
Table 7. Summary of toxicity results for Level II samples ... 47

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EXECUTIVE SUMMARY

In 2010, remediation activities at the New Bedford Harbor Superfund Site included hydraulic dredging and excavation of contaminated sediments from the upper harbor. Water quality monitoring was performed during remediation activities as part of a larger environmental monitoring program with the goal to minimize potential ecological impacts that could be caused by the resuspension of contaminated sediment into the water column during operations. Data and observations resulting from the water quality monitoring were used to document background conditions and gauge the extent of impacts potentially resulting from remediation operations. The water quality monitoring program helped to ensure that dredging activities were conducted in a manner that did not produce extensive turbidity plumes and the potential associated impacts, such as toxicity to marine organisms, contaminant transport, or hindrance of the seasonal migrations of anadromous fish within the Acushnet River. This report presents the scope and key findings from the water quality monitoring performed during the 2010 dredge season.

Dredging, debris removal, and other support operations were performed between June and September 2010, and resulted in the removal of 26,411 cubic yards of contaminated sediments. Water quality monitoring was performed during the first week of dredging to reaffirm the ecological protectiveness of the project-based compliance criteria for turbidity, and to establish baseline water quality conditions of the harbor. The monitoring program included: 1) boat-based monitoring of *in-situ* turbidity and dissolved oxygen, and observation of the active work zone for sediment plumes, as well as fish and wildlife passage, 2) fixed-station water quality moorings deployed to record *in-situ* data that supplemented the boat-based monitoring, and 3) collection of discrete water samples for physical, chemical, and biological analysis for assessment of the ecological protectiveness of the project-specific compliance criteria for Site water turbidity.

Boat-based *in-situ* measurements were evaluated against turbidity compliance criteria, which was defined as 100 Nephelometric Turbidity Units (NTU) above background or ambient turbidity. Consistent with previous years, a compliance criteria threshold was defined to mandate that remediation have a low impact on the greater New Bedford Harbor ecology, and was used to determine whether discrete water samples would be collected and analyzed for verification of impacts. During the 2010 environmental monitoring season the compliance criteria threshold was defined as 100 NTU above background, 300-feet down-current of the active work zone. At the start of the 2010 monitoring season, the protectiveness of the 100 NTU turbidity compliance criteria was reevaluated by performing toxicity bioassays using Site water of varying turbidity that was collected from two locations in the planned remedial work zone. The turbidity toxicity evaluation study indicated that the water at 100 NTU above background exhibited no adverse toxic effects on the bioassay subject organisms. Based on these results, the protectiveness of the turbidity compliance criterion was reaffirmed and used with confidence. Observations by the boat-based monitoring team confirmed that the compliance threshold was not exceeded during the 2010 remediation dredging season.

Boat-based monitoring and the fixed-station *in-situ* turbidity data from the water quality moorings revealed that dredge operations did, at times, have an effect on the turbidity in the immediate vicinity of the dredging activity. Background turbidity levels ranged from >0 to 20 NTU compared to >0- 102 NTU during times of active remediation. The fixed-station *in-situ* data also exhibited that weather events, tidal activity, and natural influences affected water quality throughout the harbor. When turbidity plumes were observed, they were generally immediately adjacent to active debris removal operations or near the dredge on windy days when support vessels were utilized to keep the dredge positioned in a straight line. These plumes tended to be ephemeral, and were confined to within approximately 100-feet, well within the active work zone and compliance threshold.

Throughout the 2010 dredge season, large numbers of fish and wildlife were observed. Lower trophic level fish were consistently observed moving throughout the river between the Sawyer Street Confined Disposal Facility (CDF) and the Wood Street Bridge. Birds, such as great blue herons, green herons, gulls, swans, cormorants, egrets, osprey, terns and other water fowl were observed feeding along the shoreline and in the river. During late summer, hypoxic conditions were observed in the northernmost dredge areas and north of Wood Street. Water temperatures reached 30°C and dissolved oxygen concentrations dropped to below 1 mg/L; these hypoxic conditions are naturally occurring in estuarine systems like the Acushnet River. During hypoxic occasions small fish were observed struggling, and a few were found dead; however, no large scale fish kills were observed. During the active dredge season, when fish were most abundant, there appeared to be no restriction of fish movement past the dredge area.

The combination of boat-based monitoring, fixed-station *in-situ* water quality data, and discrete water samples demonstrated that the remediation operations at the New Bedford Harbor Superfund Site have a low, but measurable impact to water quality. These impacts, most notably to turbidity and suspended sediment concentration, were limited to near-field areas, contained within the active dredge zone, and generally decreased with increasing distance from the active operations. Overall, the polychlorinated biphenyls (PCB) and toxicity data, along with the *in-situ* water quality measurements, confirmed the project compliance criteria are ecologically protective, while allowing remediation efforts to progress.

1.0 INTRODUCTION

1.1 SITE LOCATION AND DESCRIPTION

The New Bedford Harbor Superfund 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.

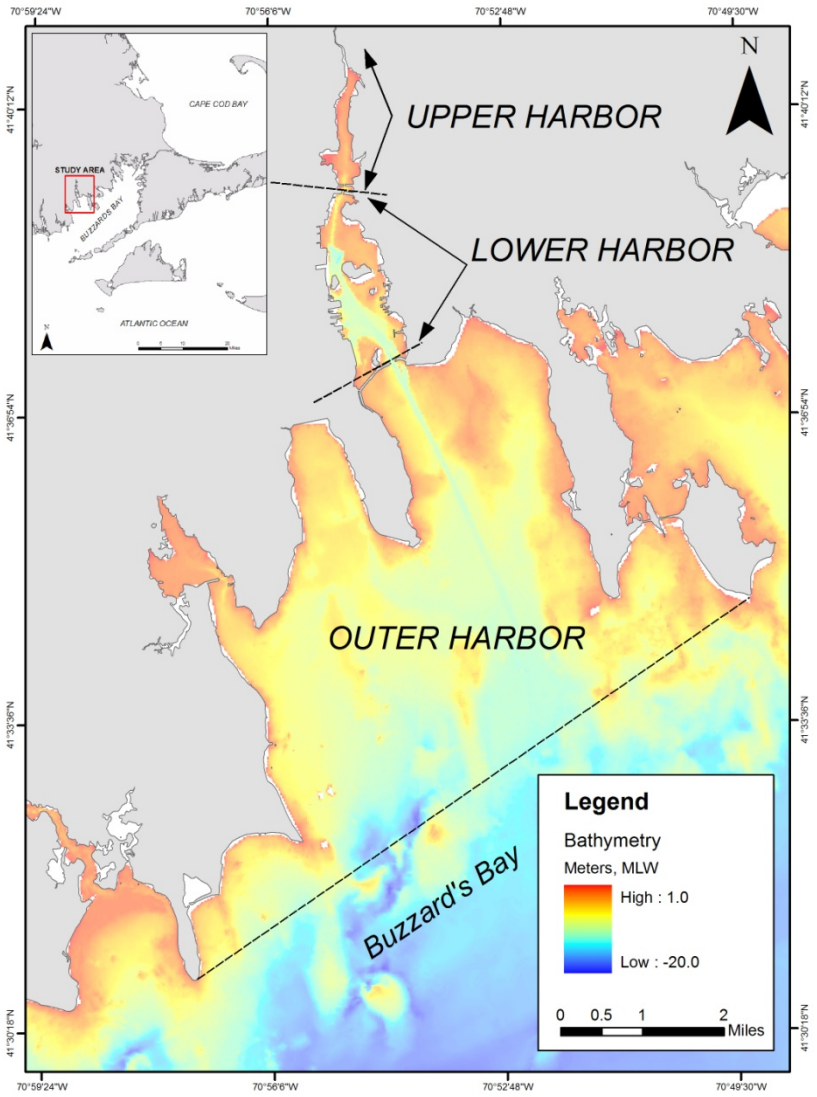

Figure 1. Basemap of New Bedford Harbor Superfund Site in Southeastern, MA

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.

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 operated between the 1940s and the 1970s. One facility, Aerovox Corporation, is 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, which are consistent with geographic features, basin morphology, and gradients of contamination (Figure 1). 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 present sediment PCB levels ranging from below detection to approximately 4,000 parts per million (ppm). Prior to the removal of the most contaminated hot spot sediments in 1994 and 1995 as part of EPA's first cleanup phase, 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 present 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 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).

1.2 PROJECT OBJECTIVES

The primary objective of the 2010 water quality monitoring program was to conduct boat-based and fixed-station *in-situ* monitoring during dredging activity. Remediation of the Site involved the excavation and dredging of approximately 900,000 cubic yards of PCB-contaminated sediment. The majority of the contaminated material was 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 was then pumped to the Area D Dewatering Facility located on Herman Melville Boulevard where it was mechanically dewatered and transported off-site for disposal.

The field reconnaissance information, collected as part of this effort, was made available to the USACE, USEPA, and dredge operators, and used to help limit the extent of water quality impacts resulting from dredging operations. This information was also used to make operational adjustments as may be necessary to limit the dispersal of suspended sediments and their associated contaminants, and to limit the extent of biological impacts to the water column. An additional objective of the monitoring program was to ensure that anadromous fish are able to successfully navigate through or around dredging operations on their natural migratory paths. Close observation of fisheries and wildlife behaviors will be pertinent to the goals of the project.

The Site is divided into a series of Dredge Management Units (DMU) based primarily on contamination levels and topography. Each year, specific Dredge Areas are established based on DMU boundaries, removal volume, and dredging operations logistics. In 2010, remediation activities at the Site included hydraulic dredging and/or debris removal in five Dredge Areas: N, G, J, K and L (Figure 2). A sixth area, Area M, is located in the narrow channel south of the Wood Street Bridge. Area M was mechanically excavated from the shoreline after hydraulic dredging was completed in 2009.

During dredging and dredging related activities, such as debris removal, resuspended sediments and associated contaminants can be transported by currents away from the dredge area. Contaminated sediments suspended in the water column present a concern for toxicity to aquatic organisms in the area. The water quality monitoring program presented herein was developed to assess the near-field water column impacts, as well as the extent of sediment resuspension and transport away from the remedial dredging operation.

1.3 WATER QUALITY MONITORING PROGRAM

The water quality monitoring program was developed to meet the objectives described above; this was accomplished by employing a tiered monitoring approach. The approach was consistent with previous years' monitoring and incorporated field measurements of turbidity and water quality parameters along with discrete water samples for physical, chemical, and biological testing, as needed.

The turbidity compliance criterion for the 2010 season was defined as 100 Nephelometric Turbidity Units (NTU) above background turbidity levels. Background turbidity levels

typically ranged from 2–10 NTU depending location and environmental conditions. The turbidity compliance threshold was set at 100 NTU, measured 300 feet down-current of the active work-zone. The active work zone was defined as the area between the northern boundary of Area M and the southern boundary of Area L. In the event that no work was being done in Area L on an ebb tide, the southern boundary of the active work zone was instead 300 feet down-current of the southern boundary of Area K. The turbidity compliance criterion was supported by three toxicity dilution studies: one performed during the 2009 dredge season, and two performed at the beginning of the 2010 season (Woods Hole Group, 2010a). In previous years, monitoring occurred along a 600 foot boundary in addition to the 300 foot boundary. However, during the 2009 season use of the 600 foot boundary was discontinued following a recommendation by the EPA, which was based on the evaluation of the toxicity dilution study results. Additional information regarding the change in monitoring protocol is provided in the 2009 Water Quality Monitoring Summary Report (Woods Hole Group, 2010a).

Background or ambient turbidity was quantified from observations at reference stations 1000-feet up-current of all dredging activity. For example, if background turbidity of the ambient harbor water was quantified as 10 NTU, then the exceedance criterion for that particular time would be 110 NTU. If values of ≥100 NTU above background were observed 300-feet down-current of the active work zone, and professional judgment was used attribute the exceedance to dredging related activities, the resident USACE NAE Project Engineer (Mr. Paul L'Heureux) was notified to implement corrective actions while WHG would proceed to collect water samples. Judgment used to determine the cause of an exceedance was based on an assessment of remediation activity, location, weather, tides, and knowledge of ambient water quality. Following water sample collection at the 300-foot location, WHG continued to monitor water quality parameters before collecting water samples at the background reference location, which is always located 1000-feet up-current of all activity. Figure 3 depicts the decision sequence for the 2010 water quality monitoring program.

After the full suite of water samples were collected, samples would be submitted for analysis. An initial toxicity analysis was performed using the *Arbacia punctulata* (sea urchin) 1-hour sperm immobilization/fertilization bioassay. Results of this initial toxicity screening and information regarding the intensity and duration of the plume were delivered to appropriate USACE personnel to determine whether subsequent analytical chemistry testing should be performed. Figure 4 illustrates the tiered decision sequence for water sample analyses.

An exceedance of the 100 NTU turbidity criterion was considered a "compliance threshold violation," if observed 300 feet down-current of the active work zone. This is in contrast to a "high turbidity event," which occurred if turbidity levels reached 100 NTU above background, but still within the active work zone, before reaching the 300-foot boundary. While a high turbidity event could be cause for concern and certain adjustments would be made to active dredging operations in the area, it did not constitute a project-specific compliance threshold violation and therefore did not require collection of water quality samples.

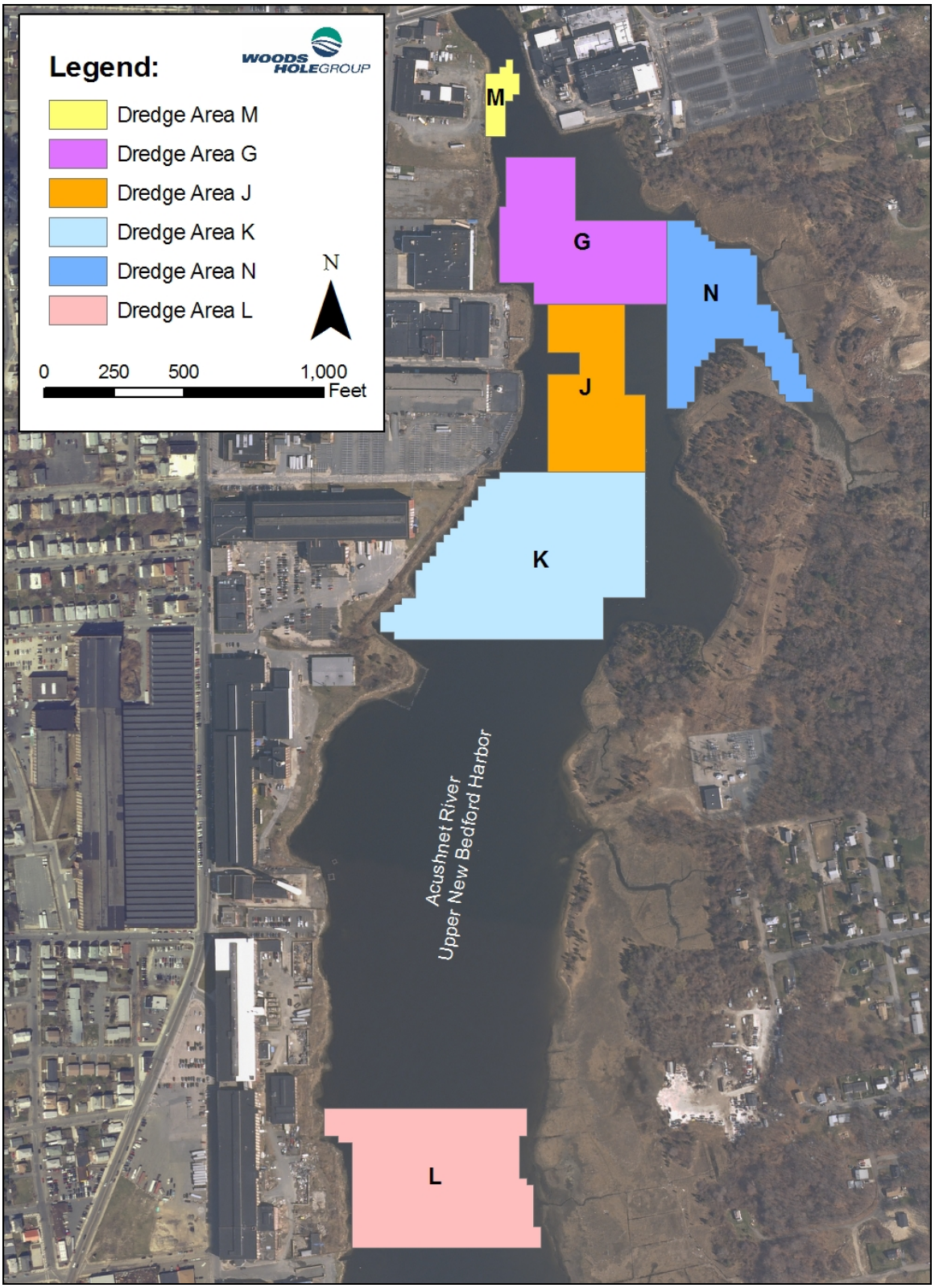

Figure 2. Basemap of 2010 Remedial Dredging Areas

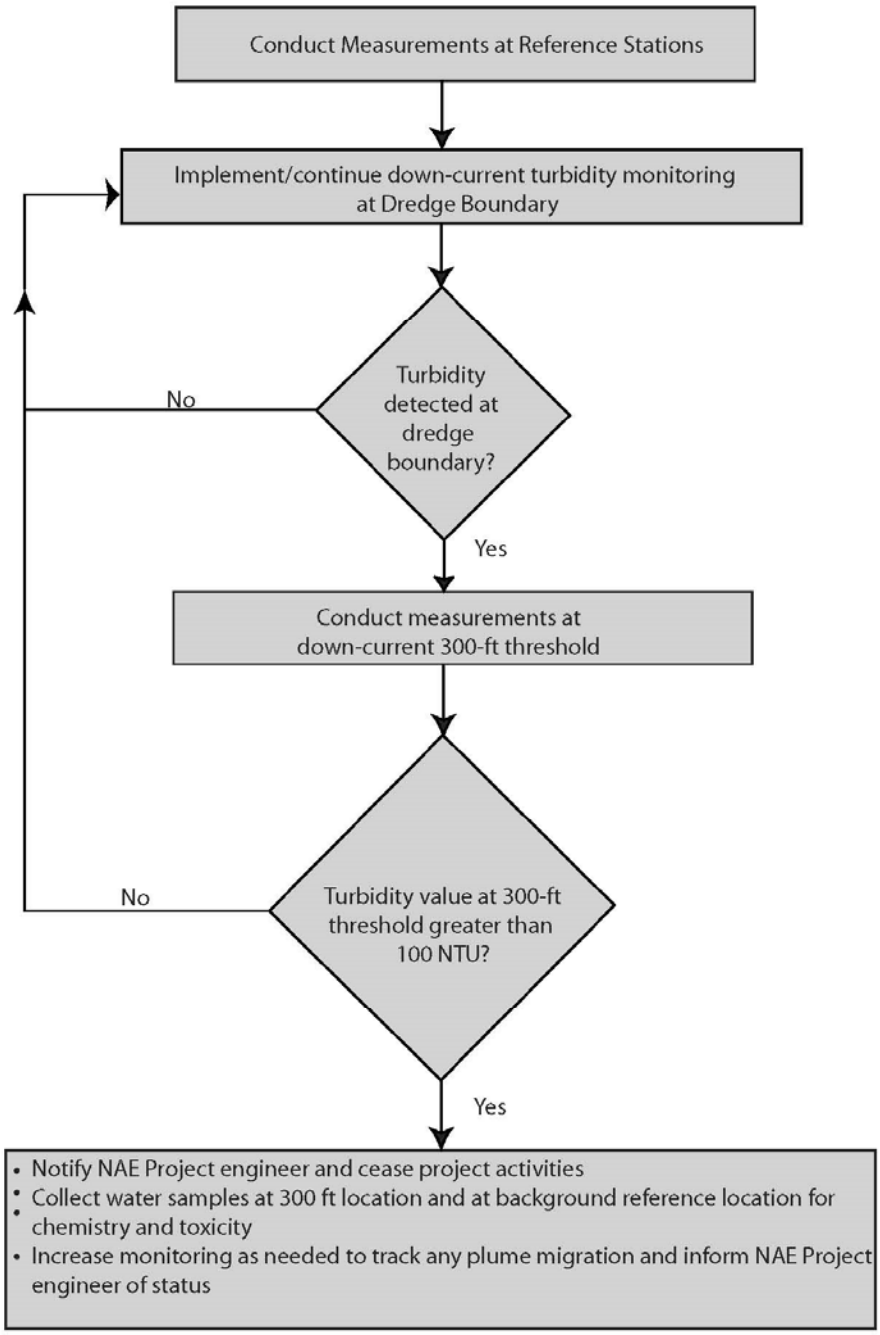

Figure 3. Decision Sequence for 2010 Water Quality Monitoring

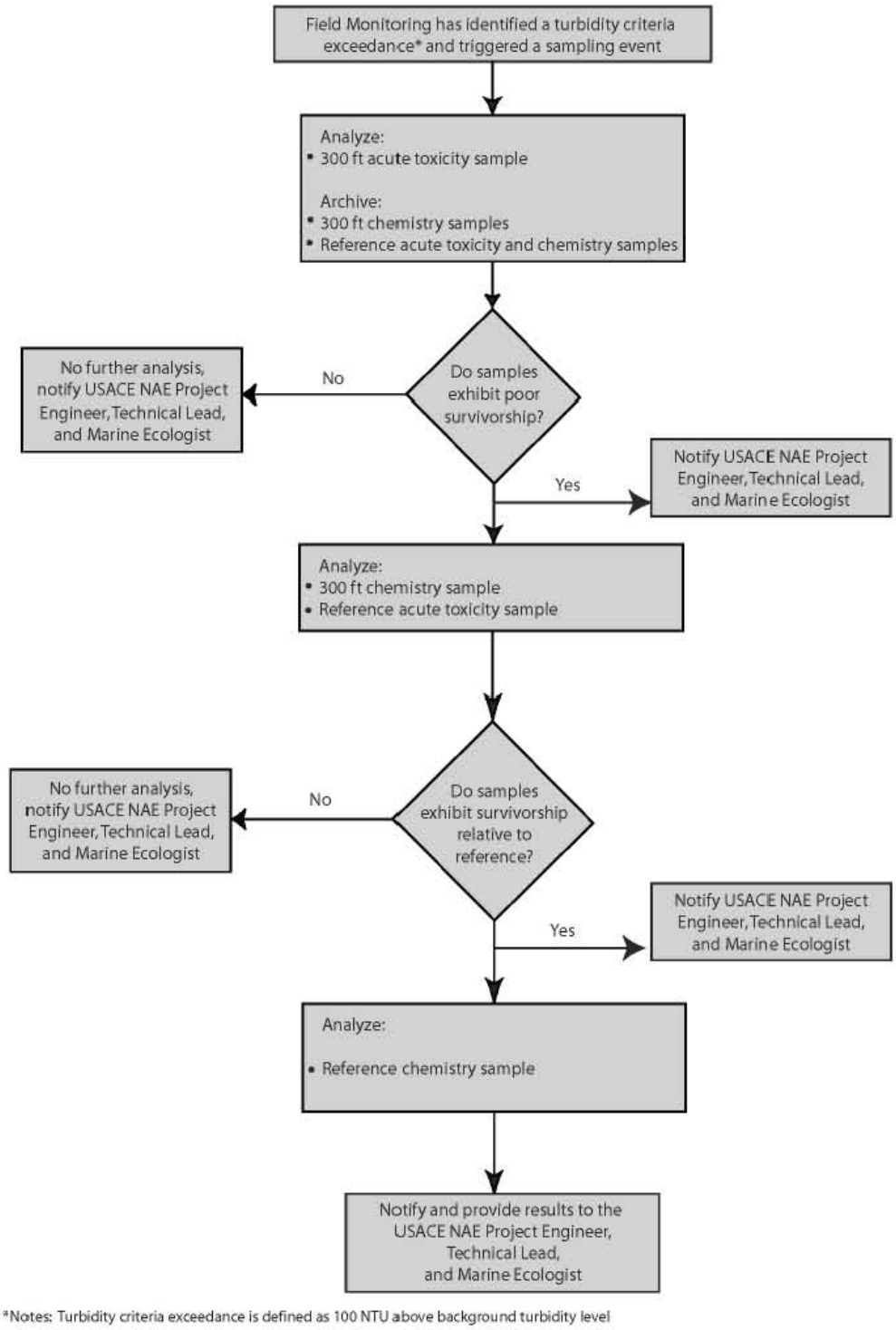

Figure 4. Decision Sequence for Level III Water Quality Sample Analysis

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2.0 METHODS

Methods employed to monitor water quality and collect water quality samples are summarized below and described in detail in the project Field Sampling Plan (Woods Hole Group, 2010b) and Quality Assurance Project Plan (Woods Hole Group, 2010c).

2.1 MONITORING APPROACH

The established sampling approach for this program employed a variety of methods to characterize sediment suspension in the water column and its potential impact on water quality. The overall approach utilizes an adaptive, criteria-based, sampling scheme to monitor project-related water quality parameters and impacts. *In-situ* boat-based water quality monitoring was performed along transects immediately adjacent to defined distances down-current of dredging operations and at up-current reference stations as described in Section 1.3. Daily boat-based monitoring data was supplemented with fixed instrument stations that recorded a near-continuous time series of the pertinent water quality parameters in the estuary before, during, and after the dredging season.

As with previous years' efforts, a tiered monitoring approach was employed that used varying levels of monitoring intensity to assess dredging related water quality impacts, the levels of monitoring are described below. Intensive daily monitoring occurred during the initial week of dredging to verify the effectiveness of the project-specific turbidity compliance threshold, and to track sediment plume dispersion and potential for contaminant transport downfield of the dredge. Following the intensive daily monitoring at the start of the season, boat-based monitoring was performed twice weekly. Flexibility in the monitoring program was necessary throughout the dredging process in order to respond to changing field conditions. The sampling locations and frequency of sampling was often altered depending on field conditions (e.g., tide level, location of equipment).

The three levels of monitoring are defined as follows:

- **Level I:**
  Level I represents the highest level of monitoring and required collection of discrete water samples, independent of *in-situ* observations. Level I sampling was conducted for activities considered to have the greatest potential to impact water quality or when new conditions were encountered, such as the start of the season. Level I sampling required collection of discrete water samples at two designated stations: Reference and 300-feet down-current. Water samples were collected for all test parameters from the depth of highest turbidity, based on *in-situ* readings. For the last five years, Level I sampling has been implemented to collect discrete samples at locations representing a full range of turbidities to evaluate relationships, if any, between turbidity, PCB concentration, and toxicity. Level I monitoring was performed to confirm that the compliance criterion was adequately protective of the environment.

- **Level II:**
  Level II represents a lower level of monitoring intensity compared to Level I, and is performed to identify any project related water quality impacts, as warranted or requested by the USACE.

- **Level III:**
  Level III represents routine, boat-based monitoring performed during dredging activities to evaluate *in-situ* turbidity readings against the project-specific turbidity compliance criterion. Collection of di**s**crete water samples for laboratory analysis is conditional upon *in-situ* turbidity monitoring and occurs if there is an exceedance of the compliance criterion.

Complete details of these sampling methods are provided in the Field Sampling Plan (Woods Hole Group, 2010b) and Quality Assurance Project Plan (Woods Hole Group, 2010c).

2.1.1 Boat-Based Water Quality Monitoring

Boat-based monitoring was performed aboard the R/V George Hampson, a 24-foot pontoon boat, which provided access to all areas of the harbor during most tides. Except for Level I and Level II monitoring events at the beginning of the dredge season, Level III monitoring was conducted twice weekly during the course of the 2010 dredge season. Beginning in June and ending in September, Level III monitoring was typically scheduled on Mondays and Thursdays, throughout the active dredge season. A YSI 6920-V2 sonde was used to collect *in-situ* measurements of depth, temperature, salinity, turbidity, and dissolved oxygen along monitoring transects. The sonde was equipped with optical turbidity and dissolved oxygen sensors; these sensors were calibrated for turbidity and conductivity once per week, according to manufacturer's specifications to ensure data quality. A handheld YSI 650 was used to display real-time data during observation transects with the sonde. Data were recorded on field log sheets and summarized in a daily report, which was delivered to the USACE at the end of each monitoring day. The daily water quality summary reports are presented in Appendix A.

At the start of each monitoring day, the vessel transited to the appropriate reference station, 1000-feet up-current of the active work zone, to collect background water quality observations. During a flood tide this station was located 1000-feet south of the Area L southern boundary. Conversely, during an ebb tide, this station was located 1000-feet north of the northern boundary of Area M. These background reference observations were used to characterize the ambient conditions in the estuary, and to serve as the basis for comparison with the monitoring data from the active work zone on a given day and tide. Background turbidity values were re-established as necessary given changes in weather and tidal conditions. The terms "background" and "reference" are used interchangeably in this report.

Once background values were established, the WHG team would initiate boat-based monitoring per required protocols. Water quality parameters were monitored at the specified transects 300-feet down-current from the active work zone. Figure 5 depicts the

monitoring compliance transects for the 2010 water quality monitoring efforts. An exceedance of the 100 NTU (above background) compliance criterion at either of the 300-foot transects would result in a compliance threshold violation. If such a plume was identified and turbidity readings remained elevated 100 NTU above background for a sustained period, the resident Project Engineer Mr. Paul L'Heureux was to be notified and all dredge related operations were to be shut down until the condition abated. Due to the variable nature of a plume, both temporally and spatially, it is left to the professional judgment of the monitoring team to determine whether a plume has been sustained to warrant sample collection. An ephemeral spike in turbidity would not warrant sample collection.

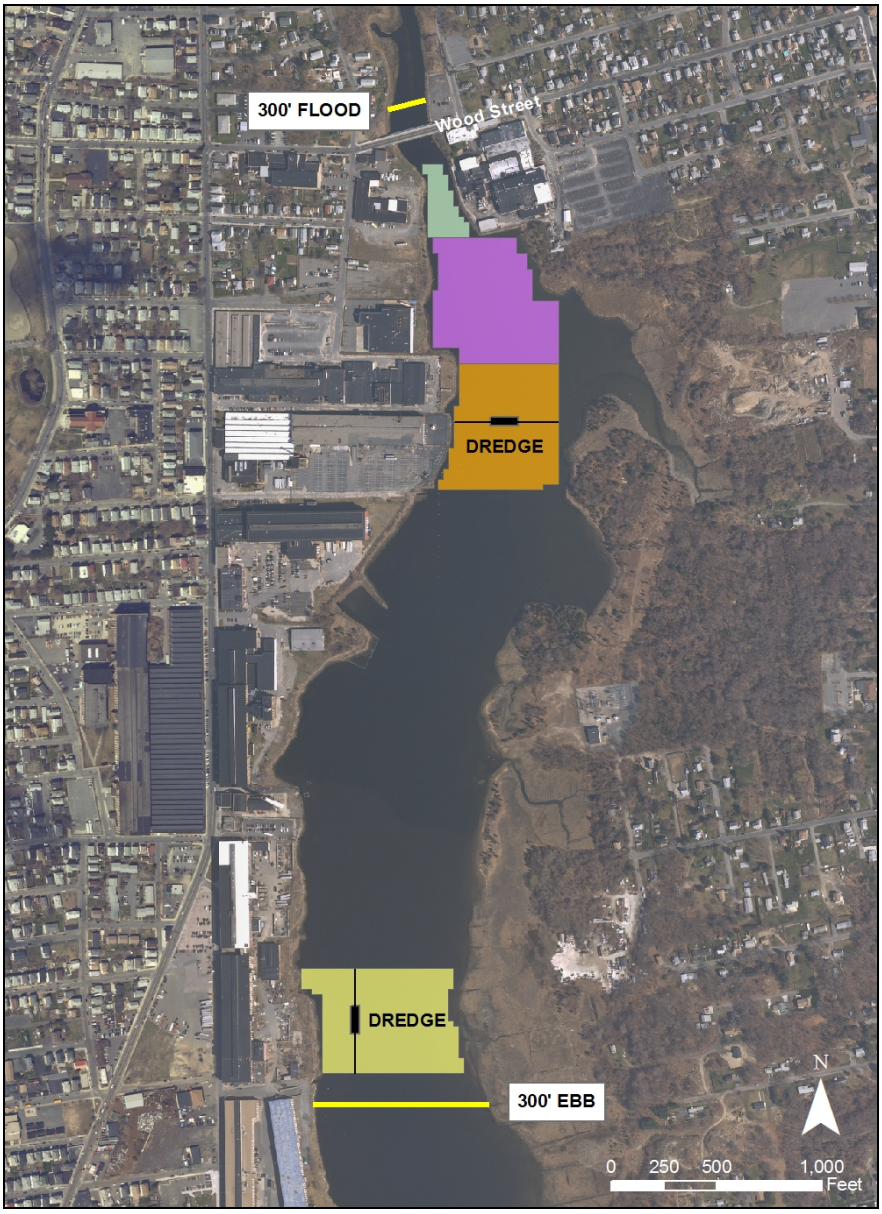

Figure 5. Monitoring Transects for the Turbidity Criteria Compliance Threshold

2.1.2 Fixed Station Water Quality Monitoring

In addition to the active boat-based monitoring, fixed station water quality moorings were deployed at five locations throughout the upper portion of the estuary (Figure 6). Mooring locations included: 1) North of the Wood Street Bridge (NWS), 2) South of the Wood Street Bridge (SWS), 3) South of Area J (SAJ) or Area K (SAK), 4) South of Area L (SAL), and 5) North of the Coggeshall Street Bridge (NCS). Moorings were designed to float approximately 1.0–1.5 feet below the water surface (Figure 7). Each mooring was instrumented with a YSI 6920-V2 sonde that recorded depth, temperature, salinity, turbidity, and dissolved oxygen measurements. A measurement of these parameters was recorded in 15-minute intervals. The mooring locations were strategically selected in order to best supplement the boat-based water quality monitoring data.

The fixed-station water quality moorings were made up of a YSI sonde that was anchored by a chain and mushroom anchor, and suspended by a lobster pot buoy (Figure 7). The instruments were positioned to float vertically, with the sensors facing upward. Fixed-station IDs and locations are summarized in Table 1. The SAJ mooring station was relocated when work started in Area K; the mooring was moved south of Area K (SAK), where it remained for the duration of the 2010 monitoring season. The mooring stationed 300-feet north of the Coggeshall Street Bridge was added during the 2010 dredge season to provide better spatial coverage in the Upper Harbor. Unfortunately the mooring was lost over the Fourth of July holiday weekend. Multiple attempts to recover the instrument with a grapple hook, and a search by the New Bedford Marine Police Dive Team, were unsuccessful and it was assumed to have been stolen. The mooring station was not reoccupied due to: 1) risk of vandalism or theft, 2) station proximity to the Lower Harbor and associated boat traffic, and 3) adequate data coverage provided by the four remaining stations in the Upper Harbor. It was determined that the other mooring were not at risk of theft/vandalism due to the proximity of stations to the active work zone and no previous history of disturbance.

Table 1. Fixed-station IDs and positions for *in-situ* instruments

Station ID	Position	Date Deployed	Date Recovered
NWS	41°40.724 N 70°55.021 W	Mar. 25, 2010	Nov. 22, 2010
SWS	41°40.679 N 70°55.003 W	Mar. 25, 2010	Nov. 22, 2010
SAJ	41°40.367 N 70°54.954 W	Mar. 25, 2010	Jul. 15, 2010
SAK	41°40.279 N 70°54.987 W	Jul. 15, 2010	Nov. 22, 2010
SAL	41°39.910 N 70°55.023 W	Mar. 25, 2010	Nov. 22, 2010
NCS	41°39.430 N 70°55.007 W	Mar. 25, 2010	NA – presumed stolen (data last recovered July 1, 2010)

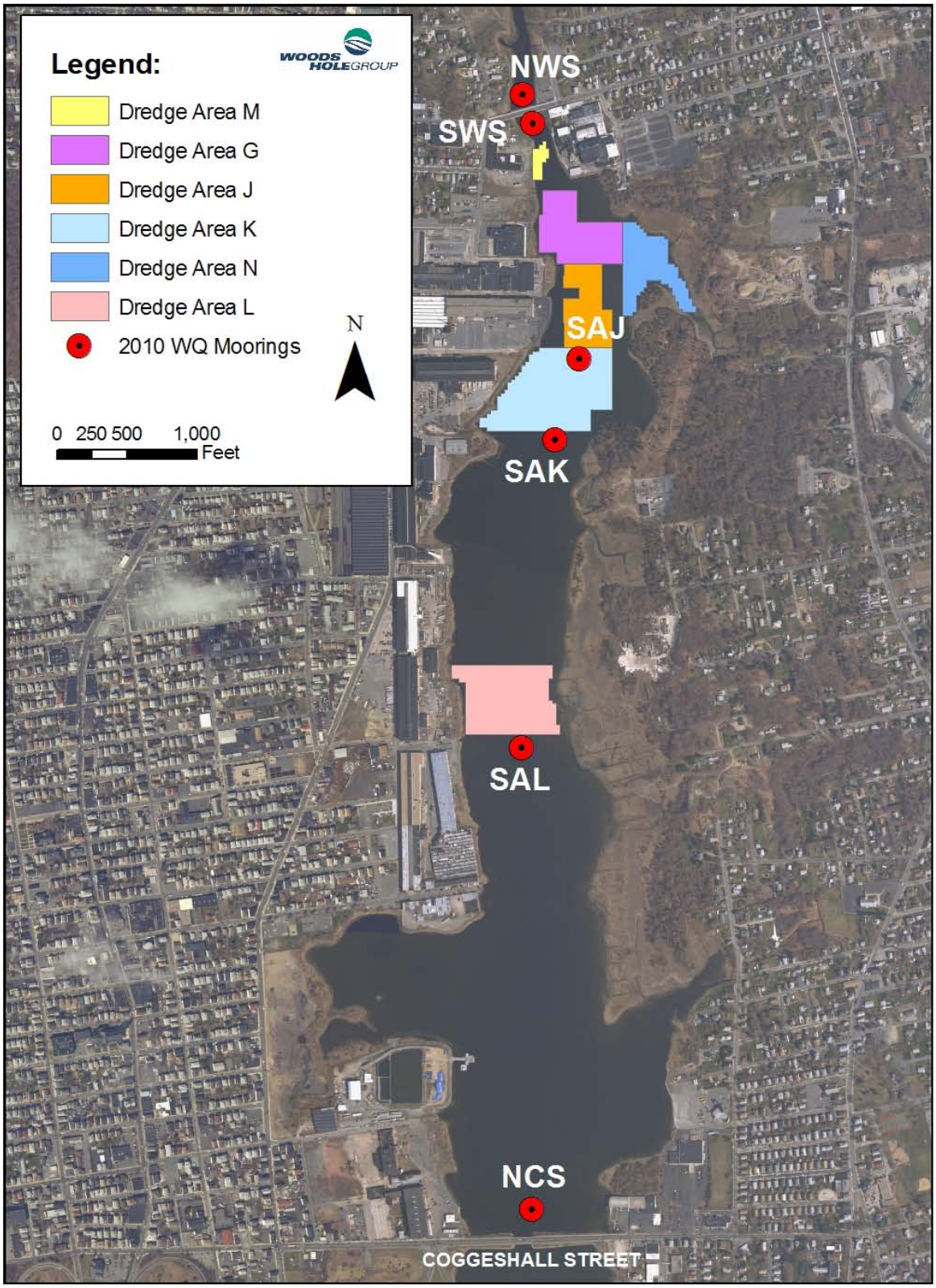

Figure 6. 2010 Fixed Station *In-Situ* Water Quality Mooring Locations

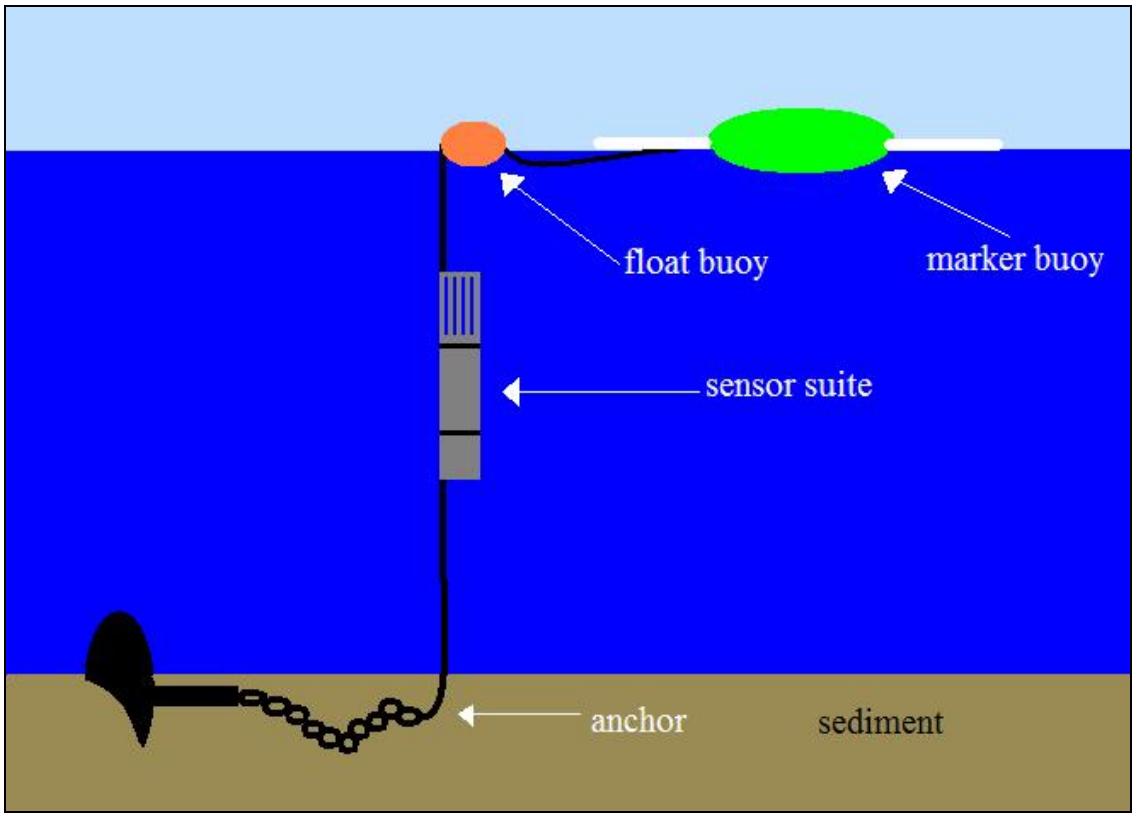

Figure 7. Diagram of Fixed Station Water Quality Moorings

A new feature introduced during the 2010 monitoring season was the addition of a data telemetry buoy system coupled with a YSI sonde. The NexSens MB-300 buoy and SDL500C telemetry system was introduced to the water quality monitoring program on a trial basis to evaluate the value to the program in providing additional access to data in near real-time. The telemetry buoy system was equipped with solar panels, providing power to the YSI sonde, and the internal data logger and cellular IP modem used to transmit data, at 15-minute intervals, to a computer at the WHG office in Falmouth, MA. A photograph of the telemetry buoy system is presented in Figure 8. Warning levels and alerts were established for a turbidity threshold with the telemetry system's software, enabling email notification to the WHG monitoring team members should turbidity reach 100 NTU or higher. The pilot telemetry system proved effective in alerting the WHG monitoring team in this manner.

The email alert system and real-time updates allowed field personnel to monitor water quality parameters seven days a week without presence on the water. The situation where the telemetry system added the most value during the 2010 dredge season was during the excavation of the Area M. During this process all water access north of this location was closed due to equipment blocking the passage of the monitoring vessel; however, since the telemetry buoy was deployed at the south of Wood Street (SWS) mooring station, the WHG team was able to maintain a monitoring presence north of Area M on the flood tide.

The telemetry buoy system was initially stationed at the SAL mooring station, but once the excavation work in Area M commenced, the telemetry system was repositioned at the South of Wood St. (SWS) station. The telemetry system remained at the SWS station for the remainder of the 2010 dredging season; because the majority of remedial work was performed in the Dredge Areas to the north, it was believed that this was the best use of the telemetry alert system. This approach effectively allowed WHG to continuously monitor the southern compliance threshold boundary, while simultaneously monitoring the active remediation work in northern Dredge Areas with boat-based *in-situ* observations.



Figure 8. Data Telemetry Buoy System that was Coupled with the YSI Sonde

Data from all water quality moorings were downloaded once per week and reported to the USACE. The data were provided as plots of the turbidity and dissolved oxygen time series at each station in one week intervals. Information regarding dredge related activities was provided by the dredge contractor and was included on these figures. Times of active dredging and debris removal in the areas immediately adjacent to each mooring were shaded on the figures to determine whether elevated turbidity levels could be attributed to dredging activities. Any dredge related activities in Areas N, M, G, J or K were shaded for the NWS, SWS, SAJ, and SAK mooring stations. Activity within Area L was shaded for the SAL mooring station. The complete time series of turbidity and dissolved oxygen concentration data are provided for each mooring in Appendix B.

The moorings and YSI instruments were maintained approximately every other week (14 days). Maintenance required that the instruments be recovered and brought back to the lab trailer for cleaning, recalibration, and to have batteries changed, as needed. Once routine maintenance was performed and the data had been downloaded, the mooring instruments were redeployed at their respective locations.

2.1.3 Discrete Water Samples

Discrete water samples were collected during boat-based monitoring using a diaphragm pump connected to 10-feet of tygon tubing. Prior to collecting samples at a given location, water was pumped continuously through the system for approximately two minutes to flush the equipment. This process purged the pumping system in order to reduce the potential for site-to-site cross-contamination. The YSI *in-situ* sensor was placed in the water adjacent to the tubing inlet during collection to ensure that the sensor measurements and the analytical results were representative of the parcel of water being tracked.

Following the purging procedure, water sampled from the pump tube outlet was collected into the appropriate sample containers for laboratory testing (Table 2). The geographic coordinates of the sample collection location and other ancillary information were recorded in the WHG field logbook and later entered into electronic data deliverable (EDD) file for inclusion in the project database. Following collection, samples were stored on ice in coolers until delivery to the participating laboratories for analysis (Table 2). For each sample event, a routine set of field-based quality control (QC) samples were collected to monitor data quality. Samples included one equipment blank and one field duplicate sample for each set of 20 or fewer field samples. Field QC samples were collected for all test parameters except for toxicity bioassays.

Table 2. Sample collection requirements and participating laboratories

Parameter	Sample Volume	Sample Container	Preservation	Storage Condition	Holding Time	Analytical Lab
TSS	1 L	HDPE Bottle	Ice	4 $\pm$ 2 ^{o}C	7 Days	**Alpha Analytical** 320 Forbes Blvd Mansfield, MA 02767 Ph:508-822-9300
Turbidity	1 L	HDPE Bottle	Ice	4 $\pm$ 2 ^{o}C	48 Hours	
PCB (unfiltered)	1 L	Wide-mouth Amber Glass Bottle	Ice	4 $\pm$ 2 ^{o}C	7 Days	
PCB (dissolved)	1 L	Wide-mouth Amber Glass Bottle	Ice	4 $\pm$ 2 ^{o}C	7 Days	
Total Metals	500 ml	HDPE Bottle	$HN0_3$	4 $\pm$ 2 ^{o}C	6 Months	
Toxicity	5 gallons	Cubitainer	Ice	4 $\pm$ 2 ^{o}C	24 Hours	**EnviroSystems, Inc** One Lafayette Road P.O. Box 778 Hampton, NH 03843 Ph: 603-926-3345

2.2 LABORATORY ANALYSIS

Laboratory testing was performed on preplanned discrete water samples. Contingency based samples (Level III) were not collected during the 2010 season. At the direction of

USACE, planned samples (Levels I and II) were submitted for total suspended solids (TSS), turbidity, PCB (total and dissolved phases), and toxicity testing. An additional sample was collected and archived in the event that heavy metals analysis was later requested; however, metals analysis was not needed and the samples were eventually discarded. Metals Laboratory methods are summarized below and described in detail in the project QAPP (Woods Hole Group, 2010b).

In addition to the discrete water samples, a routine set of laboratory-based QC samples were prepared from the sample bottles submitted to the laboratory to monitor data quality in terms of laboratory accuracy and precision. Depending on the analysis, QC samples included a procedural blank, laboratory control sample (LCS), laboratory control sample duplicate (LCSD), matrix spike (MS), and matrix spike duplicate (MSD). Specific QC samples and the associated measurement quality objectives are discussed in the QAPP (Woods Hole Group, 2010b).

2.2.1 Total Suspended Solids and Turbidity

In addition to real-time *in-situ* turbidity monitoring, discrete water samples were submitted for TSS and turbidity analyses at Alpha Analytical Laboratories (AAL). Water samples were analyzed for TSS following AAL Standard Operating Procedure (SOP) "Total Suspended Solids (TSS) Non-Filterable Residue, Rev. 6.1" (WHG 2010B), which is based on a modified USEPA Method 160.2. In brief, a well-mixed sample was filtered through a 0.45 µm membrane filter and the residual retained on the filter was dried and weighed. Results were reported on a milligram dry-weight basis per volume of water filtered (mg/L). Water samples were analyzed for turbidity following AAL SOP "Turbidity 180.1 Rev. 2.2" (Woods Hole Group, 2010b), which is based on USEPA Method 180.1. Sample results were reported as NTU.

2.2.2 Polychlorinated Biphenyl Congeners (NOAA-18)

Polychlorinated biphenyl (PCB) analysis for the National Oceanic and Atmospheric Administration (NOAA) eighteen congeners was conducted by AAL, using both unfiltered (total) and filtered (dissolved) water samples. Dissolved phase samples required filtering using Gelman AE glass fiber filters (0.45 µm pore size) and the filtrate captured for analysis.

Polychlorinated biphenyl samples (total and dissolved) were extracted following modified EPA Method 3510C, AAL SOP "Extraction of Water Samples by Separatory Funnel" (Woods Hole Group, 2010b). An aliquot of a well mixed, homogeneous aqueous sample is accurately measured for sample preparation. Generally, 1L of a water sample is extracted. The sample is spiked with surrogate compounds and then extracted using methylene chloride. The extract is dried using anhydrous sodium sulfate and solvent exchanged to hexane during sample concentration. After extraction and concentration, the SW-846 3600-series methods for extract clean-up techniques are applied as necessary. The extract may be treated with Florisil (3620B) or GPC (3640A) for hydrocarbon and lipid removal, and copper (3660B) for sulfur removal. The extract is solvent 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 1–5 mL.

After clean-up and re-concentration, the extracts are analyzed on a gas chromatograph (GC) which is fitted with two capillary columns of differing polarities each employing separate ECD detectors. This process follows a modified USEPA Method 8082 (Woods Hole Group, 2010b). 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) and Pattern Recognition (PR). Concentrations are calculated from the ECD response using internal standard techniques. Sample results were reported in micrograms per liter (µg/L) for the individual eighteen 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.

2.2.3 Toxicity

Acute and chronic (sub-lethal) exposure screening assays were performed to evaluate the potential toxicity of surface water samples. All assays were conducted by EnviroSystems, Inc. (ESI) located in Hampton, New Hampshire. The information regarding the toxicity analyses that is contained in this section has been obtained from the ESI report text (Appendix D). Assay design included a laboratory control treatment and one or more surface water samples, generally including a site reference sample. Samples were evaluated "As Received" without dilutions. Testing was based on programs and protocols developed by the USEPA, primarily designed to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples. Testing included the following bioassays: 1) a modified 2-day acute assay conducted with the mysid shrimp *Americamysis bahia*, 2) a 7-day chronic assay conducted with *Americamysis bahia*, and 3) a 60-minute chronic fertilization assay conducted with the purple sea urchin, *Arbacia punctulata*.

2.2.3.1 Test Species

Americamysis bahia, ≤5 days old, were obtained from cultures maintained by Aquatic Research Organisms (ARO), Hampton, New Hampshire. Juvenile shrimp were collected daily, isolated, and placed in a rearing tank for up to 6 days. Holding tanks were maintained in a flow-through culture mode at a temperature of 25±2°C. At the start of the assays the mysids were 7 days old. Juveniles were fed <24 hour old brine shrimp on a daily basis. Water temperature, salinity, and pH were monitored on a daily basis. Prior to testing organisms were siphoned from the rearing tanks to a holding vessel, and then transferred to test chambers using a large bore pipet, minimizing the amount of water added to test solutions.

Arbacia punctulata adults were acquired from cultures maintained by ESI. Original stock was obtained from commercial supply. Male and female urchins were maintained in separate chambers. Adult urchins were induced to spawn by the injection of a potassium chloride solution. The viability of gametes obtained was determined prior to their addition to the test solutions. Eggs and/or sperm that would not result in a fertilized egg were rejected from the pool of gametes used in the assay.

2.2.3.2 Site Water Samples and Laboratory Control Water

Prior to testing, samples were evaluated to document salinity, conductivity, and total residual chlorine. Total residual chlorine was measured by amperometric titration (MDL 0.02 mg/L). Prior to use in the assays, the salinity of the samples was adjusted, as necessary, to predetermined levels using artificial sea salts for *A. bahia* and *A. punctulata* assays. When necessary, the salinity of samples for the *A. bahia* acute and chronic exposure assays were adjusted to 25±2‰ while samples used for the *A. punctulata* assays were adjusted to 30±2‰. Samples with "as received" salinity above these levels were not adjusted.

Laboratory control water used for the mysid and sea urchin assays was collected from the Hampton/Seabrook Estuary; this water is classified as SA-1 and has been used to culture marine test organisms since 1981.

2.2.3.3 Bioassay Tests

***Americamysis bahia* Acute Exposure Assays**

The endpoint for the *A. bahia* bioassay was survival (acute). The 48 hour static acute toxicity tests were conducted at 25±1°C with a light:dark photoperiod of 16:8 hours. Test chambers for the acute assays were 250 mL glass beakers containing 200 mL test solution in each of 4 replicates with 10 organisms per replicate. Survival and dissolved oxygen were measured daily in each replicate prior to test solution renewal. Salinity, temperature and pH were recorded in a composite sample of the "old" test solution and in the "new" test solution prior to being added to the test chamber. Specific conductivity was measured in one replicate of each sample at the start of the assay. Mysids were not fed during the assay.

***Americamysis bahia* Chronic Exposure Assays**

The 7 day assays were conducted at a temperature of 26±1°C with a light:dark photoperiod of 16:8 hours. Mysids were maintained in 250 mL beakers containing 150 mL of test solution. Approximately 100 mL of the test solution were replaced each day. The assay incorporated 8 replicates with 5 organisms per replicate. Survival and dissolved oxygen were measured daily in each replicate prior to test solution renewal. Salinity, temperature and pH were recorded in a composite sample of the "old" test solution and in the "new" test solution prior to being added to the test chamber. Incubator temperatures were also recorded on a daily basis. During the test, mysids were fed ≤24 hour old *Artemia* nauplii. On Day 7 of the assay, surviving mysids were removed from test solutions, rinsed to remove any surface detritus and salts, and transferred to tared foils and dried for 24 hours at 103°C. Foils were weighed to the nearest 0.01 mg. Mean dry weights per individual were obtained by dividing the net dry

weight of all surviving organisms by the number of organisms added at the start of the assay.

***Arbacia punctulata* Chronic Exposure Fertilization Assays**

The endpoint for the *A. punctulata* bioassay was fertilization. Gametes were obtained by potassium chloride injection to induce spawning. Sperm were collected dry, diluted to achieve a concentration of approximately 5.0×10^7 sperm/mL in the surface water treatments. Actual sperm concentrations are provided on laboratory bench sheets within ESI's report in Appendix D. Sperm solutions were added to 5 mL aliquots of each sample being evaluated and allowed to remain in the test solutions for 60 minutes before the addition of unfertilized eggs. Each treatment incorporated a total of four (4) replicates. After 20 minutes exposure, the assay was terminated by the addition of 0.2 mL of preservative. Aliquots of preserved solution were counted to determine numbers of fertilized and unfertilized eggs. Fertilization was accepted based on the presence or absence of a fertilization membrane around the egg.

2.2.3.4 Data Analysis

Statistical analysis of acute and chronic exposure data was completed using Comprehensive Environmental Toxicity Testing System (CETTS) software. The program computes acute and chronic exposure endpoints based on EPA decision tree guidelines specified in individual test methods. For chronic exposure endpoints statistical significance was accepted at $\alpha < 0.05$.

2.2.3.5 Quality Control

As part of the toxicity testing laboratory quality control program, standard reference toxicant assays are conducted on a regular basis for each test species to provide relative health and response data while allowing for comparison with historic data sets.

3.0 CHRONOLOGY OF BOAT-BASED OBSERVATIONS

Water quality monitoring of the Acushnet River and Upper New Bedford Harbor via *in-situ* fixed-station moorings started on March 25, 2010, approximately 2.5 months prior to the onset of the dredging season. Monitoring with the fixed-station mooring ended on November 22, 2010, approximately 2 months after the dredging season was completed. Boat-based monitoring began with baseline samples collected in May 2010 and continued through the dredge season until the completion of demobilization activities in mid-September 2010. Remedial dredging began on June 14, 2010, and was completed on September 10, 2010.

The following section provides a weekly summary of boat-based water quality monitoring observations and activities. The text was summarized from the daily field logs and weekly summary reports submitted to the USACE throughout the 2010 dredge season. All turbidity values referenced are the actual values as read from the sensor, and therefore, not corrected for background levels. Field logs and daily summary reports, as well as figures depicting the complete time series from *in-situ* fixed-station instruments are included in Appendices A and B, respectively. Tide level data are included on the field logs (Appendix A).

Week of May 10 – May 14, 2010 (Baseline)

- **Days monitored**: Tuesday 5/11.
- **Areas of activity**: None.
- **Exceedances**: None.
- **Turbidity summary**:
  Tues: ebb reference (ref) = 3.0–3.5 NTU, ebb dredge area = 2.9–3.3 NTU, flood ref = 1.3–1.5 NTU, flood dredge area = 2.1–2.3 NTU
- **Wildlife**: None.
- **Notes**: Baseline water quality samples collected at ebb and flood reference locations and within the active dredge zone during both flood and ebb tidal cycles. Samples submitted for TSS and turbidity analyses only. No dredge related activities anywhere at this time (pre-season).

Week of June 14 – June 18, 2010 (Week 1)

- **Days monitored**: Monday 6/14, Tuesday 6/15, Wednesday 6/16 and Thursday 6/17.
- **Areas of activity**: Dredging in Areas G and J. Debris removal in Area G.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 6/14: ebb ref = 2.8–4.2 NTU, flood ref = 2.0–7.5 NTU, 300’ down-current of debris removal (DR) & dredge (DRG) in G = 5–35 NTU (ebb) & 4.5–6.0 NTU (flood);
  Tues – 6/15: ebb ref = 6.7–9.1 NTU, flood ref = 3.6–6.6 NTU, 300’ down-current of DR & DRG in G = 16.1–29.8 NTU, 300’ down-current of DRG in J = 13.4–28.9 NTU;

Weds – 6/16: ebb ref = 3.6–8.1 NTU, flood ref = 2.7–8.0 NTU, 250' down-current of DRG in G = 7–24 NTU (flood) & 5.3–24 NTU (ebb), 100' down-current of DRG in J = 10.7–28.2 NTU;
Thurs – 6/17: ebb ref = 10.2–13.6 NTU, flood ref = 2–22.6 NTU, 300' down-current of DRG in J = 4.5–55.2 NTU (flood) & 5.7–29.0 NTU (ebb), 300' down-current of DRG in G = 14.9–33.1 NTU, 300' down-current of DR & DRG in G = 17.4–47.7 NTU (flood) & 7.6–28.7 NTU (ebb)

- **Wildlife**: Abundant swans, seagulls, water fowl and shorebirds observed. Several fish were also sighted.
- **Notes**: On Monday 6/14, monitoring efforts were focused around the collection of Level I samples for analysis of all water quality parameters. Samples were collected 300-feet north of the active dredging and debris removal in Area G on the flood tide and 300-feet south of the same activities during the ebb tide. Reference water samples were also collected at locations 1000-feet south of Area L during the flood tide and 1000-feet north of Area M during the ebb tide. Turbidity was generally low surrounding the remediation activities. Dissolved oxygen concentrations ranged 2.4–7.9 mg/L.

  Tuesday 6/15 was the second day of Level I water quality monitoring. Samples were collected surrounding dredging activities in Areas G and J. Turbidities were observed to be between 10–30 NTU during sample collection at both the flood and ebb sampling locations. Collection of two dilution study samples was also performed (Level II): one in Area G and one in Area L, to represent the northern and southern dredge areas, respectively.

  On Wednesday 6/16, no debris removal operations occurred. Monitoring efforts surrounded dredging in Area G and J for both flood and ebb tides. Reference turbidity at both locations was approximately 8 NTU. Higher turbidities were observed at depth, with a maximum of 42 NTU 150-feet north of the dredge during the low, flooding tide. Turbidity was generally slightly elevated throughout the monitored area, including the reference stations.

  Turbidity on Thursday 6/17 was also elevated at the reference stations. The southern, flood reference location observed a maximum of 22.6 NTU at depth with lower turbidity closer to the surface. The northern, ebb reference station was slightly elevated: a maximum of 13.6 NTU was observed. Ephemeral plumes of high turbidity (maximum 55.2 NTU, generally 35–50 NTU) were observed occurring infrequently at a distance 300-feet north of the dredge in Area J during the flood tide. The plumes lasted less than one minute before dissipating to 20–30 NTU, or near background levels. Dissolved oxygen concentrations ranged between 2.1–9.0 mg/L.

Week of June 21 – June 25, 2010 (Week 2)

- **Days monitored**: Monday 6/21 and Thursday 6/24.
- **Areas of activity**: Dredging in Areas G, J, and L. Debris removal in Area G.
- **Exceedances**: None.

- **Turbidity summary**:
  Mon – 6/21: flood ref = 4.5–7.5 NTU, 200' down -current of DRG in G = 14.3–15.5 NTU, 200' down-current of DRG in J = 13.1–48.2 NTU (flood) and 8.3–9.1 NTU (ebb);
  Thurs – 6/24: ebb ref = 6.1–8.2 NTU, 200' down-current of DRG in G = 8.4–39.9 NTU, 100' down-current of DR in G = 9.5–17.9 NTU, 100' down-current of DRG in J = 10.5–23.5 NTU (flood) & 8.8–22.1 NTU (ebb)
- **Wildlife**: Several fish were observed jumping.
- **Notes**: During monitoring on Monday 6/21, no debris removal operations occurred. Monitoring efforts surrounded dredging in Area G and J during the flood tide. Reference turbidity at the southern location was between 4.5–7.5 NTU. Elevated turbidities were observed in the immediate vicinity of the dredge in Area J with a maximum of 79.5 NTU measured 150-feet north of the dredge during the low, flooding tide. Turbidity was generally slightly elevated throughout the monitored area during the flood tide. Water temperatures are increasing rapidly and dissolved oxygen concentrations are low throughout the harbor with as little as 0.5 mg/L recorded in Area G.

  Dissolved oxygen concentrations on Thursday 6/24 were also diminished at all monitoring stations. Reference turbidity ranged 6.1–8.2 NTU. Turbidity was generally low surrounding all remediation activities, which included debris removal in Area G and dredging in Areas G and J.

Week of June 28 – July 2, 2010 (Week 3)

- **Days monitored**: Monday 6/28 and Thursday 7/1.
- **Areas of activity**: Dredging in Areas G and J. Debris removal in Areas G and N.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 6/28: ebb ref = 3.2–5.3 NTU, 200' down-current of DRG in G = 14.3–15.5 NTU, 200' down-current of DRG in J = 13.1–48.2 NTU (flood) and 8.3–9.1 NTU (ebb);
  Thurs – 7/1: ebb ref = 8.1–10.0 NTU, flood ref = 2.2–6.1 NTU, 300' down-current of DR in N = 5.7–52.9 NTU, 100' down-current of DRG in G = 12.1–28.4 NTU, 100' N of Wood Street = 10.0–12.1 NTU, 100' S of Wood Street = 13.3–16.2 NTU, 300' S of J = 6.3–8.9 NTU
- **Wildlife**: Several fish were observed jumping. Many water fowl and shore birds were observed as well.
- **Notes**: Monitoring efforts on Monday 6/28 surrounded dredging in Area G and J during the ebb tide. Reference turbidity at the NWS location was between 3.2–5.3 NTU. Turbidity was slightly elevated (~15 NTU above background) 150' down-current from the dredge in Area J and 300' from debris removal in Area G. Dissolved oxygen spanned a large range in Area J, from 0.4–14.2 mg/L.

  Dissolved oxygen concentrations on Thursday 7/1 were observed to be between 7.0–12.7 mg/L. Reference turbidity was 2.2–6.1 NTU at the southern, flood reference location and 8.1–10.0 NTU at the northern, ebb reference station. The

area encompassing north of Wood Street, Area M, Area G and Area J all appeared to have elevated turbidity. The plume was observed to be highest in the vicinity of Area J, 300' south of debris removal in Area N during the ebb tide. A maximum turbidity reading of 52.9 NTU was observed, however turbidity generally ranged from 20–35 NTU. Turbidity readings were highest in the top foot of water, and ranged 5–20 NTU below the saltwater wedge, in water greater than one foot deep.

Week of June 5 – July 9, 2010 (Week 4)

- **Days monitored**: Tuesday 7/6 and Thursday 7/8.
- **Areas of activity**: Dredging in Areas G and J. Debris removal in Areas J and N.
- **Exceedances**: None.
- **Turbidity summary**:
  Tues – 7/6: flood ref = 2.1–5.6 NTU, 300' up-current of DRG in J = 5.8–12.5 NTU, 300' down-current of DRG in J = 14.8–46.7 NTU;
  Thurs – 7/8: ebb ref = 4.9–11.3 NTU, flood ref = 5.7–9.7 NTU, 300' down-current of DRG in J = 13.6–28.1 NTU (ebb) and 14.0–19.7, 300' down-current of DRG in G = 11.4–55.2 NTU
- **Wildlife**: Several finned fish were observed jumping. Numerous small minnows were observed throughout the harbor, particularly near the Sawyer Street docks.
- **Notes**: During monitoring on Tuesday 7/6, background turbidity readings were low, between 2–6 NTU. Dissolved oxygen concentrations were in the normal range (5–9 mg/L), with the exception of deeper depths that reached near-hypoxic conditions in the late afternoon. Monitoring efforts focused on the dredging in Area G and J during the flood tide. Turbidity occasionally elevated to ~40 NTU above background 300' down-current from the dredge in Area J but generally ranged from 15–30 NTU.

  During collection of data from the fixed water quality moorings on Tuesday, it was discovered that the mooring north of the Coggeshall Street Bridge was missing. After an extensive search, WHG was unable to locate the mooring or the YSI instrument attached to the anchor line.

  On Thursday 7/8, background turbidity was elevated at both reference locations, with a maximum of 9.7 NTU observed during the flood tide and 11.3 NTU observed during the ebb tide. Water temperatures at times exceeded 30° C (>85° F). Turbidity was slightly elevated in the vicinity of Areas G, J and N. A moderate to heavy, localized sheen was observed surrounding the dredge in Area G after work stopped due to low water levels in the morning hours. The sheen was detected again in the afternoon after work resumed in Area G. During operations in Area G, turbidity readings reached a maximum of 55.2 NTU, more than 45 NTU above background, and maintained values of 30–40 NTU above background for the duration of active dredging. The plume of turbidity and apparent oily sheen maybe have been the result of the prop-wash from push boats that were used to keep the dredge operating in a straight line. Debris removal in

Area N was also active at the time when the elevated turbidity readings were observed.

Week of July 12 – July 16, 2010 (Week 5)

- **Days monitored**: Monday 7/12 and Thursday 7/15.
- **Areas of activity**: Dredging in Areas G and J. Debris removal in Areas N and K.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 7/12: ebb ref = 5.7–9.3 NTU, flood ref = 7.4–9.4 NTU, 300' down-current of DRG in G = 5.2–16.9 NTU, 300' down-current of DRG in J = 6.8–14.9 NTU, 300' down-current of DR in K = 21.0–25.5 NTU;
  Thurs – 7/15: ebb ref = 5.5–12.1 NTU, flood ref = 2.5–5.6 NTU, middle of J = 4.0–17.8 NTU, 75' down-current of DR in K = 20–50 NTU
- **Wildlife**: Several swans, ducks, cormorants, gulls and osprey were observed. Small minnows were observed throughout the harbor.
- **Notes**: During monitoring on Monday 7/12, background turbidity readings were between 5.7–9.4 NTU. Dissolved oxygen concentrations were very low (1.0–3.2 mg/L) in the morning at the ebb reference location north of Wood Street. A plume of turbid water was observed within 200' of the debris removal barge in Area K. At the time, the barge was installing new sheet piles surrounding Area K. Turbidity values ranged from 20–26 NTU, less than 20 NTU above background at maximum; however there was a significant sheen on the water surrounding the barge and debris removal operations.

  The sheen in Area K was present on Thursday 7/15 as well, although spotty and less wide-spread. Turbidity readings in close proximity (<100') to the debris removal were elevated as high as 50 NTU above background during ephemeral spikes, and generally 10–40 NTU above background. Turbidity values diminished rapidly with increasing distance from the active operations. Background turbidity was elevated at the ebb reference location, ranging 5.5–12.1 NTU.

Week of July 19 – July 23, 2010 (Week 6)

- **Days monitored**: Monday 7/19 and Thursday 7/22.
- **Areas of activity**: Dredging in Areas G, J and K. Debris removal in Area K.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 7/19: flood ref = 2.4–7.9 NTU, 300' down-current of DR & DRG in K = 15.1–16.7 NTU, @ SWS = 8.5–15.1 NTU;
  Thurs – 7/22: ebb ref = 15.7–31.4 NTU, flood ref = 6.8–10.6 NTU, 200' down-current of DR & DRG in K = 12.5–62.8 NTU (ebb), 300' down-current of DR & DRG in K = 20.0–55.9 NTU (flood)
- **Wildlife**: Small minnows were observed throughout the harbor and other fish observed jumping. Terns were observed fishing in Areas J, K and L on Thursday 7/22.

- **Notes**: Monitoring on Monday 7/19 was interrupted when severe thunderstorms passed through the region and all personnel were ordered to evacuate the water. Dissolved oxygen concentrations were in the normal range, approximately 4.3–7.7 mg/L. A slight sheen was observed in the oil boom at the northern boundary of Area G during the flood tide while debris removal and dredging were active in Area K. Two debris removal barges were active in Area K during the monitored hours on Monday.

  On Thursday 7/22, high background turbidity readings were recorded at the ebb tide reference location 1000-feet north of Area M. Turbidity ranged 15.7–31.4 NTU and dissolved oxygen concentrations were extremely low: 0.7–2.2 mg/L. The flood tide reference readings were not as high; however they were slightly elevated as compared to previous weeks. Turbidity ranged 6.8–10.6 NTU at 1000-feet south of Area L. Dissolved oxygen concentrations increased throughout the day, reaching normal levels (4.3–9.1 mg/L) during the afternoon hours in all monitored areas. Frequent ephemeral plumes of turbidity were observed down current of the dredging and debris removal operations in Area K. Two debris removal barges were again active in Area K for most of the day on Thursday 7/22. The highest turbidity readings were generally observed between one to two feet depths, and spikes of up to 62.8 and 55.9 NTU were observed during the ebb tide and flood tide, respectively. The highest readings were brief, and turbidity was typically between 20–40 NTU at both locations.

Week of July 26 – July 30, 2010 (Week 7)

- **Days monitored**: Monday 7/26 and Wednesday 7/28.
- **Areas of activity**: Dredging in Areas G and K. Debris removal in Area K
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 7/26: ebb ref = 8.9–11.6 NTU, 150’ down-current of DR in K = 11.4–102.1 NTU, 200’ down-current of dredge = 16.0–23.6 NTU (ebb) and 6.4–42.3 NTU (flood);
  Weds – 7/28: ebb ref = 4.7–14.7 NTU, flood ref = 1.4–16.4 NTU, 300’ down-current of DR & DRG in K = 6.3–14.1 NTU, 100’ down-current of DR in K = 44.2 NTU, 200’ down-current of DRG in K = 6.3–38.1 NTU
- **Wildlife**: Numerous terns and gulls feeding, occasional fish observed jumping, many cormorants, also osprey and a blue heron.
- **Notes**: On Monday 7/26, a slight sheen was observed in the oil boom around Area K while debris removal and dredging were active. Turbidity readings close to the debris removal in Area K (within 200 feet) were elevated to a maximum of 102.1 NTU. The plume was brief and localized to within the immediate vicinity of the active debris removal. Within ten minutes, turbidity values returned to near-background levels. The highest turbidity readings were observed during the ebb tide. During the flood tide, readings ranged from background to approximately 30 NTU above background. Dissolved oxygen concentrations were generally slightly low, ranging from a minimum of 2 mg/L at depth, to a maximum of 7 mg/L at the surface.

On Wednesday 7/28, background turbidity readings were 4.7–14.7 NTU during the ebb tide and 1.4–16.4 NTU during the flood tide. Turbidity values were highest in close proximity to the debris removal operations in Area K. At a distance of 100-feet down-current, a maximum of 44.2 NTU was recorded. An occasional high spike of turbidity was observed but not recorded, reaching approximately 50 – 60 NTU. Turbidity values decreased rapidly with increasing distance away from the operations. Dissolved oxygen concentrations were higher than on Monday, ranging from approximately 6.5 mg/L to almost 11 mg/L in near-surface waters during the afternoon.

Week of August 2 – August 6, 2010 (Week 8)

- **Days monitored**: Monday 8/2 and Thursday 8/5.
- **Areas of activity**: Dredging in Areas G and K. Debris removal in Area K.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 8/2: flood ref = 2.2–6.4 NTU, 300' down-current of DR & DRG in K = 5.6–21.5 NTU (flood), 300' down-current of DR in K = 4.0–45.7 NTU (ebb);
  Thurs – 8/5: flood ref = 6.2–8.0 NTU, 300' down-current of DR & DRG in K = 7.3–14.1 NTU
- **Wildlife**: Numerous terns and gulls feeding, especially on Thursday. Occasional fish observed jumping and small fish observed in the top half-foot of water. Mating crabs were swimming near the Sawyer Street dock on Monday.
- **Notes**: A visible plume of turbidity was observed south of the debris removal barge in Area K while debris removal and dredging were active on Monday 8/2. Turbidity readings within the plume were between 4.0–45.7 NTU. During the flood tide, readings ranged from background to 21.5 NTU at a distance of 300-feet down north of the dredge in Area K. Dissolved oxygen concentrations fell within the normal range between 3.4 mg/L to 10.7 mg/L.

  Low turbidity readings surrounding all remediation activities were observed in the harbor on Thursday 8/5. Dissolved oxygen concentrations were very low in the morning but increased during the course of monitoring to normal levels (5–10 mg/L) during the afternoon. Lower concentrations were observed at depth throughout the day. Dredging and debris removal continued in Area K, and the dredging of Area G is almost complete, with the dredge working in the far southwest corner of Area G. Excavation in Area M was active during period of high water levels.

Week of August 9 – August 13, 2010 (Week 9)

- **Days monitored**: Monday 8/9 and Thursday 8/12.
- **Areas of activity**: Dredging in Areas G and K. Debris removal in Area K.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 8/9: ebb ref = 4.1–7.2 NTU, flood ref = 6.8–8.1 NTU, 300' down-current of DRG in K = 5.0–24.0 NTU, @SAK = 16.0 NTU

Thurs – 8/12: ebb ref = 5.9–6.4, flood ref = 4.3–7.3 NTU, 250' down-current of DRG in G = 5.7–25.5 NTU, 300' down-current of debris removal in K = 5.0–73.6 NTU, 300' down-current of dredge in K = 8.7–32.3 NTU

- **Wildlife**: Abundant terns and gulls feeding in the northern areas.
- **Notes**: Dissolved oxygen concentrations were slightly elevated in surface water readings on Monday 8/9. Background turbidity was below 10 NTU, with a maximum turbidity reading of 24 NTU observed at a distance of 300 feet down-current of the dredge in Area K. Low turbidity observed throughout the harbor.

  Elevated turbidity was observed on Thursday 8/12 surrounding the dredging and debris removal in Area K. The highest readings were ephemeral and localized to the channel adjacent to Area K by the western shoreline. Turbidity was generally between 20–60 NTU, averaging approximately 45 NTU for the duration of activity in Area K. Brief spikes above 60 NTU, up to 73.6 NTU, were observed occasionally but dissipated quickly. Turbidity decreased with increasing distance down current. Dissolved oxygen concentrations were at normal levels (5–10 mg/L) during the monitored hours.

Week of August 16 – August 20, 2010 (Week 10)

- **Days monitored**: Monday 8/16 and Thursday 8/19.
- **Areas of activity**: Dredging in Areas G and K. Debris removal in Area K. Excavation in Area M.
- **Exceedances**: None.
- **Turbidity summary**:

  Mon – 8/16: flood ref = 4.8–6.5 NTU, 250' down-current of DRG & DR in K = 5.5–18.9 NTU, 200' down-current of DRG in G = 6.3–14.2 NTU, within 200' of DR in M = 4.0–8.1 NTU;

  Thurs – 8/19: flood ref = 5.0–9.7 NTU, 300' down-current of DR & DRG in K = 6.6–14.8 NTU (ebb) and 17.0–32.8 (flood), 300' down-current of DRG in G = 11.8–12.4 NTU
- **Wildlife**: Abundant terns, gulls feeding in the northern areas. Small baitfish observed in the surface water throughout the harbor. Some fish appeared stressed, and a few were observed dead. A large school of small fish (estimated in size at >1000) observed in the vicinity of the Wood Street Bridge.
- **Notes**: On Monday 8/16, water quality monitoring observed low turbidity readings surrounding all remedial activities. A sheen was observed emanating from the debris removal activity in Area K, moving north with the wind and tide into Areas J, G and M. A slight sheen was also observed during shoreline excavation in Area M. Dissolved oxygen concentration was 5–8 mg/L, the lower concentrations observed at deepest depths.

  Dissolved oxygen concentrations spiked in the afternoon on Thursday 8/19. Concentrations reached near 12 mg/L, beginning at normal to low concentrations in the morning (4–7 mg/L) and climbing throughout the afternoon. This trend is observed in the fixed station data. Low turbidity was observed surrounding all activities; the highest readings were less than 30 NTU above background during

active dredging and debris removal in Area K on the flood tide. A moderate sheen was observed near the debris removal activity, accompanied by a strong H_2S or petrol odor.

Week of August 23 – August 27, 2010 (Week 11)

- **Days monitored**: Monday 8/23 and Thursday 8/26.
- **Areas of activity**: Dredging in Areas G and K. Debris removal in Area K. Excavation in Area M.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 8/23: ebb ref = 5.3–6.1 NTU, 200' down-current of DR in K = 11.5–24.5 NTU, 200' down-current of DRG in K = 49.1–74.4 NTU (ebb) and 35.2–36.5 NTU (flood);
  Thurs – 8/27: ebb ref = 3.2–5.4 NTU, flood ref = 1.6–5.7 NTU, 100–300' down-current of DR in K = 6.0–42.3 NTU, 300' down-current of DRG in K = 5.1–28.5 NTU
- **Wildlife**: Abundant terns, gulls feeding in the northern areas. Fish jumping in all areas. Numerous blue crabs observed throughout the harbor, including on the fixed station water quality moorings.
- **Notes**: On Monday 8/23, water quality monitoring observed high turbidity readings surrounding the debris removal in Area K, even after work has ceased for a period of time. Dredging was active in Area K at the time as well. High readings (>50 NTU above background) were observed in close proximity to the debris removal barge and active dredge during the ebb tide. Similarly, turbidity readings elevated to approximately 30 NTU above background were observed in close proximity to the activity during the flood tide. Dissolved oxygen concentrations were very low, generally between 1–4 mg/L.

  Dissolved oxygen concentrations were very low again on Thursday 8/26, ranging approximately 3 – 6 mg/L. Low turbidity readings were observed surrounding all activities throughout the day. Slightly elevated readings (>40 NTU above background) were recorded in close proximity (within 200 feet) of debris removal in Area K, but decreased away from the activity.

Week of August 30 – September 3, 2010 (Week 12)

- **Days monitored**: Monday 8/30 and Thursday 9/2.
- **Areas of activity**: Dredging in Areas G and K. Debris removal in Area N.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 8/30: ebb ref = 3.1–3.2 NTU, flood ref = 1.4–4.2 NTU, 100–300' down-current of DRG in G = 2.5–8.9 NTU (flood) and 4.6–31.6 NTU (ebb), 100–300' down-current of DR in N = 8.6–35.3 NTU;
  Thurs – 9/2: ebb ref = 8.2–10.2 NTU, 200' down-current of DRG in G = 7.2–16.2 NTU, 200' down-current of DRG in K = 6.3–16.0 NTU
- **Wildlife**: Abundant terns, gulls feeding throughout the harbor. Many larger fish jumping. Blue crabs also observed.

- **Notes**: On Monday 8/30, low turbidity readings were observed throughout the harbor surrounding all dredge-related activities. The highest observed turbidity readings were in close proximity to active dredging in Area G and debris removal in Area N during the flood tide. Similarly, turbidity readings elevated to approximately 30 NTU above background were observed in close proximity to the activity during the ebb tide. A moderate sheen was observed near debris removal activities in Area N, but produced no significant associated turbidity plume.

  On Thursday 9/2, low turbidity readings were observed during monitored hours surrounding all activities. The ebb reference location observed slightly elevated readings as compared to previous weeks' data: 8.2–10.2 NTU. Generally, reference readings are less than 10 NTU. Dissolved oxygen concentrations ranged between 7–11 mg/L.

Week of September 6 – September 10, 2010 (Week 13)

- **Days monitored**: Wednesday 9/8 and Thursday 9/9
- **Areas of activity**: Dredging in Areas G and K.
- **Exceedances**: None
- **Turbidity summary**:
  Weds – 9/8: ebb ref = 5.8–10.4 NTU, flood ref = 11.4–12.9 NTU, 250' down-current of DRG in G = 4.8–7.1 NTU, 250' down-current of DRG in K = 4.8–6.1 NTU (ebb) and 8.8–19.2 NTU (flood), 100' from DRG in K = 11.0–28.7 NTU;
  Thurs – 9/9: ebb ref = 3.0–4.9 NTU, 275' down-current of DRG in G = 5.4–9.9 NTU, 200' down-current of DRG in K = 2.5–13.8 NTU
- **Wildlife**: Numerous terns, gulls, egret, herons, cormorants, osprey feeding throughout the harbor. Many larger fish jumping.
- **Notes**: On Wednesday 9/8, thunderstorms caused all dredge-related activities including water quality monitoring to stop in the morning hours. Very low turbidity readings were observed throughout the day surrounding all dredge-related activities. Turbidity values were slightly higher in the afternoon during the flood tide, with a maximum of 28.7 NTU observed within 100' of the dredge in Area K. Reference turbidity readings were slightly elevated, ranging from 6–13 NTU. Dissolved oxygen concentrations were in the normal range, 5–10 mg/L throughout the day. A slight to moderate sheen with an associated odor was observed near dredging operations in Area K. No associated turbidity plume was observed with the oily sheen.

  Turbidity readings were very low again on Thursday 9/9 surrounding all remediation activities. At low tide in close proximity to the dredging activities, occasional spikes into the teens were observed. A slight spotty sheen was observed near dredging in both Areas G and K but produced no associated turbidity plume

Week of September 13 – September 17, 2009 (Week 14)

- **Days monitored**: Monday 9/13 and Tuesday 9/14.
- **Areas of activity**: No active dredging. Demobilization.
- **Exceedances**: None.
- **Turbidity summary**:
  Mon – 9/13: flood ref = 0.9–2.9 NTU, Area K = 1.5–4.0 NTU, Pierce Mill Cove = 0.9–3.6 NTU, Sawyer Street Dock = 1.1–3.3 NTU;
  Tues – 9/14: flood ref = 0.9–3.4 NTU, ebb ref = 3.2–6.9 NTU, Pierce Mill Cove/Sawyer Street Dock = 2.2–4.6 NTU (flood) and 2.0–8.5 NTU (ebb)
- **Wildlife**: Many larger fish (bluefish) jumping. Numerous terns, gulls, egrets, herons, cormorants, osprey throughout the harbor. A dead gull and a dead cormorant observed north of Wood Street and in Area K, respectively, on Tuesday 9/14.
- **Notes**: On Monday 9/13, monitoring observed low turbidity throughout the harbor. Turbidity readings surrounding all demobilization activities were observed to be approximately background conditions. No oily sheens or odors were observed relating to the demobilization activities.

  Tuesday 9/14 observed similar conditions surrounding demobilization activities on the harbor. The highest turbidity reading observed was 8.5 NTU, during which time the vessel was approximately 200-feet from active work driving sheet piles in Pierce Mill Cove. A large algal bloom was observed north of Wood Street and in dredge areas M and G. When disturbed, the water appeared to be a cloudy greenish hue, and dissolved oxygen concentrations were elevated to >15 mg/L.

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4.0 DREDGING SUMMARY

Remedial dredging was initiated on June 14, 2010 and completed on September 10, 2010. In 2010, remediation activities at the Site included hydraulic dredging and/or debris removal in five Dredge Areas: N, G, J, K and L (Figure 2). A sixth area, Area M, is located in the narrow channel south of the Wood Street Bridge. In 2010, a portion of Area M was mechanically dredged from the shoreline after hydraulic dredging in 2009. Dredge Areas are comprised of Dredge Management Units (DMU), which divide up the entire Site and are based primarily on contamination levels, contamination sources, and topography. Portions of the following DMUs fell within the boundaries of the Dredge Areas that were active in the 2010 season: DMU-1, DMU-2, DMU-3, DMU-4, DMU-10, DMU-12, DMU-13, DMU-14, DMU-102(MF) and DMU-103(MF).

Once the dredge areas were determined, sheet pilings were placed around the perimeter of each section, at approximately 50-foot spacing, to anchor the perimeter and dredge winching cables. The perimeter cable was run around the sheet piles at approximately the high tide mark. Also along the perimeter, floating, absorbent oil booms were placed to contain any surface oil slicks.

Dredging was performed by Sevenson Environmental Services Inc. (SES) under the direction of Jacobs Engineering (JE). SES utilized a Mud CatTM hydraulic dredge equipped with a horizontal auger (Figure 9). The dredge was propelled by winching itself along a transverse cable which spans the dredge area to opposite sides of the perimeter cable. Once a pass was completed, support crews relocated the cable to position for the next pass. Dredged material was pumped through a flexible pipeline to a booster pump, then to the de-sanding facility at Sawyer Street. Following de-sanding, the remaining fine material was pumped via a separate pipeline to the dewatering, treatment, and handling facility in the Lower Harbor. In total, JE has estimated that the dredging team removed 26,411 cubic yards of material in 2010.



Figure 9. Mud CatTM Hydraulic Dredge

Hydraulic dredges cannot process large debris contained in the native sediment because the debris fouls the auger and suction of the slurry pipeline. Therefore, the operation requires a separate debris removal operation prior to the dredging of a particular area. Debris removal was accomplished by 'raking' the bottom with a barge-mounted excavator (Figure 10). The end of the excavator has two forked jaws that are hydraulically opened and closed. The jaws are deployed to the bottom and methodically "grab" or scrape the bottom for debris. Each "grab" of the bottom is brought to the surface, rinsed of sediment and inspected. If debris such as cobbles, old tires, timbers or scrap metal is contained within the excavator jaws, the debris is stored in scows secured to the debris removal platform or barge. Support boats were used throughout the operation to transport crews, maintain dredges, handle the pipeline, and move barges.



Figure 10. Debris Removal Excavator and Debris Storage Scow

The northern most portions of Areas M, N, and G contain intertidal areas and therefore dredging operations could not always be conducted, especially during low tides. When low water prevented work in these areas, the dredge crew moved operations to deeper waters in Areas J, K, or L. Due to the narrowing of the estuary in the northern regions of the harbor and the shallow waters in these locations, the use of heavy equipment and pipeline in Areas M and G caused some concern that the equipment and dredge activity might impact the seasonal migration of anadromous fish species. For this reason, the excavation of Area M was only performed after the spring migration period to alleviate the potential for impacts on migratory fish species.

5.0 RESULTS

Results of the water quality monitoring of the 2010 remedial dredging operations at the New Bedford Harbor Superfund Site are presented in this section. Complete results, including fixed-station time series and laboratory data reports are provided as Appendices to this report.

5.1 FIELD MONITORING SUMMARY

Water quality monitoring was conducted in an adaptive manner in response to changing operational and weather related conditions. The monitoring approach was modified: 1) as tides and winds changed, 2) as dredge activities moved between areas, 3) as debris removal activities changed, and 4) as warranted based on support activities. All of these activities (dredging, debris removal, and support activities) had the potential to impact water quality. The monitoring program incorporated assessment of the entire operation. Monitoring activities were also largely influenced by tidal conditions and safety. The dredge areas and the associated perimeter cable and oil boom spanned most of the width of the river limiting access to northern portions of the river, including the northern reference location. At lower tides, the northern portion of the river was nearly impassable, making it difficult to monitor work performed in Areas M and G during these periods. Due to the narrow river channel and shallow water depths at this location, however, there was increased potential for water quality impacts. Monitoring in this restrictive location was successfully accomplished using the fixed station YSI sonde and buoyed telemetry system.

5.1.1 Boat-Based Monitoring

Boat-based water quality monitoring was performed four days during the first week of the dredging season in June, and typically twice a week until dredging was completed in September 2010. Site conditions and *in-situ* water quality measurements collected during boat-based monitoring are summarized in Section 3.0 and documented per monitoring protocols in the field logs and daily reports, located in Appendix A. Water quality monitoring was performed primarily north of activities during a flood tide and south of activities during an ebb tide. Access to the northern areas was somewhat limited during low tidal periods, which is sometimes reflected in the volume of boat-based monitoring data collected from that location for a particular day.

5.1.1.1 Turbidity Summary

Each water quality monitoring day began with a transit to the reference station, 1000-feet up-current of the active work zone. The water quality readings collected at the reference location provided data regarding the background conditions and established the baseline turbidity for use in determining the compliance threshold on a given day. Turbidity values were generally higher at the northern reference site as compared to the southern reference site. Background turbidity readings were typically around 5 NTU, but ranged over the season between <1 and 20 NTU, depending on environmental conditions.

During dredging and debris removal operations, *in-situ* turbidity readings in the active work zone increased compared to background conditions, with readings ranging <1–102

NTU. Variations in turbidity were observed due to proximity to dredging activities, and environmental conditions. The maximum turbidity observation of 102 NTU was observed on July 26, 2010 in Area K. It occurred during an ebb tide, in a plume that migrated 200-feet south of the debris removal barge. Readings within the plume ranged from background to 102 NTU, and dissipated with increasing distance from the active operation. The plume was ephemeral and water quality parameters returned to background conditions within 10 minutes of observation.

Turbidity plumes observed during boat-based monitoring were generally weak (<30 NTU) and turbidity levels decreased as the plume migrated down-current, away from its origin. Plumes were observed on multiple occasions throughout the dredge season on both flood and ebb tides and were typically ephemeral. Often, the plumes occurred south of debris removal in Area K on an ebb tide and north of debris removal in Areas M, G and J on the flood tide. At times, such as on August 2, 2010, a plume of turbidity was visible, but water quality readings indicated the turbidity remained below 50 NTU.

Oily sheens were observed while monitoring turbidity near dredging and debris removal operations, particularly during operations in Area K. Although sheens were likely produced as a result of disturbing bottom sediments, both high and low turbidity values were observed when surface sheens were present. Sheens often persisted long after turbidity subsided to background levels.

Relatively high turbidity readings were frequently observed immediately adjacent to dredging support activities. This is especially the case for, but not limited to, debris removal activities and the use of boats to push barges or dredges for re-location and wind stabilization. During high winds, boats were used to maintain the hydraulic dredge's heading, and when used during low water levels, the motor's propeller wash often disturbed bottom sediments, forming narrow plumes of high turbidity. This was observed on numerous occasions throughout the dredge season. Close monitoring of these activities and conditions ensured that elevated turbidity plumes did not migrate outside of the active work zone. In general, dredging itself did not produce high turbidities in surrounding areas.

5.1.1.2 Dissolved Oxygen Summary

At the request of the USACE, WHG closely monitored the concentration of dissolved oxygen during the 2010 season on account of the concern for potential impacts to anadromous fish and other fish species and migration.

At several times during the season, dissolved oxygen concentrations decreased to hypoxic conditions throughout the system (0.4–2.8 mg/L); this is a naturally occurring phenomenon during summer months in estuarine systems. Dissolved oxygen readings of <1 mg/L were frequently observed north of Wood Street and in the vicinity of Areas M and G. These water quality conditions occur naturally in shallow stratified estuaries, but provided a warning for the dredging operators to be cautious as to not exacerbate the situation. Because of the project's activity in the northern reaches of the estuary during the fall migratory season, characterization of dissolved oxygen conditions were important

to distinguish between naturally occurring conditions and dredge related impacts to water quality.

During the month of August, schools of small bait fish were observed in the river north of Wood Street. On occasion, these fish appeared to be stressed, possibly due to the low dissolved oxygen levels in the estuary. While a few dead fish were observed, no large scale fish-kills were observed. Efforts to limit activity and keep equipment from interfering with fish passage or water flow exchange during hypoxic conditions in the northern areas were successful, as directed by the 2010 Fish Migration Impact Plan (Jacobs Engineering Group, 2010). Dredging operations had little or no effect on the fish migration or the overall health of the local fish and wildlife population.

5.1.2 Fixed-Station Continuous Monitoring

Five water quality instruments (YSI 6920 sondes) were deployed on March 25, 2010, prior to the onset of active dredging operations. Appendix B provides of complete time series of all fixed station water quality data. Initial deployment stations were: 1) North of the Wood Street Bridge (NWS), 2) South of the Wood Street Bridge (SWS), 3) South of Area J (SAJ), 4) South of Area L (SAL), and 5) North of the Coggeshall Street Bridge (NCS) (Table 1). The instruments remained at these stations for the duration of the 2010 environmental monitoring season, apart from two deviations. The first deviation that occurred was the loss of the mooring and instrument at the NCS station, which was presumable caused by vandalism/theft; this station was not reoccupied. The second deviation occurred when station SAJ was repositioned to the south of Area K (SAK) after debris removal work started in Area K. Fixed-station instrumentation and equipment was recovered for the 2010 environmental monitoring season on November 22nd. See Table 1 for specific fixed-station deployment details.

The continuously recording water quality sensors provided additional data that complemented the adaptive boat-based monitoring approach discussed above. The location of the sensors north and south of the dredge areas and active work zone helped characterize the extent of sediment suspension and potential plume transport. Furthermore, the data were collected during periods when active boat-based monitoring of dredge activities was not performed. These data helped to "fill the gaps" when boat-based monitoring crews were not on site, and also provided valuable information used to define the ambient water quality parameters during non-working periods (nights, weekends, and holidays). Appendix B contains the fixed-station time series data plots for turbidity and DO.

Dredging operations frequently stopped and started due to mechanical or physical issues and the location of active operations was highly variable. Moreover, the 2010 active dredge zone was divided into six separate dredge areas, each active at various dates and times depending on tides, fish migration, and other factors. As a result, it was difficult to positively determine whether active work in a given area would cause changes in the data recorded by the moored instruments. However, the examination of the work record (logs) of dredge activity for each area, and a comparison with the mooring data in closest proximity has allowed for a cause-effect relationship to be determined. This type of comparison was performed throughout the 2010 environmental monitoring season, and

both work schedule and water quality data were plotted together in weekly reports to the USACE.

The fixed-station mooring data indicate the occurrence of turbidity signals that were related to dredge activity. These signals are manifested as peaks in turbidity above background levels at times that correspond to active dredge operations in the adjacent dredge area (Figure 11). The background turbidity signal in the estuary is influenced by tidal conditions, river flow, weather and wind, output from CSOs, and other minor factors. As a result, the background signal can fluctuate on scales from minutes to days. The background turbidity level, on a given day in one area of the estuary, can be different than the background turbidity level in another area. Local turbidity fluctuations are apparent in the figures in Appendix B. In some cases of low turbidity (<10 NTU), it is difficult to discern whether a fluctuation in turbidity is caused by natural processes, or related to dredge activities. When evaluating the following criteria: 1) proximity to and timing of active dredging operations, 2) weather conditions, 3) tide conditions, and 4) ambient water quality conditions, one may be able to determine the cause of turbidity fluctuation.

The turbidity levels in the 2010 environmental monitoring time series did not exceed the project-specific compliance criteria (100 NTU), except when the optical sensor itself experienced significant biofouling that compromised readings. In an attempt to reduce the occurrence of compromised data caused by biofouling on the sensors, instruments were visually inspected weekly, and removed from the mooring and thoroughly cleaned every two weeks.

At times, the cause-effect relationship between turbidity and forcing mechanism (e.g., debris removal rake) is apparent; this was the case at the SAJ station between July 8 and 15, 2010. Figure 11 depicts data for this time period and provides information regarding active remedial operations in Areas J and G. Periods of sustained elevated turbidity are observed during dredge-related activity in the adjacent areas. During this particular deployment period, preparations were made to move dredge activity into Area K. The highest turbidity recorded was on July 12, 2010, during the driving of sheet piles in Area K. Due to the proximity of the mooring to the dredge activities, the turbidity measurements are relatively high (83 NTU maximum). This is the only occasion, throughout the entire 2010 environmental monitoring season, when turbidity readings were sustained and elevated to such levels. Noticeable spikes in turbidity readings also occurred during weekends and inoperable hours.

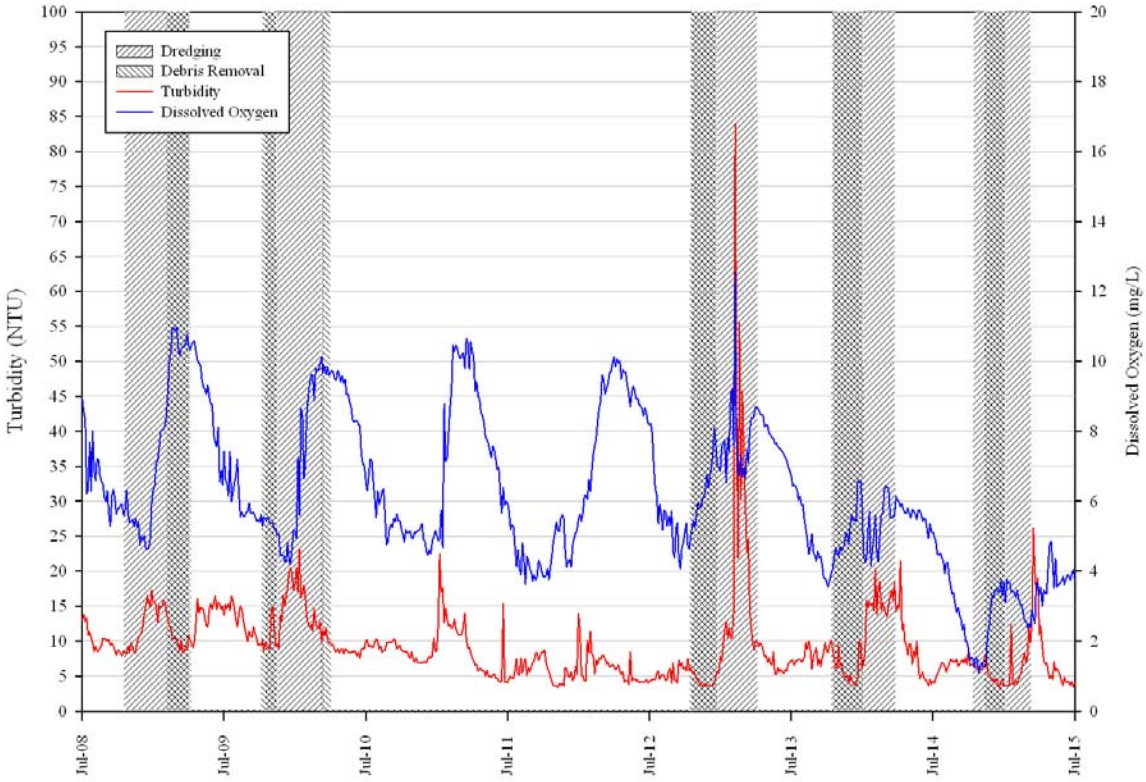

Figure 11. Example of Turbidity Levels Related to Dredging and Support Operations in the Northern Part of the Estuary, July 8–15, 2010

Continuous *in-situ* DO concentration data were also collected at each of the fixed-station moorings. Dissolved oxygen concentrations varied significantly over the seven month deployment, 0.4–17.5 mg/L. During August, normal conditions (1–6 mg/L) in the northern areas of the estuary were followed by supersaturated DO concentrations as high as 17.5 mg/L. The rapid change in DO was observed at all mooring stations in the harbor. The data plotted in Figure 12 depict this phenomenon, as observed at the station NWS between August 26 and September 3. During this period, hypoxic conditions prevail over the first two days, and are followed by readings of supersaturated water August 31–September 2. Figure 12 also illustrates the natural diel cycle of oxygen consumption and production in water; this is apparent in the daylight peaks (photosynthesis production dominant) and low concentrations at night (aerobic consumption dominant). During the first two days, DO concentrations were <1 mg/L at night, and between 3–5 mg/L during peak hours of the day. However, over the next three days DO concentrations steadily increased to super-saturated conditions, >8.6mg/L. The sudden increase in DO could have been caused by an algal bloom in the upper harbor and is probably not an effect of dredge related activities or sensor malfunction. Fluctuations in DO were noticeable in all areas of the harbor.

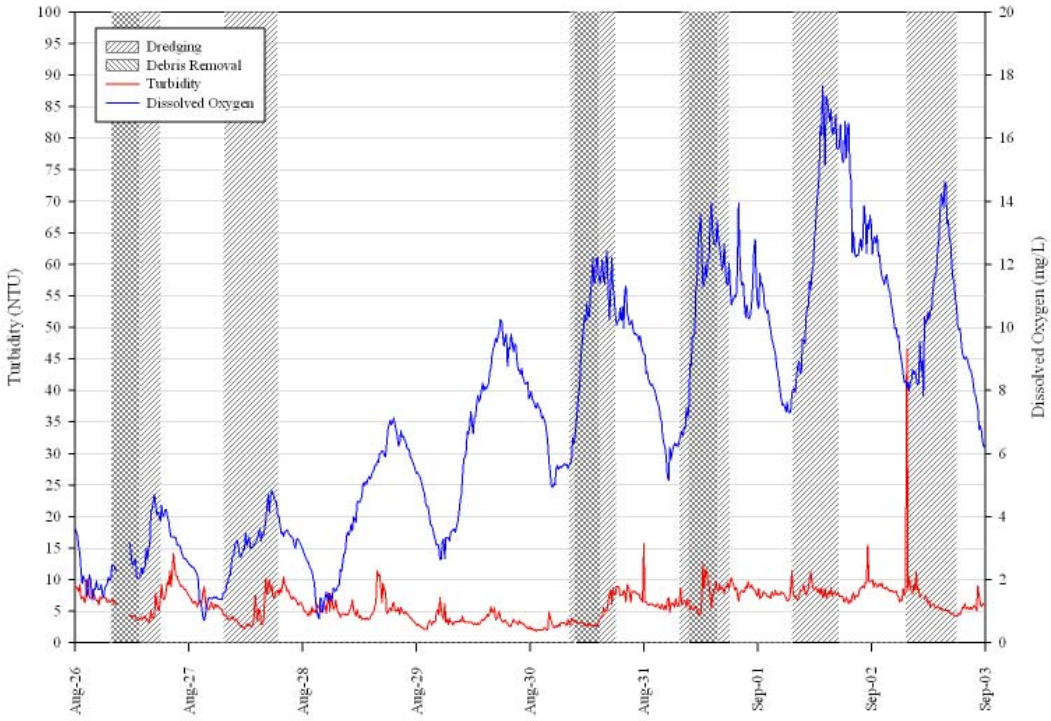

Figure 12. Example of Rapid Changes in Dissolved Oxygen, August 26–September 3, 2010

Water temperature in the 2010 active work zone ranged from a minimum of 6.2 °C, recorded at station NWS on March 28, to a maximum of 31.6°C, recorded at the same location on July 7. Figure 13 presents the average water temperature for each calendar month at station SAJ/SAK over the course of the deployment (March 25–November 22, 2010).

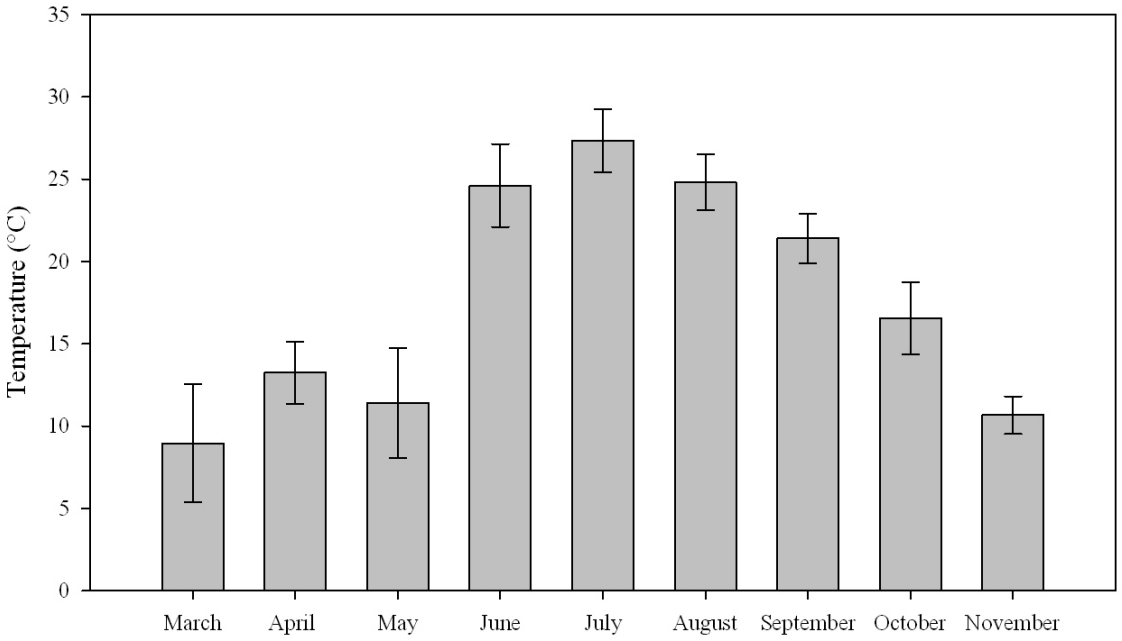

Figure 13. Average Monthly Water Temperature at the SAJ/SAK Fixed-Station *in-situ* YSI sonde, March 25 – November 22, 2010.

5.1.3 Collection of Discrete Water Samples

Discrete water samples were collected three times during the 2010 environmental monitoring season (Table 3). Sample collections occurred May 11, June 14, and June 15, 2010. All discrete water sample collections were planned Level I and Level II events; there were no Level III sample collection events. Under the protocols outlined in Section 2.1, the sampling team functioned in an adaptive sampling mode, and utilized real-time *in-situ* data to guide monitoring and sample collection. Baseline samples (Level II) collected during the spring were used to establish reference conditions for the harbor and confirm the validity of *in-situ* measurements. On June 14 and 15, Level I water samples were collected from a reference station and an artificially created suspended sediment plume to establish near-baseline conditions and/or re-establish relationships between field measurements (i.e. turbidity) and toxicity results to verify the protectiveness of the project turbidity compliance threshold. Two toxicity evaluation studies were performed on June 15 to support the turbidity criterion compliance threshold.

5.1.3.1 Baseline Water Quality Samples

The first sampling event was conducted on May 11, 2010 as part of the baseline monitoring and sampling performed before the start of the dredge season (Table 3). These samples were analyzed to reaffirm the relationship between turbidity and suspended solids, and verify the accuracy of the *in-situ* monitoring sensors. Samples were analyzed for turbidity and TSS only. Samples were collected at the two reference stations and within the planned active dredge zone during both a flood and an ebb tide.

Table 3. Summary of discrete water sampling events

Sampling Event	Date	Sample ID	Sample Description
Baseline Water Quality Samples (Level II)	5/11/10	WQ-__*__-001-051110	1000-ft north, ebb reference
		WQ-__*__-002-051110	Active dredge area, ebb tide
		WQ-__*__-003-051110	1000-ft south, flood reference
		WQ-__*__-004-051110	Active dredge area, flood tide
Level I Water Quality Samples	6/14/10	WQ-__*__-001-061410	300-ft north of activity, flood tide
		WQ-__*__-002-061410	1000-ft south, flood reference
		WQ-__*__-003-061410	300-ft south of activity, ebb tide
		WQ-__*__-004-061410	1000-ft north, ebb reference
	6/15/10	WQ-__*__-001-061510	300-ft north of activity, flood tide
		WQ-__*__-002-061510	1000-ft south, flood reference
		WQ-__*__-003-061510	300-ft south of activity, ebb tide
		WQ-__*__-004-061510	1000-ft north, ebb reference
Level II Toxicity Evaluation Dilution Study Samples	6/15/10	DS-__*__-001-061510	100% plume water - Area G
		DS-__*__-002-061510	75% plume, 25% reference - Area G
		DS-__*__-003-061510	50% plume, 50% reference - Area G
		DS-__*__-004-061510	25% plume, 75% reference - Area G
		DS-__*__-005-061510	100% reference site water - NWS
		DS-__*__-006-061510	100% plume water - Area L
		DS-__*__-007-061510	75% plume, 25% reference - Area L
		DS-__*__-008-061510	50% plume, 50% reference - Area L
		DS-__*__-009-061510	25% plume, 75% reference - Area L
		DS-__*__-010-061510	100% reference site water - NWS

* three digit code for type of analysis required (e.g., TUR for turbidity)

5.1.3.2 Level I Water Quality Samples

Water quality samples were collected June 14–15, 2010 as part of the Level I monitoring performed at the start of the 2010 dredge season. These samples were analyzed in order to assess the protectiveness of the project's compliance threshold during dredging activities, to reestablish confidence in the sampling protocol, and to examine the background conditions at the reference stations. Samples were analyzed for turbidity, TSS, PCBs (total and dissolved), and toxicity; a sample for metals analysis was collected and archived, but not analyzed. Samples were collected during dredging and debris removal activities in Area G. Water quality samples were collected at four locations during these two events: 1) 300-feet north of activity during a flood tide, 2) 300-feet south of activity during an ebb tide, 3) the southern flood reference station, and 4) the northern ebb reference station (Table 3).

5.1.3.3 Level II Toxicity Evaluation Dilution Study Samples

Level II water quality samples were collected June 15, 2010 for two toxicity evaluation dilution studies. The goal of the water toxicity evaluation dilution studies was to evaluate the turbidity criterion with the intent to verify that the project remains ecologically protective. Simply put, the methodology required that toxicity bioassays be performed in site water samples of varied turbidities to determine if there was a correlation between turbidity and toxicity. This was accomplished by the creation of an artificial suspended sediment plume, and the collection of enough water from the plume and from a background station to complete five dilutions of varying turbidities for analysis. A plume with a turbidity of 200 NTU was targeted, and toxicity analyses were performed on water samples diluted (in the field) to a turbidity of approximately 200 NTU, 150 NTU, 100 NTU, 50 NTU and background. Boat based *in-situ* monitoring of the plume provided real-time turbidity readings while samples of approximately 200 NTU were collected at two locations. Four of the five toxicity sample cubitainers were filled to 100%, 75%, 50% and 25% capacity. The fifth cubitainer was filled with natural, low-turbidity water from the reference station up-current. The three cubitainers that were partially filled with water from the artificial plume were topped off with the low-turbidity reference site water; this produced a dilution of the same 200 NTU water parcel for the respective collection area.

Four samples were collected from Area G, and four from Area L (Table 3). The two reference station samples were collected north of Woods Street due to the ebb tide during sample collections (Table 3). The ten samples were sent to ESI for toxicity analyses. A small sample of well-mixed water was collected from each cubitainer and sent to AAL for turbidity analysis. The actual turbidity results for the five Area G water samples were: 180, 160, 110, 37, and 8.1 for the 100%, 75%, 50%, 25%, and reference waters, respectively. The turbidity results for the five Area L water samples were: 230, 190, 160, 41, and 7.1 for the 100%, 75%, 50%, 25%, and reference waters, respectively.

ESI evaluated the results of acute and chronic toxicity assays performed using the mysid shrimp, *Americamysis bahia*, and the sea urchin, *Arbacia punctulata*. Results were consistent with the 2009 toxicity dilution study and supported the continued use of the 100 NTU project specific compliance criteria. A complete discussion of the toxicity results is included in Section 5.2.3.

5.2 LABORATORY TESTING SUMMARY

A summary of the results from the three water sampling events are provided in this section. The first event on May 11, 2010, which established baseline levels for background conditions on the harbor, included only TSS and turbidity analyses. A complete suite of samples were collected on the second event, taking place June 14 and June 15, 2010 during Level I monitoring. The Level I samples were analyzed for toxicity, TSS, turbidity, dissolved and total PCBs. The third sample collection event was a two-part dilution study, performed on June 15, 2010. These samples were collected for toxicity and turbidity analysis in order to confirm the project's water quality compliance criterion.

5.2.1 Total Suspended Solids and Turbidity

TSS concentrations from the May 11, 2010 baseline sampling event ranged from 5.0 mg/L, at the flood reference site, to 10.0 mg/L, within the planned active work zone during the ebb tide. Turbidity ranges from the *in-situ* water quality monitoring sonde are comparable with the lab-based results, however all values reported by AAL were slightly higher (although negligible) than *in-situ* observations (Table 4). The difference between the lab and field turbidity measurements may be attributed to the fact that the exact same parcel of water was not sampled, even though the water pump tube collecting the lab sample was mounted adjacent to the *in-situ* optical sensor.

Level I water quality samples collected June 14–15, 2010 resulted in TSS concentrations ranging from 8.8 mg/L at the flood reference site, to 67.3 mg/L at the site 300-feet north of dredge-related activity in Area G. Higher concentrations of TSS generally corresponded with higher turbidity values. The correlation between TSS and turbidity results for the baseline and Level I samples is presented in Figure 14.

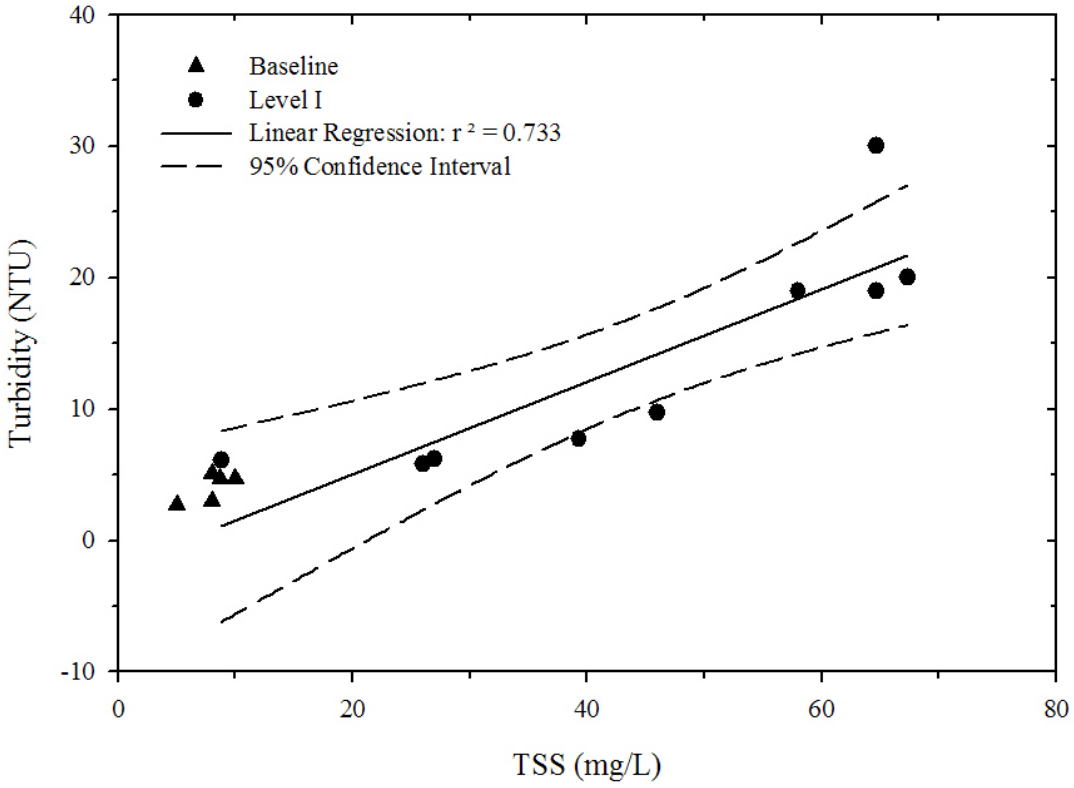

Figure 14. Correlation between TSS and Turbidity Results from 2010 Baseline and Level I Samples

Turbidity observations from *in-situ* monitoring during the water collection for the Level II samples collected on June 15, 2010 are also comparable to the laboratory results (Table 4). Suspended solids analysis was not performed on these samples.

Table 4. Summary of TSS and turbidity results

Sampling Event	Date	Sample ID	Sample Description	Lab Results		*In-situ* Measurements
				TSS (mg/L)	Turbidity (NTU)	Turbidity (NTU)
Baseline Water Quality Samples (Level II)	5/11/10	WQ-__*__-001-051110	1000-ft north, ebb reference	8	5.1	3.0-3.5
		WQ-__*__-002-051110	Active dredge area, ebb tide	8.7/10	4.7	2.9-3.3
		WQ-__*__-003-051110	1000-ft south, flood reference	5	2.7	2.1-2.3
		WQ-__*__-004-051110	Active dredge area, flood tide	8	3	1.3-1.5
Level I Water Quality Samples	6/14/10	WQ-__*__-001-061410	300-ft north of activity, flood tide	39.3	7.7	5.5-6.3
		WQ-__*__-002-061410	1000-ft south, flood reference	8.8	6.1	4.2-4.9
		WQ-__*__-003-061410	300-ft south of activity, ebb tide	58/64.7	19/19	22.3-33.0
		WQ-__*__-004-061410	1000-ft north, ebb reference	26	5.8	3.3-4.2
	6/15/10	WQ-__*__-001-061510	300-ft north of activity, flood tide	67.3	20	20.3-26.9
		WQ-__*__-002-061510	1000-ft south, flood reference	27	6.2	5.4-6.6
		WQ-__*__-003-061510	300-ft south of activity, ebb tide	64.7	30	18.6-28.9
		WQ-__*__-004-061510	1000-ft north, ebb reference	46	9.7	7.7-8.6
Level II Toxicity Evaluation Dilution Study Samples	6/15/10	DS-__*__-001-061510	100% plume water - Area G	NA	180	180-220
		DS-__*__-002-061510	75% plume, 25% reference - Area G	NA	160	mixture
		DS-__*__-003-061510	50% plume, 50% reference - Area G	NA	110	mixture
		DS-__*__-004-061510	25% plume, 75% reference - Area G	NA	37	mixture
		DS-__*__-005-061510	100% reference site water - Area G	NA	8.1	7.7-8.6
		DS-__*__-006-061510	100% plume water - Area L	NA	230	180-220
		DS-__*__-007-061510	75% plume, 25% reference - Area L	NA	190	mixture
		DS-__*__-008-061510	50% plume, 50% reference - Area L	NA	160	mixture
		DS-__*__-009-061510	25% plume, 75% reference - Area L	NA	41	mixture
		DS-__*__-010-061510	100% reference site water - Area L	NA	7.1	7.7-8.6

* three digit code for type of analysis required (e.g., TUR for turbidity)

5.2.2 Polychlorinated Biphenyl Congeners (NOAA-18)

Polychlorinated biphenyl testing for the NOAA-18 congeners was performed for one sampling event during the 2010 dredge season: the Level I samples collected June 14 and 15, 2010. Results are presented in Table 5 as total concentrations of the NOAA-18 congeners. For all congener analyses resulting in a non-detect, a value of zero is used in determining the sum of the NOAA-18 congeners. Results for individual congeners are reported with all complete analytical data in Appendix C. Concentrations of the NOAA-18 PCB congeners ranged from 0.219 µg/L to 1.489 µg/L in the total (unfiltered) water samples, and from 0.028 µg/L to 0.114 µg/L in the dissolved phase (filtered) samples (Table 5). Dissolved phase samples contained lower concentrations than the total, unfiltered samples. The sum of the NOAA-18 congeners, for both dissolved and total samples, were generally lower the reference sample sites, and as expected, the summed

concentrations were highest in the dredge area, down-current of active remediation activities.

Table 5. Summary of Total and Dissolved PCB (NOAA-18 Congeners) results

Sampling Event	Date	Sample ID	Sample Description	Lab Results		
				Turbidity (NTU)	NOAA-18 Congeners, Total (µg/L)	NOAA-18 Congeners, Dissolved (µg/L)
Level I Water Quality Samples	6/4/10	WQ-_*_-001-061410	300-ft north of activity, flood tide	7.7	0.715	0.044
		WQ-_*_-002-061410	1000-ft south, flood reference	6.1	0.252	0.043
		WQ-_*_-003-061410	300-ft south of activity, ebb tide	19/19	1.231/1.226	0.114/0.108
		WQ-_*_-004-061410	1000-ft north, ebb reference	5.8	0.671	0.084
	6/15/10	WQ-_*_-001-061510	300-ft north of activity, flood tide	20	1.391	0.046
		WQ-_*_-002-061510	1000-ft south, flood reference	6.2	0.219	0.030
		WQ-_*_-003-061510	300-ft south of activity, ebb tide	30	1.489	0.028
		WQ-_*_-004-061510	1000-ft north, ebb reference	9.7	0.705	0.084

* three digit code for type of analysis required (e.g., TUR for turbidity)

5.2.3 Toxicity

Toxicity exposure assays were performed on site water samples collected for two events, and results are summarized in Tables 6 and 7. Results are presented for the acute and chronic (sub-lethal) test endpoints: survival, growth, and reproduction. Results for test endpoints for each sample were statistically compared to those from both the event-specific site reference water and the laboratory control sample. The *A. punctulata* chronic fertilization assay was performed for both Level I and Level II water quality samples. Level I water quality samples were also tested for chronic toxic effects using the mysid shrimp *A. bahia* to examine survival and growth. Acute (48-hour) exposure assays using the mysid shrimp *A. bahia* were performed on the Level II toxicity evaluation dilution study sample.

Level I water quality samples collected on June 15, 2010 suggest a trend of reproductive failures by the sea urchin (*A. punctulata*) under chronic exposure to the southern flood reference sample. The ebb reference sample collected on June 15, 2010 also exhibited statistically different results than the laboratory control sample, however this may be a statistical artifact since any fertilization over 70% is considered to be non-toxic. The remaining *A. punctulata* assays for the Level I samples did not exhibit any adverse effects when compared to the laboratory control. Analytical water quality data do not indicate high concentrations of PCBs or suspended sediments in any of the Level I water quality samples.

Table 6. Summary of toxicity results for Level I samples

Sampling Event	Date	Sample ID (WQ-TOX-)	Sample Description	Lab Results			
				Turbidity (NTU)	Sea Urchin *(A. punctulata)*	Mysid *(A. bahia)*	
					mean fertilization (%)	7-day mean survival (%)	7-day mean biomass (mg/mysid)
Level I Water Quality Samples	6/14/10	001-061410	300-ft north of activity, flood tide	7.7	97.6	85.0	0.478
		002-061410	1000-ft south, flood reference	6.1	97.4	90.0	0.445
		003-061410	300-ft south of activity, flood tide	19	97.4	90.0	0.485
		004-061410	1000-ft north, ebb reference	5.8	97.3	90.0	0.456
	6/15/10	001-061510	300-ft north of activity, flood tide	20	94.7	90.0	0.341
		002-061510	1000-ft south, flood reference	6.2	45.1	87.5	0.320
		003-061510	300-ft south of activity, flood tide	30	95.2	85.0	0.335
		004-061510	1000-ft north, ebb reference	9.7	87.8	82.5	0.332

Table 7. Summary of toxicity results for Level II samples

Sampling Event	Date	Sample ID (WQ-TOX-)	Sample Description	Lab Results		
				Turbidity (NTU)	Sea Urchin *(A. punctulata)*	Mysid *(A. bahia)*
					mean fertilization (%)	48-hr mean survival (%)
Level II Toxicity Evaluation Dilution Study Samples	6/15/10	001-061510	100% plume water - Area G	180	91.1	100.0
		002-061510	75% plume, 25% reference - Area G	160	85.5	100.0
		003-061510	50% plume, 50% reference - Area G	110	90.4	100.0
		004-061510	25% plume, 75% reference - Area G	37	91.9	100.0
		005-061510	100% reference site water - Area G	8.1	88.7	100.0
		006-061510	100% plume water - Area L	230	54.1	100.0
		007-061510	75% plume, 25% reference - Area L	190	39.3	100.0
		008-061510	50% plume, 50% reference - Area L	160	66.1	100.0
		009-061510	25% plume, 75% reference - Area L	41	85.1	100.0
		010-061510	100% reference site water - Area L	7.1	91.6	100.0

Toxicity assays performed on the samples collected during the Level II toxicity evaluation dilution study in Area G did not exhibit any significant adverse effects when compared to the laboratory control. The Area G plume water samples and background reference sample did result in lower *A. punctulata* fertilization rates when compared to the lab control, however these differences were not statistically significant. Furthermore, the 48-hour survival rates (*A bahia*) were 100% for all samples.

The samples from the toxicity evaluation dilution study in Area L exhibited significant differences in the *A. punctulata* fertilization assay for all except the reference and 25% plume samples. These dilution study samples were collected approximately one quarter mile north of the location where Level I southern (flood) reference samples were collected on the same day. The Level I southern (flood) reference toxicity sample also exhibited adverse effects in the sea urchin fertilization assay. Given the toxic effects observed in the reference sample and the low concentrations of PCBs in the samples, the adverse toxic results may not be a product of the artificially created suspended sediment plume. Although it cannot be verified, the toxicity observed in the *A. punctulata* assay could have been influenced by a combination of a heavy rainfall event (1.82 inches in 9 hours) that occurred two days prior to the sampling event, and the proximity of the sampling location to CSOs that may have flushed a localized contaminant into the harbor. Furthermore, 100% survival rates in the *A. bahia* assays confirmed that the 100 NTU turbidity criterion was ecologically protective for both the northern and southern dredge areas planned for the 2010 dredge season.

5.2.4 Quality Control

Complete laboratory QC data from AAL and ESI is included in the respective laboratory reports and are provided in Appendix C and D of this report. In general, the quality of the data was acceptable and the analytical methods were in control. For example, target parameters were undetected in the method/procedural blanks, indicating that the methods were free of contamination. Results for the laboratory-based QC samples, such as LCS and MS/MSD samples were acceptable for all test parameters, indicating that the laboratory procedures were in control. Field-based QC samples (i.e. field duplicate samples and equipment blanks) were also acceptable, indicating sampling methods were also in control.

6.0 DISCUSSION

The water quality monitoring program was developed to characterize the aqueous environment, to limit potential ecologically harmful impacts of remedial operations on water quality, and to limit redistribution of contaminated sediments. Achieving these goals required utilizing a variety of monitoring techniques:

- Adaptive boat-based monitoring with the use of *in-situ* instruments to track sediment plumes in real-time
- Collection of water samples for analytical testing, which were used to establish baseline water quality conditions and assess project compliance criteria
- Continuous *in-situ* data collection using fixed-station instrument moorings at strategically selected locations. Data were collected autonomously or telemetered to provide water quality data when boat-based monitoring was not possible
- Observational monitoring of water quality conditions with respect to fish and wildlife impacts, used to minimize ecological risk factors

6.1 FISHERY AND WILDLIFE OBSERVATIONS

Field staff consistently recorded visual observations regarding fish migration and wildlife behavior throughout the 2010 environmental monitoring and remedial dredging season. Large numbers of fish were observed in the upper harbor, between the Sawyer Street CDF and the northern reaches of the estuary, north of the Wood Street Bridge. Lower trophic level fish and juveniles were consistently observed schooling throughout the estuary, particularly in the vicinity of the Wood Street Bridge and Dredge Area K. Larger predatory fish such as striped bass and bluefish were often seen feeding on the smaller fish. On occasion, in late summer, stressed fish were observed during hypoxic conditions and water temperatures near 30°C. The stressed fish were most often observed in the top layer of water where dissolved oxygen concentrations were slightly higher than in deeper water (~3 mg/L compared to <1 mg/L, respectively). Although a dozen or fewer dead fish were observed on a given day during this period, no large-scale fish kill events occurred during the 2010 dredge season. The fish mortality that did occur is likely attributable to the poor water quality conditions (low DO concentrations, high temperature) that naturally occur during the late summer months. There appeared to be no restriction of movement or migration of fish within or around the dredge areas.

Birds such as great blue herons, green herons, gulls, swans, cormorants, egrets, terns, osprey, as well as other water fowl were observed living and feeding in the estuary surrounding all active dredge areas (Figure 15). Abundant waterfowl were observed during July in the northern dredge areas. These birds appeared to be feeding on small fish. At times, greater than a hundred birds were observed in Areas G, J, and K surrounding the dredging equipment and activities. The species most frequently present were cormorants, gulls, and terns. Pairs of swans were observed throughout the summer and in the early fall with their cygnets, feeding in the marsh grass and shallow water on the eastern shore of the Acushnet River, in Pierce Mill Cove, and north of Wood Street.



Figure 15. Cormorants and Gulls Observed in Northern Active Dredge Zone

6.2 SEDIMENT RESUSPENSION RELATED TO REMEDIAL DREDGING ACTIVITIES

In general, there were three activities with potential to generate suspended sediment plumes; 1) dredging, 2) debris removal, and 3) support operations. Direct field reconnaissance information collected in close proximity to dredge operations allowed field personnel to determine which activities had the greatest potential to contribute to turbidity plumes. These findings were generally consistent with previous monitoring years.

The distribution of turbidity plumes in the 2010 active work zone was often limited to areas of shallow water, where bottom perturbation by work related vessels or the debris removal excavator was common. Suspended sediment plumes were elevated in turbidity levels immediately adjacent to the source, but rapidly decreased with distance. The shallow water (and resulting lower flow) in the active work zone is thought to have helped contain plume dispersion.

The hydraulic dredging operation created virtually no measurable or sustained sediment plumes above 50 NTU, as evidenced by both boat-based and continuous *in-situ* turbidity monitoring data. In the event that debris became fouled in the auger-head of the dredge and required manual removal, the auger would be lifted to the water surface. If high winds or strong tidal flow drew surface water across the sediment-covered auger, a localized plume of turbidity and often a light to moderate sheen was observed down-wind or down-current of the dredge. In general, turbidity plumes of >100 NTU were spatially limited to <100-feet of the source, and temporally short-lived. Additionally, during period of high winds, the use of support vessels was necessary to keep the dredge moving in line with the dredge cables. During these circumstances, and in shallow areas, the supporting push-boats' propeller turbulence disturbed sediments and created narrow plumes of elevated turbidity.

Suspended sediment plumes related to debris removal activities were perhaps the most common cause for elevated turbidity. These plumes tended to occur in pulses. Rapid increases and decreases in turbidity readings, or "spikes" were observed in conjunction with the debris removal rake being lifted through the water column and releasing sediments. Constant communication with the mechanical excavator operators performing debris removal showed that when this work was done carefully and slowly, plumes were less frequent and of lower turbidity. Frequent breaks would allow suspended sediments to settle before the operator continued with a subsequent pass of the excavator's rake.

The placement and removal of sheet pilings also had the potential to produce plumes of suspended sediments. This type of support operation was observed early in the 2010 dredge season during the setup of Area K for dredging. The water quality mooring initially deployed south of Area J was immediately adjacent to the placement of sheet piles in Area K before the mooring was repositioned south of Area K. Boat-based monitoring and data from the mooring confirmed that positioning sheet piles disturbed bottom sediments and created a plume of turbid water within close proximity to the activity (Figure 11). Turbidity readings within the plume rapidly diminished with increasing distance away from the activity. The removal and placement of sheet piles was closely monitored for the duration of the 2010 environmental monitoring season to ensure that such plumes did not violate the compliance criterion threshold for the project.

A short-term, pulsed nature of the suspended sediment plumes was observed in the *in-situ* fixed-station data record. Turbidity spikes (30–80 NTU) occurred during operational activity, but usually represented only one or two readings at a time (15–30 minute period). Turbidity spikes and fluctuations of varying magnitude were also recorded during non-working hours; these turbidity spikes are not attributed to dredging operations. There is the possibility that this phenomenon is indirectly caused by dormant equipment (e.g., dredges, barges, scows) that is disturbing the bottom as wave action moves the equipment up and down in shallow water. Spikes were observed on both incoming and outgoing tides and a wave forcing mechanism such as the one described above, could create turbidity pulses with a low frequency period, independent of tidal flow. Turbidity spikes could also be caused by weather events, CSO discharge, or a blockage of the turbidity sensor.

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APPENDIX A. WATER QUALITY MONITORING FIELD LOGS AND DAILY REPORTS (ON CD)

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APPENDIX A WATER QUALITY MONITORING FIELD LOGS AND DAILY REPORTS

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WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: June 14, 2010

Weather: overcast, light breeze NNW to S

Tides:

high	@	10:04
low	@	15:24
high	@	22:21

Monitoring Period:

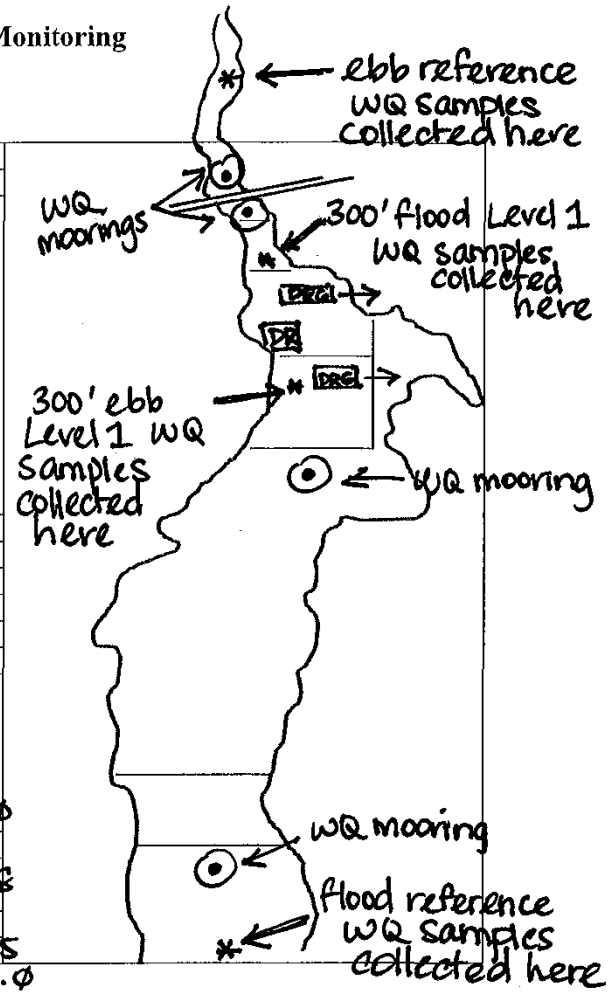
From: 08:50 To: 16:20

Tidal Stages: (HWS) (Ebb) (LWS) (Flood)

Dredging Activity:

Area G: active dredging and debris removal (high tide)

Area J: active dredging (low tide)



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Area G, 300's of DR & DRG	5-35	4.1-7.9	0.5-6.0
Area G, 300' N of DR & DRG	4.5-6.0	4.2-7.3	0.2-4.8
ebb reference	2.8-4.2	2.4-6.3	0.5-2.5
flood reference	2.0-7.5	6.5-7.1	0.4-13.0

Oil Sheen/Debris:

abundant garbage throughout upper harbor and in oil boom.

Wildlife Observations:

Swans, shorebirds, a finned fish

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L) WQ-TSS-(0001→0004)-06141 Turbidity (1L) WQ-TUR-(0001→0004)-06141

Total PCB (1L) WQ-TPC-(0001→0004)-06141 Dissolved PCB (2x1L) WQ-DPC-(0001→0004)-06141

Toxicity (5 gal) WQ-TOX-(0001→0004)-06141 Metals (500ml) WQ-MET-(0001→0004)-06141

Notes: 1st day of dredging, Level 1 water quality monitoring: samples collected at flood & ebb reference locations and 300 ft north & south of debris removal and dredging in Area G during flood & ebb tides, respectively. All water quality moorings deployed (5 total) and sediment trap south of Area J deployed.

Sampling Crew: D. Walsh, M. Walsh, D. Bailey, K. McCartney

Chief Scientist Signature: Kate McCa

1st day of dredging: Level 1 WQ monitoring

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area 6
Dredging Description	active dredging and debris removal
Survey Vessel	R/V George Hampson
Chief Scientist	D. Walsh
Sampling Technician	K. McCartney, D. Bailey
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	overcast, light breeze

Date	6/14/10
Page	1 of 2

Tide Information	
High	10:04
Low	15:24
High	22:21
Low	

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
300' N of G	09:09	41°40.600'	70°54.971'	6.0	0.25	5.7	21.88	7.26	18.60	site of 300' flood WQ
"	09:10	"	"	"	1.53	4.9	23.50	6.33	18.74	Level 1 samples sample collection
"	09:11	"	"	"	3.07	5.1	25.14	5.74	18.88	1 hr before high tide
"	09:12	"	"	"	4.20	5.6	26.56	4.65	19.00	
"	09:14	"	"	"	4.81	5.1	26.78	4.29	19.04	
"	09:17	"	"	"	0.38	5.8	21.83	6.97	18.60	* depth of sample collection
1000' S of L	09:47	41°39.785'	70°55.002'	14.3	0.39	2.0	24.92	7.05	18.97	site of 1000' flood ref WQ
"	09:48	"	"	"	3.04	2.1	27.86	6.99	18.86	Level 1 samples sample collection
"	09:50	"	"	"	7.31	4.3	28.85	6.65	18.82	
"	09:51	"	"	"	10.10	5.3	29.92	6.62	18.82	
"	09:52	"	"	"	12.92	7.5	28.92	6.58	18.82	
"	09:57	"	"	"	7.94	4.3	28.78	6.63	18.82	* depth of sample collection
300' S of G	12:06	41°40.512'	70.54.932'	7.5	0.66	22.9	21.84	7.85	18.89	site of 300' ebb WQ
"	12:07	"	"	"	2.12	12.8	26.88	5.61	19.09	samples
"	12:07	"	"	"	3.54	6.1	28.29	4.66	19.11	
"	12:08	"	"	"	6.03	7.5	28.50	4.12	19.13	
"	12:12	"	"	"	1.37	22.3	26.72	5.11	19.08	* depth of sample collect

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area 6
Dredging Description	active dredging and debris removal
Survey Vessel	R/V George Hampson
Chief Scientist	D. Walsh
Sampling Technician	K. McCartney
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	overcast light breeze

Date	6/14/10
Page	2 of 2

Tide Information	
High	10:04
Low	15:24
High	22:21
Low	

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
1000' N of M	12:58	41°40.840'	70°55.035'	3.6	0.59	2.8	10.64	6.30	18.10	site of 1000' ebb ref WQ samples
"	12:59	"	"	"	1.53	3.9	26.33	3.01	19.21	
"	13:00	"	"	"	2.47	3.8	27.31	2.42	19.22	
"	13:04	"	"	"	1.40	3.5	23.91	2.98	19.13	* depth of sample collect

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	no dredging : baseline WQ sample collection
Dredging Description	none
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarney
Sampling Technician	D. Bailey
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	sunny, 50°, winds

Date: 5/11/10
Page: 1 of 1

Tide Information	
High	0641
Low	1207
High	1856
Low	

ID Location	Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
01	EBB REF	09:26	41°40.835'	70°55.038'	2.9	0.07	1.6	452	10.91	12.75	baseline ebb ref.
	"	09:27	"	"	"	1.28	2.8	27.19	9.75	15.15	"
	"	09:27	"	"	"	1.60	3.2	27.59	9.85	15.22	*sample collected here
	EBB-SAMPLE	10:22	41°40.472'	70°54.924'	4.0	0.28	1.7	27.51	11.75	15.23	baseline dredge area
02	"	10:23	"	"	"	1.50	1.9	28.27	10.14	14.48	on ebb tide (center of Area J)
	"	10:25	"	"	"	3.10	2.6	28.94	9.38	14.36	sample @ ~3 ft.
	FLOOD REF	14:05	41°39.796'	70°55.008'	9.3	2.20	1.2	27.04	11.83	15.19	baseline flood ref
03	"	14:07	"	"	"	5.02	1.6	27.84	10.61	14.01	*sample collected here
	"	14:08	"	"	"	7.00	1.8	28.60	10.10	13.99	baseline flood ref.
04	FLOOD SAMPLE	14:25	41°40.474'	70°54.925'	5.3	~~0.5~~ EGM 0.57	1.7	26.03	12.08	17.24	baseline dredge area
	"	14:27	"	"	"	3.3	3.5	28.24	12.01	15.58	on flood tide (center of Area J)
	"	14:28	"	"	"	3.7	3.1	28.24	12.07	15.61	sample @ ~3 ft.

~~SW-10X~~ ~~WQ-001-062409~~ WQ-TSS-01-051110 TUR-0 +REP

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: June 15, 2010

Weather: sunny, wind 10-15 kts N (am) S (pm)

Tides:

low	@	04:30
high	@	10:57
low	@	16:16

Monitoring Period:

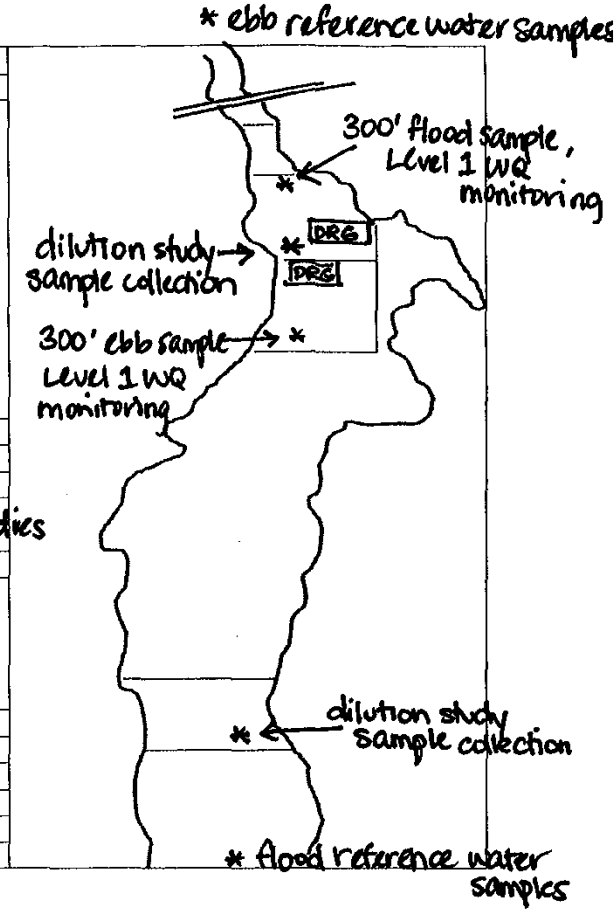
From: 0840 To: 15:10

Tidal Stages: HWS (Ebb) LWS (Flood)

Dredging Activity:

morning: Area G - dredging and debris removal

afternoon: Area J - dredging
Area G
Area L > debris removal for dilution studies



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Area G, 300' S of DR & DRG	16.1 - 29.8	6.0 - 8.6	0.5 - 3.2
Area J, 300' S of DRG	13.4 - 28.9	6.2 - 9.0	0.6 - 5.0
ebb reference (N)	6.7 - 9.1	5.0 - 9.5	0.5 - 4.0
flood reference (S)	3.6 - 6.6	7.1 - 7.5	0.8 - 7.6
Area G Dilution Study	~180-220	~5.5	0.5
Area L Dilution Study	~180-220	8.1 - 11.1	1.0

Oil Sheen/Debris:

none detected

Wildlife Observations:

swans, shorebirds, osprey

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	WQ-TSS-(0001→0004)-060151	Turbidity (1L)	WQ-TUR-(0001→0004)-060151
Total PCB (1L)	WQ-TPC-(0001→0004)-060151	Dissolved PCB (2x1L)	WQ-DPC-(0001→0004)-060151
Toxicity (5 gal)	WQ-TOX-(0001→0004)-060151	Metals (500ml)	WQ-MET-(0001→0004)-060151
	DS-TOX-(0001→0010)-060151		DS-TUR-(0001→0010)-060151

Notes: Second day of Level 1 water quality monitoring: samples collected at flood and ebb reference locations and 300 ft. north and south of activity in G and J during flood and ebb tides, respectively. Two dilution studies performed, one in Area G and one in Area L. Samples collected of turbid water between 180-220 NTU and diluted with reference site water into the following: 100% plume water (~200 NT
75% plume, 25% ref. (~15
50% plume, 50% ref (~100 NTU
25% plume, 75% ref (~50 NT
100% reference (backgrou
Samples will be delivered to the labs this evening for analysis.

Sampling Crew: D. Walsh, M. Walsh, D. Bailey, K. McCartney

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G, Area J
Dredging Description	debris removal in G, dredging in G (am), in J (pm)
Survey Vessel	R/V George Hampson
Chief Scientist	D. Walsh
Sampling Technician	K. McCartney, D. Bailey
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	Sunny, wind 10-15 kts N

Date: ~~6/14~~ 6/15/10
Page: 1 of 2

Tide Information	
High	10:57
Low	04:30
High	23:14
Low	16:16

	Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
	300' N of G	09:05	41°40.594'	70°54.941'	5.2	Ø.66	12.9	22.65	9.13	19.43	300' flood dredge area
	"	09:06	"	"	"	2.9Ø	38.6	26.95	7.23	19.51	Level 1 sample (north of active dredging in G; debris removal in G)
	"		"	"	"						
300' flood sample: ØØ1	300' N of G	09:12	41°40.607'	70° 54.964'	4.6	Ø.58	18.2	22.83	8.57	19.64	* RELOCATED more north too close to dredge.
	"	09:13	"	"	"	1.95	27.2	25.71	7.67	19.44	now 300' N of dredge in
	"	09:14	"	"	"	3.13	16.1	26.94	6.67	19.54	~400' N of debris removal in
	"	09:15	"	"	"	1.78	29.8	25.91	6.04	19.36	* depth of sample collected
flood ref sample: ØØ2	1000' S of L	09:54	41° 39.802'	70°54.995'	14.1	Ø.86	3.9	27.Ø6	7.48	19.54	flood reference 1000's of
	"	09:55	"	"	"	3.17	4.2	28.Ø3	7.27	19.31	Level 1 samples
	"	09:56	"	"	"	5.46	3.6	28.48	7.17	19.18	
	"	09:57	"	"	"	7.57	4.7	28.68	7.09	19.1Ø	* depth of sample collect
	@DR in G	12:08	41°40.649'	70°54.948'	5.3	Ø.53	188.1				during sampling for dilution study, Area G (DS#1)
Dilution Study #1		12:09					196.Ø		5.5Ø		
		12:09					211.9				
		12:09					227.8				
		12:10					205.2				
		12:13					200.7				
		12:17					228.1				
		12:19					227.8				

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G, Area J, Area L
Dredging Description	debris removal in L (dilution study) dredging in J (pm)
Survey Vessel	R/V George Hampson
Chief Scientist	D. Walsh
Sampling Technician	K. McCartney, D. Bailey
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	

Date: 6/15/10
Page: 2 of 2

Tide Information	
High	10:57
Low	04:30
High	23:14
Low	16:16

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
ebb ref sample: ØØ4 and dilution study ref samples	1000' N of M	12:51	41° 40.837'	70° 55.037'	5.0	Ø.57	6.7	13.2Ø	9.47	2Ø.Ø5	collection of ref water for dilution studies and ebb ref Level 1 WQ samples
	"	12:52	"	"	"	2.25	8.8	26.5Ø	7.41	19.75	
	"	12:56	"	"	"	3.99	9.1	26.88	3.5Ø	19.5Ø	
	"	12:58	"	"	"	2.51	8.1	26.68	5.Ø9	19.67	* depth of sample collec
	"	13:20	"	"	"	25Ø	7.7	—	—	—	
Pilution study #2	@DR in L		41° 39.980'	70° 55.~~00~~'	~~5.4~~ 14.2	1.75	~~4.9~~		8.43		during sampling for dilution study, Area L (DS #2)
		1314:03	"	"	4.2	Ø.97	215.9		11.10		
		14:03	"	"	"	"	1857				
		14:07					208-2				
		14:13					215.0				
		14:13					200.9				
		14:19					189.6				
300' ebb sample: ØØ3	300' S of J	14:35	41° 40.459'	70° 54.93~~0~~'	6.3	Ø.6Ø	21.Ø	25.97	8.74	2Ø.23	300' S of dredge in J ebb samples (ØØ3)
	"	14:37	"	"	"	2.52	25.1	25.79	9.ØØ	2Ø.31	
	"	14:38	"	"	"	4.99	13.4	27.97	6.24	19.28	Level 1 WQ monitorin
	"	14:39	"	"	"	2.Ø5	2Ø.9	25.91	8.63	2Ø.22	* depth of sample collecte

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 6/16/2010
Weather: Partly Cloudy Wind SW @ 5
Tides:

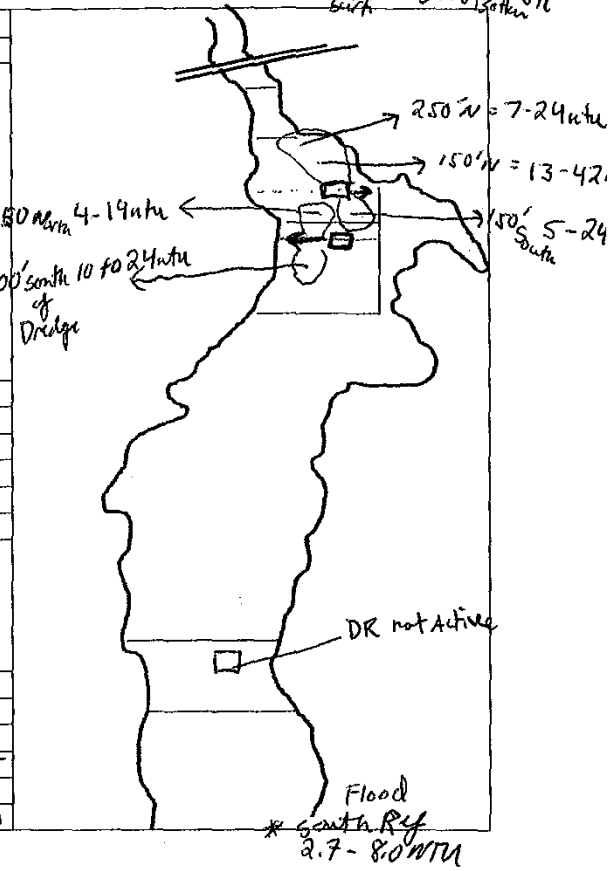
-0.1'	@	0514
4.2'	@	1151
0.0'	@	1711

Monitoring Period:

From: ~~0915~~ 0830 To: 1545

Tidal Stages: (HWS) (Ebb) LWS (Flood)

Dredging Activity:
Morning: Active dredging Area J / No debris Removal / East to west
1030 Dredging Moved to Area G / no Debris Removal
Dredge working west to east
1500 Dredging moved to Area J



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Flood Area G 0940	15 - 22 ntu	7.84	1.80
Flood North Area G	4 - 19 ntu	9.55	0.5 - 1.5
150' N. Dredge Area G	8 - ~~13~~ 35 42	6.81	2.3 - 4.7
250' N of Dredge	7 - 24	8.26	4.2
Ebb North Reference	3.6 - 8.1	9.17 - 3.18	0.6 - 4.5
Ebb 150' south of Dredge Area G	5.3 - 24	10.28 - 8.53	0.4 - 3.1
100' south of Dredge Area J	10.7 - 28.2	10.72 - 7.61	0.6 - 3.00

Oil Sheen/Debris:
No noticable Sheen or Debris observed.

Wildlife Observations:
Several Fish, Osprays, Egrets, Gulls, Swans

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: No debris removal Today. Monitored dredging in areas G and J for both Flood and Ebb - Background NTU's at both reference Sites North and South were in 8 Ntu. This slight elevation was noticed throughout all dredge Areas Dissolved Oxygen ranged from a low of 3.2 mg/l (Bottom) N. of wood St. to 10.28 at the surface in the Dredge Areas

Sampling Crew: M. Walsh, D. Rogers

Chief Scientist Signature: Michael Walsh

Higher NTU's (42) were noticed in Area G 150' north of Dredge during lower Flood tide.

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area J
Dredging Description	Active Dredging East to West Northern Boundry Area J
Survey Vessel	S/V George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	mostly cloudy / wind SW 5-10

Date 6/16/10
Page 1 of 2

Tide Information	
High	4.2' @ 11:51
Low	-0.1' @ 05:14
High	4.6 @ 2351
Low	0.0 @ 1711

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
1000' Rip South	0830	41°39.80	70° 55.00	9.7'	1.39	2.7	26.34	7.67	20.58	
	0832				3.51	2.3	27.61	7.84	20.25	
	0834				6.53	2.8	27.98	6.96	20.07	
	0835				8.03	8.0	28.12	6.20	20.05	
150' north of Dredge	0908	41° 40.543	70° ~~54~~.934	3.2	0.94	7.2	~~6.35~~ 27.80	8.75	19.28	Dredging Area J moved to Area G
	0910				1.99	28.2	16.75	8.12	20.55	
	0940			3.7	1.80	19.3	13.81	7.84	20.20	
150' north of Dredge	1055	41°40.60	70° 54.93	5.3	0.52	9.0	11.72	9.30	20.39	Dredging Area G ~~moved to Northern Boundary Area 6~~
	1058				1.51	10.1	16.57	9.28	20.58	
	1059				2.62	13.2	23.05	8.07	20.74	
	1100				3.52	13.5	24.28	7.66	20.87	
	1133			5.6	4.55	42.5	25.07	8.27	20.87	
	1143			5.7	5.87	42.2	25.23	6.23	20.89	
250' north of Dredge	1153	41° 40.613	70° 54.95	5.7	0.67	7.0	5.04	10.54	21.27	Northern Boundry Area G
	1154				1.56	13.4	17.63	10.83	20.56	
	1155				3.02	13.6	24.66	8.82	20.91	
	1157				4.21	24.8	25.38	8.48	20.90	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	①	Area G - middle moving West to East	
Dredging Description	②	Area J - Middle north moving East to West (1500)	
Survey Vessel		S/V George Hampson	
Chief Scientist		M. Walsh	
Sampling Technician		D. Rodgers	
Vessel Captain		D. Rogers	
Other Personnel		—	
Weather Conditions		Partly Cloudy Wind SW 10	

Date: 6/16/2010
Page: 2 of 2

Tide Information	
High	4.2' @ 1151
Low	-0.1' @ 0514
High	4.6' @ 2351
Low	0.0 @ 1711

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
250' north of Dredge	1219	41°40.613	70°54.957	5.7	4.24	21.8	25.54	8.26	20.91	North Boundary of Area G
N. Reference	1249	41°40.833	70°55.034	5.6	0.53	3.6	2.81	9.17	19.91	
	1251			~~3.22~~	3.22	8.2	23.72	6.05	20.78	
	1252				4.5	8.1	24.42	3.18	20.54	
150' South of Dredge	1308	41°40.535	70°54.903	4.0	0.45	5.3	9.52	10.28	21.72	
	1309	~~70°54.903~~ (41)			1.5	7.9	19.20	9.90	21.35	
150' from South of Dredge	1309				3.1	22.9	23.52	8.53	21.14	150' South of Dredge in Area G -
	1352				2.73	27.3	23.32	7.54	21.09	
160' South of Dredge	1583	41°40.480	70°54.951	4.5	0.68	10.7	7.27	10.72	22.31	100' South of Dredge in Area J
	1532				2.11	18.7	15.14	9.97	21.69	
	1533				3.00	28.2	24.46	7.61	20.87	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: June 17, 2010

Weather: partly sunny, winds 5-15 kts NNW

Tides:

low	@	0600
high	@	1246
low	@	1811

Monitoring Period:

From: 09:00 To: 15:45

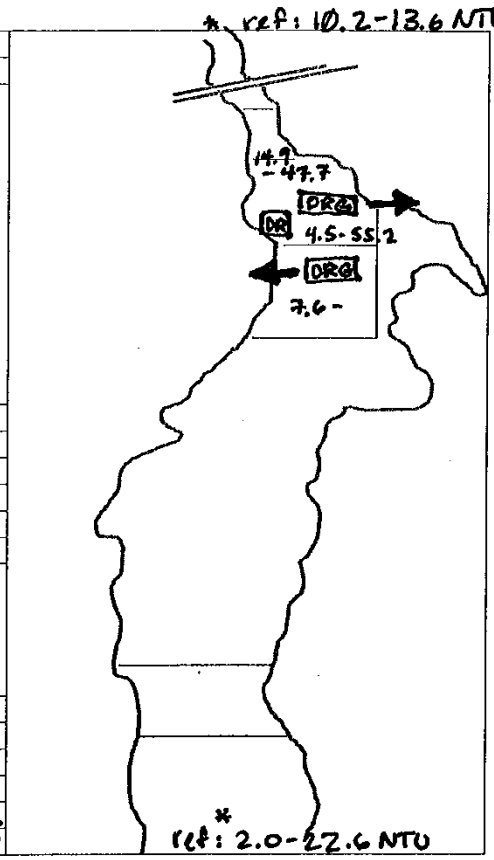
Tidal Stages: (HWS) (Ebb) LWS (Flood)

Dredging Activity:

Area L: moving pipeline, deploying oil boom

Area J: dredging (early am) (pm)

Area G: dredging (after 10:30 until 1500)
debris removal (12:00 to 1500)



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Area J: 300' N of DRG	4.5-55.2	3.8-9.0	0.5-3.0
300' S of DRG	5.7-29.0	6.1-7.3	0.9-6.7
Area G: 300' N of DRG	14.9-33.1	3.0-8.0	0.7-3.6
300' N of DRG & DR	17.4-49.7	4.5-5.4	~2.25
300' S of DRG & DR	7.6-28.7	6.2-9.0	0.9-8.5
Ebb reference	10.2-13.6	2.1-8.5	0.6-4.6
Flood reference	2.0-22.6	5.5-8.3	0.3-6.9

Oil Sheen/Debris:

none detected

Wildlife Observations:

swans, egrets, gulls

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Ephemeral plumes of 50 NTU+ turbidity (max 55.2 NTU) observed 300' N and S (flood and ebb) of dredge in Area J. Plumes lasted less than 1 minute before disparsing and occurred infrequently. High reference turbidity readings observed 1000' S of Area L (flood reference), approximately 23 NTU one foot off bottom. Lower reference turbidity observed on ebb tide (max 13.6 NTU). Oil boom deployed in Area L today and preperations were made for dredging to begin

Sampling Crew: D. Rogers, K. McCartney

Chief Scientist Signature: Kate McCar

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area L, Area J
Dredging Description	moving pipeline in L, dredging in J
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, wind 5-10 kts NW

Date: 6/17/2010
Page: 1 of 4

Tide Information	
High	12 0909
Low	0600
High	1246
Low	1811

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
S flood ref	09:11	41°39.802'	70°55.009'	9.3	0.27	2.0	23.47	8.22	21.15	1000' S of L
"	09:12	"	"	"	4.27	2.8	28.24	7.25	20.39	
"	09:13	"	"	"	8.08	22.6	28.50	5.66	20.31	
"	09:14	"	"	"	6.90	17.2	28.46	5.54	20.31	
300' N DRG in J	09:31	41°40.537'	70°54.941'	3.3	0.56	4.5	3.90	9.04	21.44	300' north of dredge in J
"	09:32	"	"	"	1.2	18.2	19.22	7.34	20.85	
"	09:34	"	"	"	1.5	14.4	12.27	8.12	20.76	
"	09:43	"	"	"	2.95	36.0	25.23	4.37	20.73	ephemeral plumes up to ~55 NTU observed lasting <1 min, infrequent (every 15-3 mins)
"	09:45	"	"	"	2.90	39.6	25.35	3.88	20.73	
"	09:46	"	"	"	2.95	52.3	35.40	3.97	20.71	
"	09:48	"	"	"	2.75	24.2	24.22	4.18	20.77	
"	09:49	"	"	"	2.47	27.0	24.49	4.41	20.74	
"	09:55	"	"	"	2.57	55.2	25.55	3.84	20.71	
"	09:56	"	"	"	2.56	20.1	25.55	4.20	20.71	
"	10:01	"	"	"	2.53	16.6	25.10	4.38	20.75	
"	10:08	"	"	"	2.54	10.5	25.06	4.52	20.75	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G
Dredging Description	dredging in G (10am) debris removal in G (noon)
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	overcast, wind 5-15 kts N/N

Date: 6/17/2010
Page: 2 of 4

Tide Information	
High	0009
Low	0600
High	1246
Low	1811

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
300'N DRGing	10:31	41°40.604'	70°54.970'	4.7	0.69	15.1	11.99	8.01	21.01	300' north of dredge in G
"	10:32	"	"	"	1.59	17.9	18.84	7.20	20.81	
"	10:33	"	"	"	2.55	17.4	22.66	5.63	20.76	
"	10:34	"	"	"	3.60	14.9	24.51	3.30	20.80	
"	10:35	"	"	"	4.14	15.3	24.49	3.05	20.79	
"	11:02	"	"	"	2.52	33.1	23.04	5.26	20.81	
"	11:24	"	"	"	2.51	23.3	24.10	5.01	20.83	
"	11:34	"	"	"	2.52	~~24.32~~ KM	19.9 24.32	5.44	20.83	
"	11:35	"	"	"	2.08	28.2	24.36	5.47	20.83	
"	11:36	"	"	"	1.18	15.0	22.64	6.04	20.89	
"	11:38	"	"	"	2.25	25.8	24.20	4.98	20.84	
"	12:01	"	"	"	2.30	28.0	25.14	5.04	20.82	300' N of debris removal
"	12:05	"	"	"	2.25	27.7	24.59	5.03	20.84	
"	12:07	"	"	"	2.27	25.3	24.76	5.52	20.83	
"	12:30	"	"	"	2.26	23.3	26.33	4.77	20.79	
"	12:40	"	"	"	2.26	17.4	26.33	5.31	20.83	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G
Dredging Description	dredging in G, debris removal in G
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, wind 5-15 kts NW

Date: 6/17/10
Page: 3 of 4

Tide Information	
High	ΦΦΦ9
Low	Φ6ΦΦ
High	1246
Low	1811

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
N ebb ref	13:01	41°4Φ.837'	7Φ°55.Φ31'	6.5	Φ.64	1Φ.2	17.45	8.52	21.Φ9	1000' N of M
"	13:03	"	"	"	2.54	1Φ.7	24.33	3.42	2Φ.8Φ	
"	13:04	"	"	"	4.58	13.6	25.2Φ	2.15	2Φ.68	
300'SDR in G	13:24	41°4Φ.47Φ'	7Φ°54.943'	9.6	Φ.89	11.4	23.79	9.Φ3	21.25	300' S of DR; DRG in G
"	13:25	"	"	"	2.53	9.2	27.53	6.54	2Φ.72	
"	13:26	"	"	"	4.5Φ	7.6	28.Φ5	6.49	2Φ.64	
"	13:27	"	"	"	6.52	9.1	28.35	6.65	2Φ.57	
"	13:29	"	"	"	8.46	16.4	28.39	6.19	2Φ.51	
"	14:06	"	"	"	7.84	13.8	28.49	6.69	2Φ.53	
"	14:15	"	"	"	7.80	17.9	28.51	6.63	2Φ.52	
"	14:16	"	"	"	7.81	28.7	28.51	6.63	2Φ.52	
"	14:17	"	"	"	7.83	18.Φ	28.51	6.63	2Φ.52	
"	14:22	"	"	"	7.76	24.6	28.52	6.6Φ	2Φ.53	
"	14:28	"	"	"	7.83	18.1	28.54	6.63	2Φ.53	
"	14:30	"	"	"	1.29	8.Φ	27.68	6.2Φ	2Φ.71	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G, Area J
Dredging Description	debris removal in southern G/northern J, dredging in J
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	sunny, winds 5-15 kts NW

Date: 6/17/10
Page: 4 of 4

Tide Information	
High	0009
Low	0600
High	1246
Low	1811

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
300'S of DR	14:52	41°40.449'	70°54.964'	8.6	1.14	9.9	27.79	5.98	20.70	300'S of DR at G/J boundary
"	14:54	"	"	"	2.50	12.4	27.23	5.88	20.72	
"	14:55	"	"	"	5.25	8.9	28.36	5.84	20.56	
"	14:57	"	"	"	6.70	12.8	28.44	5.75	20.54	
300'S of DR in J	15:13	41°40.431'	70°54.933'	7.8	0.92	10.1	24.76	6.95	20.23	300'S of dredge in J
"	15:14	"	"	"	2.49	5.7	28.33	7.28	20.68	
"	15:15	"	"	"	4.97	8.0	28.55	6.95	20.54	
"	15:17	"	"	"	6.20	21.4	28.59	6.70	20.53	
"	15:19	"	"	"	6.71	29.0	28.59	6.16	20.59	
"	15:21	"	"	"	5.61	10.9	28.58	6.75	20.53	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Ebb
* North Refrence

Date: 6/18/2010

Weather: Sunny Clear Light North wind/Variable

Tides:

4.3 @	@	1342
0.0 @	@	0651
0.4	@	1925

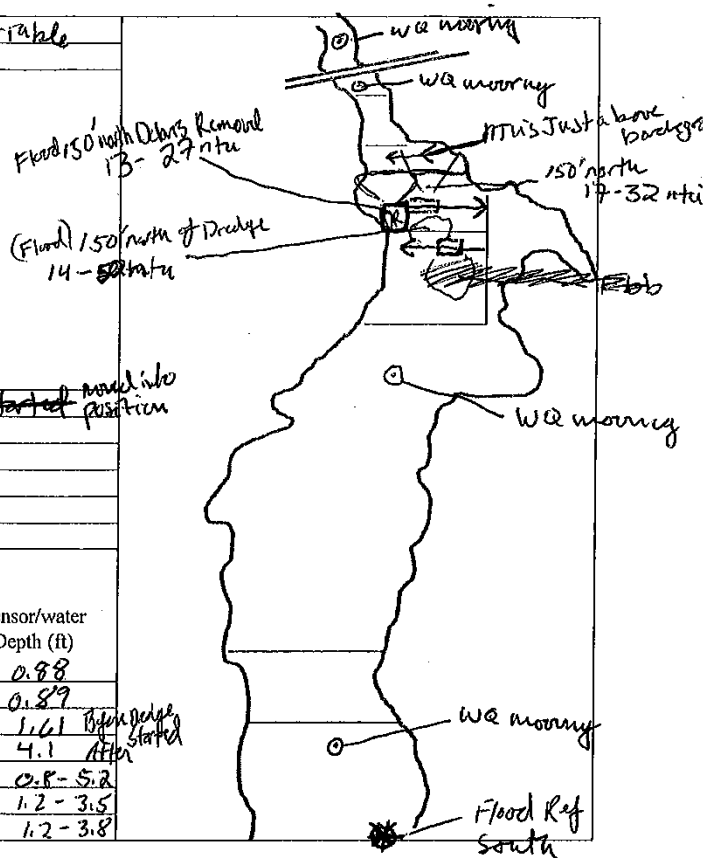
Monitoring Period:

From: 0830 To: 1540

Tidal Stages: (HWS) (Ebb) LWS (Flood)

Dredging Activity:

0911 - Stopt Go Dredging in Area J / No Debris Removal (Tidal)
1156 - Dredging moved to Area G / Debris Removal ~~started~~ moved into position
1220 - Debris Removal Started



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Flood Area G 0907	22 - 53 ntu	5.5-6.8 mg/L	0.88
Flood Area G 1007	14 - 20 Ntu	6.8 mg/L	0.89
north of Dredge area G	4.7 - 15 NTU	9.32 mg/l	1.61 Before Dredge started
north of Dredge Area G	17 - 32 NTU	8.85 - 6.11 mg/l	4.1 After
north of Debris Removal Area G	13 - 21 NTU	11.09 - 7.2 mg/l	0.8 - 5.2
South Boundry Area G (Dredge)	6 - 27 NTU	11.72 - 8.9 mg/l	1.2 - 3.5
South Boundry Area G (DR)	9 - 28 NTU	11.60 8.87	1.2 - 3.8

Oil Sheen/Debris:

No sheen/Debris Associated with Dredge / Slight to moderate sheen associated with Debris Removal

Wildlife Observations:

Occasional Fish, Gulls, Swans, Osprey

Samples Collected for Laboratory Analysis / Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Background Turbidity relatively high at refernce sites South Ref 3.4 - 10.7 NTU
Saw Steady 40-50 ntu 150' from dredge at lower tide (movement restricted due to tide)
As tide Filled in turbidity dropped to 14-20 ntu/150' from dredge. On outgoing Tide Close proximity to Dredge and Debris Removal showed NTU's in the single digits to high twenties (6-28) but levels again dropped to just above background beyond the 150' range (8-20)ntu

Sampling Crew: M. Walsh, D. Rogers

Chief Scientist Signature: Michael Walsh

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area J
Dredging Description	East to west Northern area of J Step and Go/no Debris Removal in morning
Survey Vessel	George Hampson
Chief Scientist	M. WALSH
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny Wind light North / variable

Date 6/18/10
Page 1 of ~~2~~ 3

Tide Information	
High	4.3 @ 1342
Low	0.0 @ 0651
High	
Low	0.4 @ 1925

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
Flood South Entrance	~~0845~~ 0845	41°39.794	70°55.008	9.6	1.02	3.4	25.62	6.81	20.36	
	0846				5.2	6.6	28.85	6.14	20.15	
	0847			~~7.2~~	~~7.2~~ 7.0	10.7	29.04	5.75	20.03	
	~~0848~~ 0848				8.50	21.5	29.08	5.17	19.98	
Flood South edge of Area G	0907			2.4	0.57	22.7	25.82	5.93	20.72	Dredging in Area J
	0907			~~1.9~~	1.41	29.2	27.51	5.50	20.52	150' north of Dredge
	0920			2.5	0.87	49.3	25.83	4.98	20.70	
	1007				0.88	14.2	27.26	6.81	20.87	
	1057			4.1	1.58	27.2	27.52	6.60	20.95	
Flood Area G	150' north of Dredge	1152	41°40.584	70°54.907		1.61	47-15	27.10	8.14	21.43	Activity moved to Area G Dredge
					~~6.0~~	~~1.95~~	~~32.7~~	~~26.69~~	~~7.18~~	~~21.44~~	← Reading Before Dredge Started
	150' north of Area G Dredge	1208			6.0	1.95	32.7	26.69	7.18	21.44	~~Debris removal has started~~
150' north of Debris Removal		1230	41°40.570	70°54.983	7.1	0.85	13.7	23.95	11.69	22.91	← Dredge working
		1231				3.05	21.2	27.24	8.41	21.24	Debris Removal
		1232				5.2	20.5	27.76	7.92	20.76	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G
Dredging Description	west to East Dredging / SW corner Debris Removal
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, wind variable

Date	6/18/2010
Page	2 of 3

Tide Information	
High	4.3 @ 1342
Low	0.0 @ 0651
High	
Low	0.4 @ 1925

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
GWS mooring	1322	41° 40.682	70° 55.007	8.6	1.12	13.0	24.21	14.55	22.86	
	1323				4.02	13.1	27.32	8.34	21.19	
	1324				6.25	17.4	27.48	4.70	20.97	
NWS mooring	1337	41° 40.725	70° 55.022	6.6	1.23	10.8	25.57	15.45	22.78	
	1339				2.92	11.9	27.10	8.99	21.53	
	1339				5.26	11.8	27.43	6.13	21.03	
Ebb North Plume	1352	41° 40.833	70° 55.031	6.3	1.12	13.1	22.79	15.33	22.48	
	1353				3.01	11.2	27.12	11.03	21.47	
	1354				5.44	9.6	27.44	5.21	21.16	
Ebb 150' South of Dredge	1436			5.5	2.78	26.7	26.42	9.07	22.01	Area G
Ebb 150' South east of DRemoval	1443			5.6	2.93	28.4	26.88	7.54	21.20	Area G
South of Area J mooring	1453	41° 40.370	70° 54.956	10.6	1.14	5.4	26.10	10.98	24.26	
	1454				4.84	4.4	28.41	7.95	20.84	
	1455				8.52	12.9	28.66	6.26	20.63	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G
Dredging Description	
Survey Vessel	George Hampson
Chief Scientist	M. WALSH
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	
Weather Conditions	Sunny / WIND WSW 10

Date	6/18/2010
Page	3 of 3

Tide Information	
High	4.3 @ 1342
Low	0.0 @ 0651
High	
Low	0.4 @ 1925

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
South of Area G warning	1510	41°39.912	70°55.016	8.1	1.02	9.6	28.07	8.52	22.34	
	1511				4.21	4.2	28.48	7.81	21.78	
	1512				7.01	10.8	28.96	6.57	20.27	
	1529	41°39.926	70°55.003	17.3	1.12	2.1	28.76	8.60	21.95	
	1530				6.14	2.3	28.88	8.63	21.67	
	1531				15.17	4.9	29.43	7.33	20.31	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 06/21/10
Weather: Sunny, Wind 1-3 Knts N
Tides:

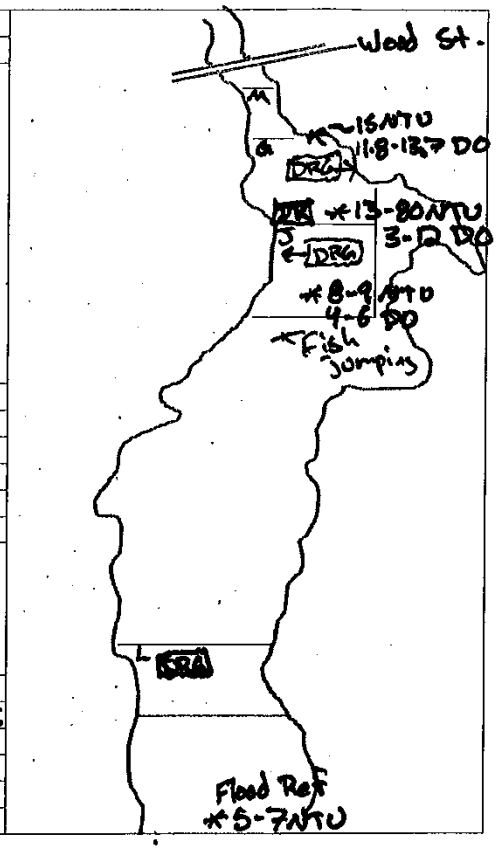
High	@	04:07
Low	@	09:52
High	@	16:40

Monitoring Period:

From: 9:15 To: 15:45

Tidal Stages: HWS (Ebb) (LWS) (Flood)

Dredging Activity:
Morning: Dredging in Area J
Afternoon: Dredging in Area J, then Area G



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
1000' S Area G (Ref)	4.5-7.5	5.3-7.0	0.8-6.2
200' S Area J	8.3-9.1	4.4-6.1	0.5-3.3
150' N DRG Area J	30.4-79.5	3.1-4.6	0.5-5.05
200' N DRG Area J	13.1-48.2	9.6-12.7	0.7-2.8
200' N DRG Area G	14.3-15.5	11.83-13.71	0.7-2.5

Oil Sheen/Debris:
None Detected

Wildlife Observations:
Fish jumping south of Area J, Birds throughout harbor (Seagulls, Gulls, Egret)

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: No Debris removal while monitoring took place. Background turbidity was low around 8NTU, highest turbidity levels were recorded just north of dredging when tide started to flood. Dissolved oxygen was found to be elevated north of dredging in G.

Sampling Crew: D. Bailey, M. Walsh

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Dredging in Area 5
Dredging Description	
Survey Vessel	R/V George Hampson
Chief Scientist	D. Bailey
Sampling Technician	
Vessel Captain	M. Walsh
Other Personnel	
Weather Conditions	Sunny, Wind N 1-3 knts

Date	06/21/10
Page	1 of 1

Tide Information	
High	04:07
Low	09:52
High	16:40
Low	23:18

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
1000'S Ref (Ref)	09:25	41°39.800	70°54.944	7.9	0.89	4.6	7.03	26.80	24.20	
	09:28	" "	" "	"	3.98	4.5	5.92	28.94	22.43	
	09:30	" "	" "	"	6.18	7.5	5.32	28.96	22.36	
200'S DRG	09:46	41°40.443	70°54.918	5.4	0.52	9.1	6.12	26.87	24.32	
in Area 5	09:48			"	3.30	8.3	4.42	28.42	23.64	
150'N DRG	10:24	41°40.517	70°54.921	6.2	0.52	30.4	4.67	27.42	24.33	
in Area 5	10:25	~~70°54.921~~	" "	"	2.13	41.2	3.66	27.90	23.80	
	10:27	" "	" "	"	3.97	68.3	3.19	28.18	23.59	
	10:29	" "	" "	"	5.05	79.5	3.28	28.18	23.61	
200'N DRG	13:33	41°40.529	70°54.928	3.7	0.65	13.1	12.69	26.55	26.27	
in Area 5	13:34	" "	" "	"	1.37	48.2	10.42	26.96	25.73	
	13:35	" "	" "	"	2.78	48.2	9.62	27.11	25.49	
200'N DRG	14:15	41°40.599	70°54.928	3.7	0.70	14.3	13.79	26.17	27.01	
in Area G	14:16				2.53	15.5	11.83	26.77	26.07	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 6/24/10
Weather: Hazy, Hot, Humid
Tides:

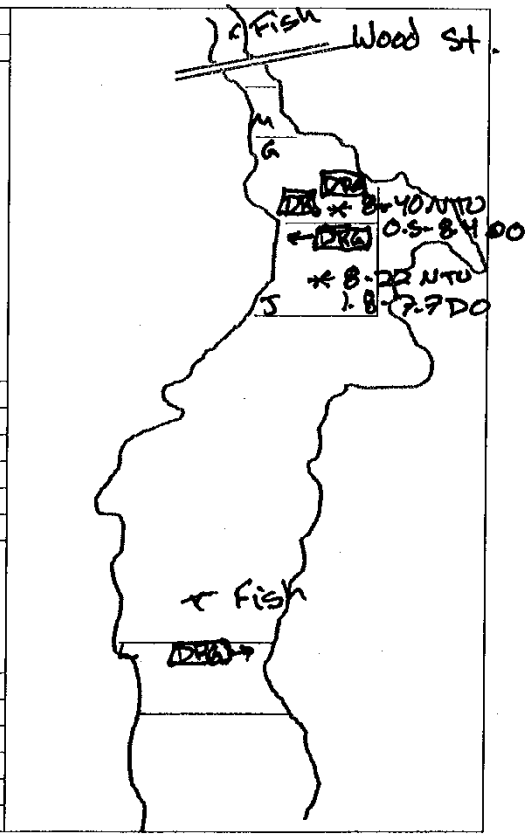
High	@	0650
Low	@	1239
High	@	1912

Monitoring Period:

From: 0820 To: 1530

Tidal Stages: HWS (Ebb) LWS (Flood)

Dredging Activity:
Debris Removal in Area G
Dredging in Area G and J
Afternoon:
Dredging in Area L



* 6.8 NTU
0.4-2.2 DO

Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
1000' NWS (Ref)	6.1-8.2	0.4-2.2	0.5-3.5
200' S Area G DRG	8.4-39.9	0.5-8.4	0.5-6.0
100' S DR Area G	9.5-17.9	1.4-8.2	0.5-6.0
100' S DRG Area J	8.8-22.1	1.8-7.7	0.5-3.4
150' N DRG Area J	10.5-23.5	0.9-8.9	0.5-5.5

Oil Sheen/Debris:
None

Wildlife Observations:
Fish jumping North of Wood St. and North of Area L
Many Birds - Terns, Gulls, Terns

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Very low dissolved oxygen throughout harbor, very little turbidity

Sampling Crew: D. Baily, M. Walsh

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Debris Removal in Area G, Dredging in Area J
Dredging Description	
Survey Vessel	R/V George Hampson
Chief Scientist	D. Bailey
Sampling Technician	—
Vessel Captain	M. Welch
Other Personnel	—
Weather Conditions	

Date: 6/24/10
Page: of

Tide Information	
High	0650
Low	0109
High	1912
Low	1239

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Edb Ref.	0840	41°40.831	70°55.031	4.9	0.51	6.1	2.22	3.63	24.61	
"	0843	"	"	"	2.06	80	[redacted]062	26.97	24.96	
"	0844	"	"	"	3.45	8.2	0.39	27.64	24.74	
200' S Area G DRG	0921	41°40.520	70°54.906	7.6	0.48	5.7	8.35	22.22	24.34	
	0922	"	"	"	1.60	22.9	6.19	25.20	24.39	
"	0923	"	"	"	2.51	39.9	4.50	26.03	24.40	
"	0925	"	"	"	6.01	8.4	0.54	28.56	23.79	
100' S DR.	10:06	41°40.503	70°54.937	8.5	0.48	9.5	8.24	21.03	24.55	
200' S DRG in Area G	10:08	"	"	"	1.89	17.9	5.21	25.54	24.64	
	10:09	"	"	"	6.04	7.7	1.40	28.59	23.84	
100' S of DRG in Area J	10:56	41°40.445	70°54.930	6.4	0.54	10.6	7.73	22.64	24.92	
	10:57	"	"	"	2.00	22.1	5.29	25.51	24.51	
	10:57	"	"	"	3.41	8.8	1.82	28.21	24.16	
150' N of DRG in Area J	13:27	41°40.513	70°54.937	6.9	0.52	13.2	8.90	21.76	27.01	
	13:28	"	"	"	2.13	13.7	8.98	23.95	25.71	
	13:29	"	"	"	4.25	23.5	3.47	22.86	24.22	
	13:30				5.55	10.5	0.88	28.42	23.81	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: June 28, 2010
Weather: Hazy, Hot, Humid
Tides:

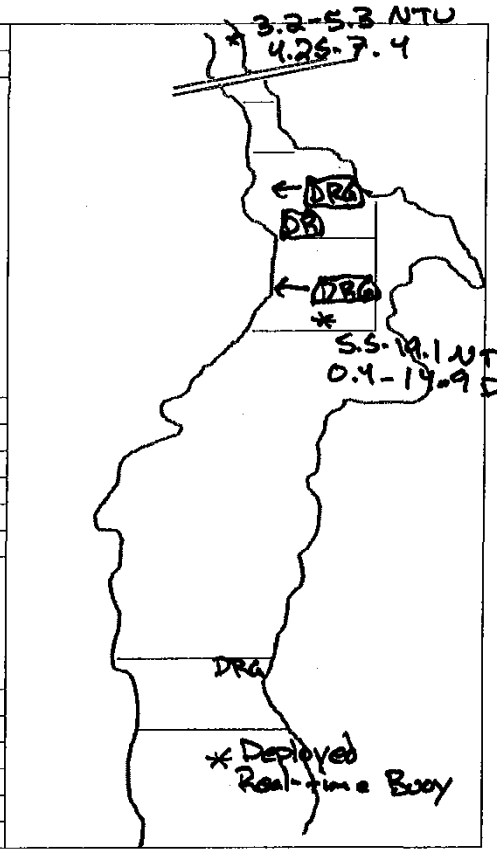
High	@	09:53
Low	@	15:24
High	@	22:08

Monitoring Period:

From: 11:20 To: 14:05

Tidal Stages: HWS (Ebb) (LWS) Flood

Dredging Activity:
Debris Removal in SW corner of G
Dredging in middle of Area G + J



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
1000' NWS Ebb Ref	3.2-5.3	4.25-7.4	0.5-2.5
150' S of DRG in J + 300' S of DR in G	5.5-19.1	0.4-14.2	0.5-6.0

Oil Sheen/Debris:
None

Wildlife Observations:
Many birds - Gulls, Swans, Cormorants, Terns

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Deployed real-time buoy south of Area L. Very low DO found at depth.

Sampling Crew: D. Bailey, M. Walsh

Chief Scientist Signature:

WOODS HOLEGROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	DR SW corner of Area G
Dredging Description	DRG middle of Area G + Area J
Survey Vessel	RV George Hampson
Chief Scientist	D. Bailey
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	Hazy, Hot, Humid

Date: 6/28/10
Page: 1 of

Tide Information	
High	~~03:35~~ 09:53
Low	03:35
High	22:08
Low	15:24

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Ebb (Ref)	12:47			4.0	0.52	3.2	7.40	7.91	25.83	
1000' N of Wood St.	12:48			"	2.55	5.3	4.25	26.70	26.51	
150'S of	13:32	41°48.431	70°54.926	7.7	0.51	10.1	14.19	22.23	28.46	
DRG in Area	13:34	" "	" "	"	1.99	19.1	11.29	25.27	27.28	
	13:36	" "	" "	"	4.11	5.5	7.12	27.93	26.15	
	13:38	" "	" "	"	5.98	11.4	0.43	28.69	25.58	
	14:39	" "	" "		0.52	12.5	13.92	21.35	29.09	
	14:40	" "	" "		2.81	16.9	~~8~~7.45	26.98	26.66	
	14:41	" "	" "		4.07	9.1	2.93	28.18	25.91	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: July 1, 2010

Weather: sunny, winds 5-10 kts W (am) 15-20 kts NW (pm)

Tides:

low	@	0506
high	@	1203
low	@	1721

Monitoring Period:

From: 0810 To: 1540

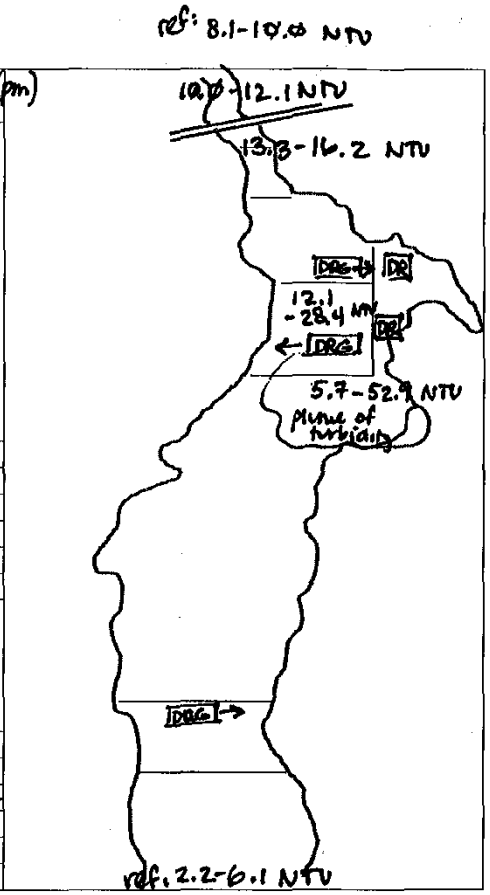
Tidal Stages: (HWS) Ebb LWS (Flood)

Dredging Activity:

Area J: dredging in am

Area G: dredging in am & pm

Area N: debris removal in pm



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
flood ref, 1000' S of L	22-61	7.0-9.2	1.0-4.9
ebb ref, 1000' N of M	8.1-10.0	8.1-10.0	0.5-3.0
NWS	10.0-12.1	7.8-8.4	1.2-3.2
SWS	13.3-16.2	7.5-12.6	1.0-4.7
100' S of DRG in G	12.1-28.4	9.8-10.0	1.1
300' S of DR in N	5.7-52.9	7.7-12.9	0.8-4.5
SAJ	6.8-8.9	7.3-12.7	1.2-5.4

Oil Sheen/Debris:

none detected

Wildlife Observations:

swans, gulls, small bait fish near Sawyer St. dock

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	Turbidity (1L)
~~Total PCB (1L)~~	~~Dissolved PCB (2x1L)~~
~~Toxicity (5 gal)~~	~~Metals (500ml)~~

Notes: A plume of turbidity was observed in the vicinity of Area J, South of debris removal in Area N. Maximum value of 52.9 was recorded only briefly and values generally ranged from 20-35 NTU. Turbidity was highest in the top foot of water and ranged 5-20 NTU below 1 foot. Turbidity was also elevated north of operations, near Wood Street (max ~ 20 NTU). Dissolved oxygen conc. elevated (>9 mg/L) around Area J, Area G, Wood St in top 2 ft of water.

Sampling Crew: D. Rogers, K. McCartney

Chief Scientist Signature: Kathryn McCartney

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	am: Area G, Area J pm: DR in Area N, DRG in G
Dredging Description	
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, winds 5-10 kts W, increasing 15-20 kts NW

Date	7/1/2010
Page	1 of 2

Tide Information	
High	0506
Low	1203
High	1721
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
floodref (S)	1150	41°39.797'	70°54.974'	6.1	1.07	2.2	9.15	24.40	23.96	1000's of L
"	1151	"	"	"	3.50	2.3	8.88	24.51	23.82	"
"	1152	"	"	"	4.88	6.1	7.00	24.83	23.38	"
@ NCS	1143	41°39.440'	70°55.104'	17.5	1.50	2.0	~~2~~ 7.80	24.67	23.29	300' N of bridge
"	1144	"	"	"	6.50	2.1	7.11	24.93	23.09	
"	1145	"	"	"	15.40	4.1	5.71	25.28	22.82	
@ SAJ	1205	41°40.369'	70°54.951	6.2	1.20	8.9	12.74	23.25	25.45	300' S of J
"	1206	"	"	"	3.90	6.3	10.34	24.41	24.40	
"	1207	"	"	"	5.40	7.3	7.30	24.54	24.41	
@ SWS	1220	41°40.683'	70°55.004	5.0	0.98	13.3	12.57 ~~22.20~~ ~~12.57~~	22.20	~~25~~ 26.21	100' S of bridge
"	1221	"	"	"	2.00	15.2	9.91 ~~23.24~~ ~~10.34~~	23.24	25.59	
"	1222	"	"	"	4.70	16.2	7.52 ~~7.30~~ ~~23.42~~	23.42	25.09	
@ NWS	1229	41°40.721'	70°55.017'	3.9	1.24	10.0	8.47	23.37	23.29	100' N of bridge
"	1230	"	"	"	2.60	10.4	8.57	23.34	23.09	
"	1231	"	"	"	3.20	12.1	7.84	23.38	22.82	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	DR6 in Area G, DR in Area N (pm)
Dredging Description	
Survey Vessel	RV George Hampson
Chief Scientist	K. McCaffrey
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	
Weather Conditions	Sunny, winds 15-20 kts NW

Date	7/1/10
Page	2 of 2

Tide Information	
High	0506
Low	1203
High	1721
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Ebbref(N)	1236	41°40.840'	70°55.039'	~~3.6~~ 3.56	0.56	8.1	10.19	23.10	26.54	
"	1237	"	"	3.6	2.53	9.5	6.29	23.33	25.95	
"	1238	"	"	3.6	3.07	10.0	4.91	23.37	25.99	
100's of DRGing	1255	—	—	—	1.17	12.1	10.00	23.12	25.26	in Area J
"	1256	—	—	—	1.19	13.5	9.81	23.14	25.20	
300's of DR in N	1312	41°40.408	70°54.911	5.8	0.83	28.4	12.03	22.42	25.69	S of J, 300's of DR 600's of DRG
"	1313	"	"	"	2.11	21.1	11.85	23.05	25.01	
"	1315	"	"	"	4.17	5.7	8.07	24.37	24.38	
"	1316	"	"	"	4.53	6.3	7.75	24.39	24.35	
"	1318	"	"	"	0.78	3.04	11.70	22.36	25.80	
"	1323	"	"	"	0.79	38.2	11.68	22.23	25.86	
"	1329	"	"	"	0.82	52.9	11.87	22.23	25.71	
"	1400	"	"	"	0.78	37.0	11.77	22.13	25.39	
"	1421	"	"	"	0.80	21.4	11.35	22.18	25.92	
"	1437	"	"	"	0.81	16.1	10.65	22.68	25.80	
"	1500	"	"	"	0.83	18.5	11.10	22.41	26.06	
"	1522	"	"	"	0.84	17.6	12.51	21.74	26.06	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: July 6, 2010

Weather: sunny, 95°, wind 5-10 kts SW

Tides:

high	@	0318
low	@	0859
high	@	1546

Monitoring Period:

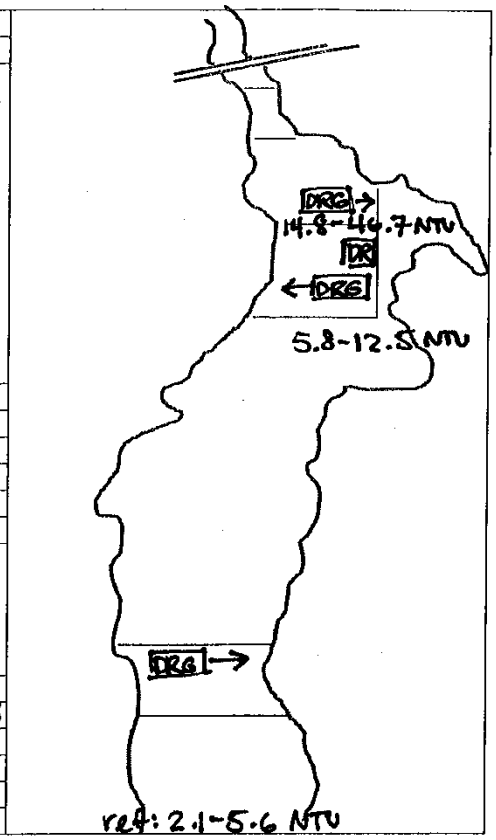
From: 0845 To: 1545

Tidal Stages: HWS Ebb LWS Flood

Dredging Activity:

Area J: dredging (am), debris removal (pm)

Area G: dredging (late am/pm)



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
flood reference	2.1-5.6	5.2-8.1	0.7-9.0
300' upcurrent DRG in J	5.8-12.5	6.5-8.3	0.9-3.0
300' downcurrent DRG in J	14.8-46.7	2.6-6.3	0.9-4.0

Oil Sheen/Debris:

none observed

Wildlife Observations:

numerous 1-2" minnows throughout harbor, especially NWS and at Sawyer dock. great blue heron, gulls, swans

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	~~Turbidity (1L)~~
~~Total PCB (1L)~~	~~Dissolved PCB (2x1L)~~
~~Toxicity (5 gal)~~	~~Metals (500ml)~~

Notes: YSI mooring located approximately 150' N of Coggeshall St. found missing at 13:00. was deployed on 7/1/2010 on a bright pink/orange Gloucester buoy. Attempted to locate buoy/YSI instrument: unsuccessful. Elevated turbidity observed at depth 300' N of dredge in J. Infrequent ephemera plumes of 30-50 NTU observed but generally 15-30 NTU.

Sampling Crew: D. Rogers, K. McCartney

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area J
Dredging Description	am: dredging in J
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	/
Vessel Captain	D. Rogers
Other Personnel	/
Weather Conditions	Sunny, 95°, wind 5-10 kts SW

Date	7/6/10
Page	1 of

Tide Information	
High	~~0859~~ 0318
Low	~~0318~~ 0859
High	1546
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
flood ref.	0906	41° 39.766'	70° 54.997'	9.5	0.7ϕ	2.6	8.ϕ8	23.97	25.76	1000' S of L
"	0907	"	"	"	4.57	2.1	6.ϕ1	24.73	23.88	"
"	0908	"	"	"	8.98	5.6	5.23	24.78	23.59	"
300' S of DRGing J	0927	41°40.383'	70° 54.939'	4.3	ϕ.86	6.5	7.49	23.84	26.31	before dredging starts
"	0928	"	"	"	1.65	7.3	7.21	24.12	25.72	"
"	0928	"	"	"	2.94	12.5	6.51	24.21	25.53	"
"	0958	"	"	"	1.87	1ϕ.1	7.32	24.ϕ3	26.14	during active dredging
"	1015	"	"	"	1.88	7.7	7.77	23.84	26.62	"
"	1025	"	"	"	1.88	5.8	8.ϕ5	23.89	26.65	"
"	1034	"	"	"	1.88	4.7	8.26	23.9ϕ	26.78	"
300' N of DRGing J	1045	41°40.521'	70° 54.947'	4.8	ϕ.89	14.8	5.9ϕ	23.98	26.3ϕ	during active dredging
"	1047	"	"	"	*2.26	2ϕ.2	5.43	24.ϕ9	25.82	"
"	1048	"	"	"	4.ϕ1	32.5	2.62	24.14	25.6ϕ	"
"	1052	"	"	"	2.36	26.6	6.29	24.ϕϕ	26.ϕ9	"
"	1111	"	"	"	2.36	46.7	5.1ϕ	24.ϕϕ	26.2ϕ	"
"	1112	"	"	"	2.36	31.2	5.14	24.12	26.ϕ5	"
"	1120	"	"	"	2.38	43.ϕ	5.12	24.11	25.74	"
"	1126	"	"	"	2.4ϕ	36.4	5.33	24.1ϕ	25.82	"
"	1135	"	"	"	2.39	2ϕ.8	5.9ϕ	24.ϕ5	26.ϕ6	"
"	1152	"	"	"	1.29	15.1	6.53	24.09	26.19	"

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: ~~7/6/2010~~ July 8, 2010

Weather:

Tides:

high	@	05:20
low	@	10:48
high	@	17:45

Monitoring Period:

From: 08:20 To: 15:50

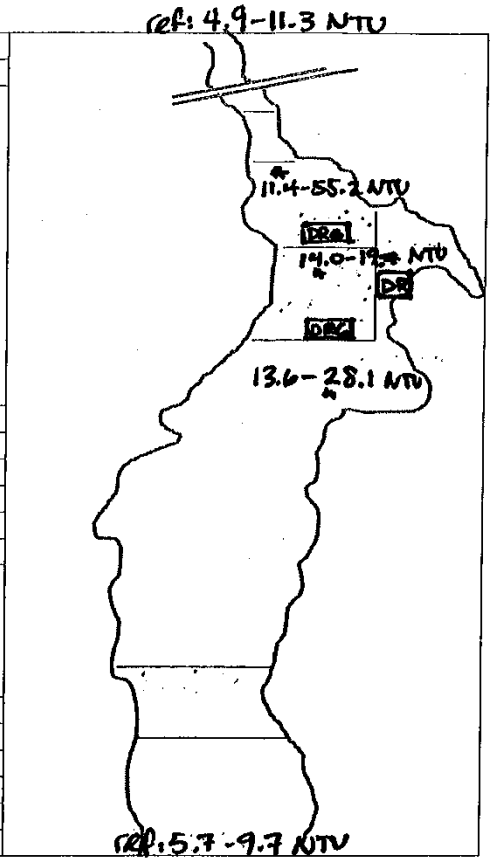
Tidal Stages: HWS Ebb LWS Flood

Dredging Activity:

Area J: dredging (am)

Area G: dredging (pm)

Area N: debris removal (early am, late pm)



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
ebb reference	4.9-11.3	1.4-4.1	0.7-2.2
flood reference	5.7-9.7	3.4-7.9	0.7-6.5
300' S DRG in J	13.6-28.1	8.3-9.0	0.6-8.0
300' N DRG in J	14.0-19.7	8.3-8.9	0.6-5.1
300' N DRG in G	11.4-55.2	9.1-11.8	0.5-2.8

Oil Sheen/Debris:

moderate, localized sheen observed near dredge in G during am after dredging ceased.

Wildlife Observations:

finned fish jumping, swans, gulls, osprey

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	~~Turbidity (1L)~~
~~Total PCB (1L)~~	~~Dissolved PCB (2x1L)~~
~~Toxicity (5 gal)~~	~~Metals (500ml)~~

Notes: A moderate, localized sheen was detected in Area G surrounding dredge and pipeline. Dredge was currently inactive. Reference turbidities were slightly elevated and turbidity throughout areas G and J were elevated at least 5-10 NTU above background. During dredging of Area G in the afternoon, turbidity was elevated to ~30-55 NTU approx ½ hour after dredging initiated. Maximum of 55.2 NTU observed, generally 35-45 NTU 300' N of the active dredge in G.

Sampling Crew: D. Rogers, K. McCartney

Chief Scientist Signature: Karen McCa

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area J
Dredging Description	am: dredging in J
Survey Vessel	R/V George Hampson
Chief Scientist	K. McKinney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	overcast / partly sunny, winds 5-10 kts SE

Date	7/8/2010
Page	1 of 2

Tide Information	
High	0520
Low	1098
High	1745
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
ebb ref	08:55	41°40.838'	70°55.032'	2.8	ϕ.76	4.9	4.1ϕ	16.ϕ1	27.52	1000' N of Area M
ebb ref	08:55	"	"	"	1.52	7.5	3.11	23.24	28.89	"
ebb ref	08:56	"	"	"	2.2ϕ	11.3	1.39	23.59	28.77	"
300's DRG in J	09:33	41°40.368'	70°54.933'	3.3	ϕ.51	15.7	6.22	23.86	28.ϕϕ	Currently inactive previously operating ~30 mins prior
300's DRG in J	09:34	"	"	"	1.41	21.5	5.54	23.93	27.92	
300's DRG in J	09:35	"	"	"	2.94	14.2	5.ϕ8	24.19	27.62	
"	09:44	"	"	"	1.54	17.6	5.88	23.89	27.87	↓
"	09:51	"	"	"	1.55	28.1	5.22	23.87	28ϕ4	dredging active
"	10:01	"	"	"	1.54	13.6	5.87	23.86	28.ϕ9	
"	10:28	"	"	"	1.52	15.1	5.42	24.ϕ3	27.92	
"	10:52	"	"	"	1.53	16.5	6.87	23.83	28.36	
"	11:23	"	"	"	1.51	25.6	5.85	23.92	28.21	
"	11:30	"	"	"	1.54	22.3	6.36	23.87	28.34	↓
flood ref	11:40	41°39.800'	70°55.015'	8.8	ϕ.7ϕ	8.ϕ	7.86	24.52	27.8ϕ	1000' S of Area L
flood ref	11:41	"	"	"	4.44	5.7	7.17	24.69	27.21	"
flood ref	11:43	"	"	"	6.5~~8.1~~ϕ	~~8~~9.7	3.4ϕ	24.8ϕ	26.43	"

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area J
Dredging Description	pm: dredging in J
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	partly sunny, winds 5-15 kts SE

Date	7/8/2010
Page	2 of 2

Tide Information	
High	0520
Low	1048
High	1745
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
300' N DR6 in J	12:51	41°40.517'	70°54.925'	7.1	0.64	14.2	8.96	23.67	29.30	300' N of active dredge
"	12:52	"	"	"	3.20	14.0	8.95	23.73	29.27	in Area J
"	12:53	"	"	"	5.12	16.1	8.30	23.77	29.17	
"	13:10	"	"	"	1.14	15.8	8.37	23.66	29.17	
"	13:16	"	"	"	1.15	16.4	8.64	2914.96	29.20	
"	13:49	"	"	"	1.13	19.7	8.60	23.85	29.31	
"	14:15	"	"	"	1.14	16.1	8.78	23.73	29.49	
300' N DR6 in G	14:26	41°40.589'	70°54.956'	3.7	0.49	11.4	11.75	21.18	31.04	300' N of active
"	14:27	"	"	"	1.90	13.7	9.67	23.71	29.55	dredge in Area G
"	14:30	"	"	"	2.75	15.2	9.41	23.73	29.49	
"	14:33	"	"	"	2.03	13.9	9.84	23.68	29.63	
"	14:52	"	"	"	2.06	15.1	11.20	23.49	30.00	
"	15:02	"	"	"	2.01	48.5	9.47	23.55	30.06	
"	15:05	"	"	"	2.02	52.0	9.36	23.52	30.11	
"	15:11	"	"	"	2.00	50.9	9.17	23.51	30.11	
"	15:15	"	"	"	2.01	39.7	9.37	23.57	30.01	
"	15:29	"	"	"	2.00	36.8	8.74	23.66	29.85	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: July 12, 2010

Weather: sunny, 85°, winds 5-10 kts SW

Tides:

low	@	02:42
high	@	08:54
low	@	14:22

Monitoring Period:

From: 08:45 To: 15:45

Tidal Stages: (HWS) Ebb (LWS) Flood

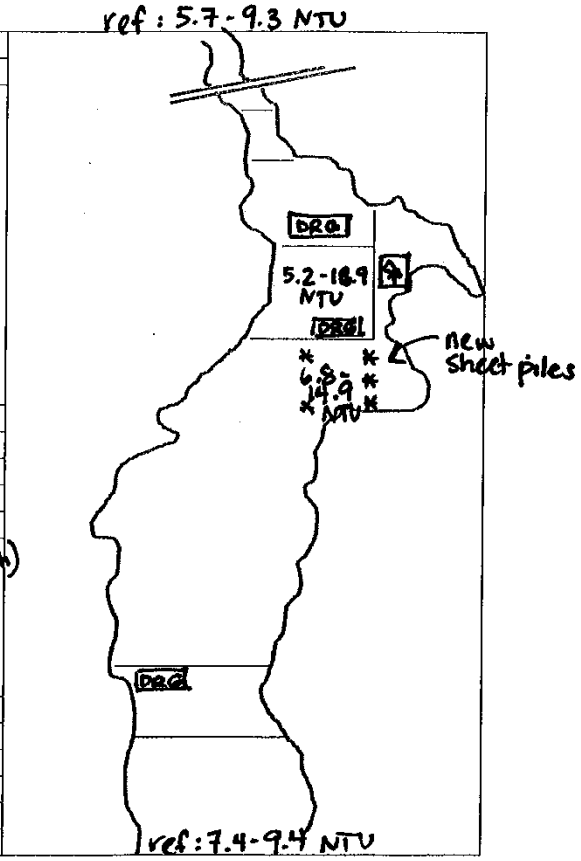
Dredging Activity:

Area G: dredging (early am)

Area N: debris removal (am)

Area K: driving new sheet piles

Area J: removing sheet piles (am), dredging (pm)



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
elbow reference	5.7-9.3	1.0-3.2	0.8-5.6
flood reference	7.4-9.4	7.7-8.0	0.9-6.2
300's of dredge in G	5.2-16.9	4.9-7.0	0.6-9.8
300's of dredge in J	6.8-14.9	5.2-8.4	0.4-4.3
* also in close proximity to driving sheet piles in K			
300' N of DR in K	21.0-25.5	7.6-7.9	1.0-2.2

Oil Sheen/Debris:

slight sheen in Area K associated with installation of new sheet piles & H_2S odor

Wildlife Observations:

ducks, swans, numerous small fish (minnows) throughout harbor

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	~~Turbidity (1L)~~
~~Total PCB (1L)~~	~~Dissolved PCB (2x1L)~~
~~Toxicity (5 gal)~~	~~Metals (500ml)~~

Notes: A plume of turbidity was observed in Area K in close proximity (within 200') of the installation of new sheet piles in Area K. Turbidity readings ranged and a slight sheen was evident on the surface in Area K. very low DO concentrations were observed north of Wood Street in the morning.

Sampling Crew: D. Rogers, K. McCartney

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area G, Area J, Area N
Dredging Description	dredging in G, removal of sheet piles in J, debris removal in N
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	sunny, 90°

Date	7/12/2010
Page	1 of 2

Tide Information	
~~High~~	
Low	02:42
High	08:54
Low	14:22

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
ebb ref	09:37	41°40.840'	70°55.038	6.4	ϕ.84	5.7	3.19	28.42	28.64	1000' N of Area M
ebb ref	09:39	"	"	"	2.97	7.9	1.4ϕ	29.1ϕ	28.72	
ebb ref	09:40	"	"	"	5.58	9.3	1.ϕ4	29.12	28.67	S of DRG, close to removal of sheet piles in Area J (~100'-300')
300's DRG in G	09:59	41°40.456'	70°54.903'	11.5	ϕ.66	7.1	6.96	29.45	27.82	
"	10:00	"	"	"	5.ϕ4	5.2	5.46	29.6ϕ	27.45	
"	10:02	"	"	"	9.74	7.9	4.95	29.65	27.25	
"	10:13	"	"	"	3.15	1ϕ.4	5.8ϕ	29.41	27.7ϕ	
"	10:21	"	"	"	3.14	12.2	6.32	29.39	27.77	
"	10:41	"	"	"	3.16	14.4	6.ϕ7	29.33	27.83	
"	10:53	"	"	"	3.18	16.9	5.78	29.35	27.82	
300' S of DRG in J	11:16	41°40.386'	70°54.918'	5.3	ϕ.43	13.6	6.22	29.43	27.97	before dredge begins
"	11:21	"	"	"	2.27	1ϕ.3	5.97	29.48	27.84	200' W of driving sheet piles in Areas J/K
"	11:23	"	"	"	4.29	6.8	5.21	29.58	27.53	
"	11:26	"	"	"	ϕ.92	14.9	6.ϕ9	29.42	27.99	
"	12:16	"	"	"	ϕ.93	11.4	6.9ϕ	29.31	28.4ϕ	
"	12:21	"	"	"	1.15	14.7	7.ϕ4	29.25	28.51	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area K Area J
Dredging Description	driving of sheet piles in K, dredging in J
Survey Vessel	R.V. George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, winds 15-20 kts S

Date	7/12/2010
Page	2 of 2

Tide Information	
High	
Low	02:42
High	08:54
Low	14:22

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
150' E of DR in K	12:36	41°40.386'	70°54.922	5.0	1.12	14.8	7.29	29.27	28.55	DR driving new sheet piles in Area K
"	12:41	"	"	"	1.11	12.4	7.45	29.28	28.65	↓
"	13:07	"	"	"	1.12	12.0	8.14	29.23	28.93	↓
300' S of DR in J	13:35	"	"	"	1.12	12.7	8.40	29.07	29.16	dredging in J resumes
"	13:53	"	"	"	1.14	12.4	8.65	29.05	29.29	↓
"	14:00	"	"	"	1.14	13.7	7.89	29.06	29.21	↓
"	14:10	"	"	"	1.12	12.1	8.40	28.98	29.32	↓
flood ref	14:51	41°39.793'	70°55.018'	7.0	0.94	7.4	8.01	29.69	28.72	1000' S of Area L
flood ref	14:52	"	"	"	3.45	8.2	7.95	29.74	28.70	↓
flood ref	14:53	"	"	"	6.20	9.4 ~~39.41~~	7.78	30.02	28.62	↓
300' N DR in K	15:11	41°40.415'	70°54.944'	3.3	1.11	22.4	7.82	28.93	29.48	DR driving new sheet piles in Area K.
"	15:12	"	"	"	1.54	24.9	7.79	28.93	29.50	↓
"	15:14	"	"	"	2.23	24.4	7.75	28.95	29.48	↓
"	15:21	"	"	"	1.44	23.9	7.67	28.96	29.52	↓
"	15:24	"	"	"	0.74	21.0	7.88	28.91	29.54	↓
"	15:29	"	"	"	1.90	25.5	7.74	28.97	29.52	
"	15:34	"	"	"	1.91	23.1	7.91	28.96	29.58	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 7/15/2010
Weather: Overcast misty NNE@10 / mostly Cloudy
Tides:

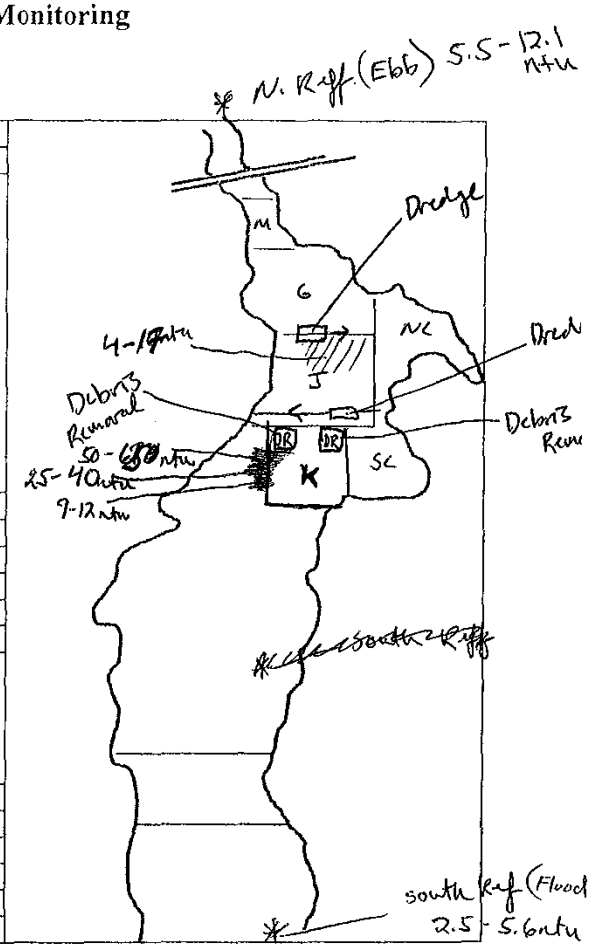
Low -0.4	@	0451
High 4.7	@	1131
Low ~~17.05~~ -0.1	@	1705

Monitoring Period:

From: 0837 To: 1555

Tidal Stages: (HWS) (Ebb) LWS (Flood)

Dredging Activity:
Morning Dredging Southern Boundry of Area J
Midday Dredging Boundry of G and J
Morning Debris Removal North Area K (Stop and Go)
Afternoon Dredging on South Boundry Area J
Afternoon Debris Removal nrth Boundry Area K



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
middle Area J	4 - 9	6.3-3.4	1.4-7.9
middle Area J	4 - 10.1	3.4 5.4	1.6-7.7
" "	4 - 17.8		
South middle Area K	7.0-7.1	4.16-5.49	0.79-3.21
Area K 75' South of NW Debris Removal	20 - 50	5.4	0.8 - 1.8

Oil Sheen/Debris:
Spotty Sheen Associated with Debris Removal and Dredge in Area K

Wildlife Observations:
Gulls, Terns, Osprey, Cormorants

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Morning - recovered, cleaned, calibrated, redeployed YSI moorings.
Afternoon - Relatively high Turbidity readings observed within 100' of N.E.east Debris Removal 25-50ntu's some higher short lived spikes to 65ntu. Readings diminished quickly with distance. In general, given all the Activity in a close area Turbidity remained low in all areas greater than 150'-200' feet from activity with readings from 4-17ntu but mainly just above background at 8-14ntu.

Sampling Crew: M. Walsh, D. Rogers

Chief Scientist Signature: Mike Walsh

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	South boundary of Area J / Boundary line of G+J
Dredging Description	North Boundary of Area K (& Debris Removals)
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Overcast, misty wind NNE @ 10 / mostly cloudy

Date: 7/15/2010
Page: 1 of 2

Tide Information		
High	1131	4.7'
Low	6451	-0.4'
High	2351	4.5'
Low	17:65	-0.1

	Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Flood	1000 South Rig	0837			9.2	1.09	2.5	3.68	28.28	25.76	
		0838				3.57	2.5	3.76	28.37	25.94	
		0840				8.91	5.6	3.06	29.47	26.37	
Ebb	1000 North Rig	1209			6.5	.82	5.5	3.62	27.17	26.88	
		1211			2.28	2.29	4.8	2.92	27.88	26.91	
		1212				5.56	12.1	0.66	28.13	27.16	
	250' south of Bridge	1230			9.9	1.45	8.2	6.87	27.77	26.42	Area J
		1231				4.20	5.4	4.90	28.32	26.20	
		1232	41°40.480	70°54.925		7.97	9.2	3.43	28.72	26.17	
		1327				1.60	10.2	5.84	27.85	27.14	
		1338				1.61	17.8	4.54	26.68	26.66	
	175-225' south bridge	1351	41°40.391	-70°54.927	5.9	0.81	9.3	6.17	27.67	27.07	
		1352				2.12	8.3	4.69	28.58	26.25	
		1354				4.45	5.8	3.37	29.17	26.11	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	South boundary of Area J / Debris Removal NE + NW corners of Area K
Dredging Description	East to west Area J
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	mostly Cloudy / wind NNE @ 5-10

Date	7/15/2010
Page	2 of 2

Tide Information		
High	1131	4.7'
Low	0451	-0.4'
High	2351	4.5'
Low	1705	-0.1'

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
South middle Area K	1419	41° 40.363		4.71	0.79	9.1	5.49	28.03	26.71	
	1420	70° 54.739		~~2.58~~	2.58	8.5	4.59	28.59	26.46	
	1421			~~X~~	3.21	7.0	4.16	28.75	26.37	
~~75~~ South of Debris Removal	1449	moving			1.8	48.7	5.49	26.86	26.71	
100' South of NW Debris Removal outside Area K	1520	moving		4.00	2.11	43.5	5.80	27.87	26.91	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 7-19-10
Weather: Sunny AM, Rain in the afternoon
Tides:

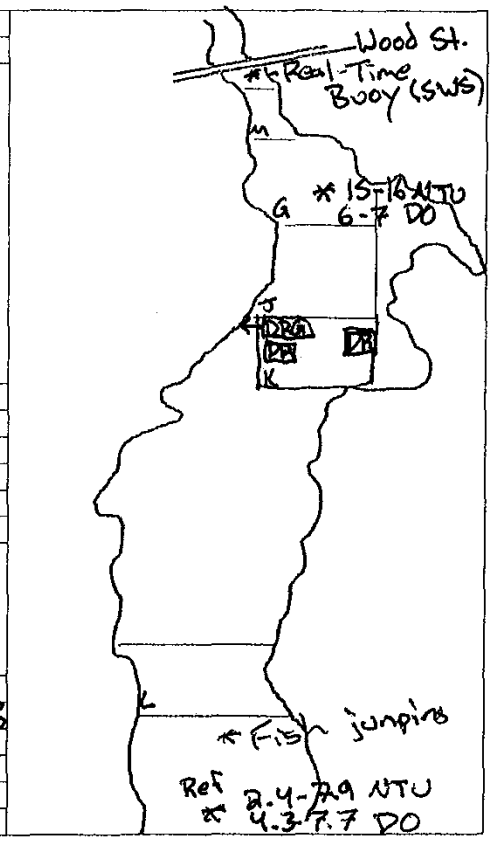
Low	@	0818
High	@	1518
Low	@	2152

Monitoring Period:

From: 0830 To: 1200

Tidal Stages: HWS Ebb LWS Flood

Dredging Activity:
Debris Removal + Dredging in Area K
All activity stopped @ 1200
due to weather



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Flood Ref.	2.4-7.9	4.3-7.7	0.8-9.5
300' N of DB+DRA in K	15.1-16.7	6-6.7	0.8-5.3
SWS Mooring	8.5-15.1	5.7-7.0	0.9-6.6

Oil Sheen/Debris:
Slight sheen around boom north of G

Wildlife Observations:
Fish jumping south of Area L, Many birds throughout harbor

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Moved real-time buoy from S Area L to south of wood St. (SW sonde) redeployed buoy from south Wood St. to South of Area L

Sampling Crew: D. Bailey, D. Rodgers

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	2 Debris Removal in Area K, DRG in Area K
Dredging Description	
Survey Vessel	R/V George Hampson
Chief Scientist	D. Bailey
Sampling Technician	
Vessel Captain	D. Bodgers
Other Personnel	
Weather Conditions	Sunny ~18 8C's

Date	7-19-10
Page	1 of

Tide Information	
High	0240
Low	0818
High	1518
Low	2152

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Flood ref. 1000's of L	0904	41°39.803	70°54.994	10.0	0.84	2.4	7.68	28.44	27.77	
	0905	" "	" "	"	4.46	3.0	5.41	30.02	26.36	
	0906	" "	" "	"	9.58	7.9	4.28	30.05	26.25	
300' N of DRG in Area K	1111	41°40.486	70°54.915	6.8	0.75	15.1	6.68	28.58	28.13	
	1112	" "	" "	"	2.05	15.7	6.66	28.64	28.10	
	1113	" "	" "	"	3.06	16.7	6.43	28.73	28.03	
	1114	" "	" "	"	5.28	16.1	6.05	29.16	27.64	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: July 22, 2010
Weather: sunny, 85°
Tides:

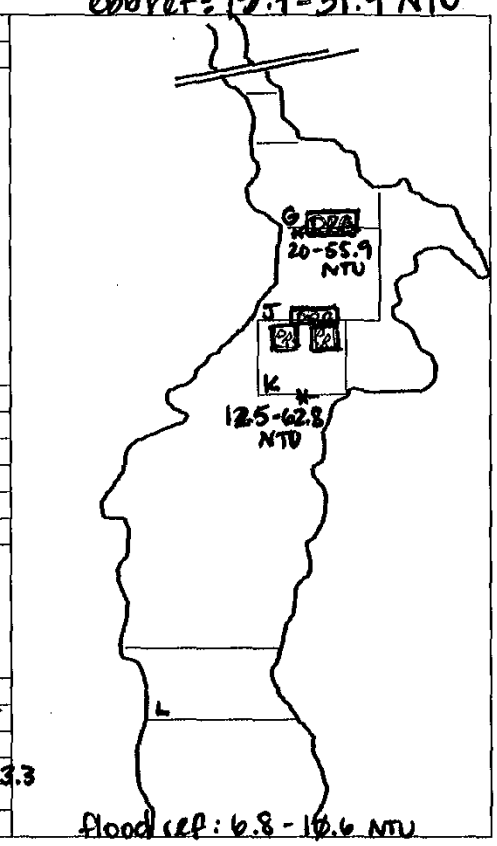
high	@	0544
low	@	1108
high	@	1819

Monitoring Period:

From: 08:30 To: 15:30

Tidal Stages: HWS (Ebb) (LWS) (Flood)

Dredging Activity:
Area G - dredging (early am)
Area K - two debris removall (all day)
- dredging (late am, pm)



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
ebb reference	15.7-31.4	0.7-2.2	0.7-2.6
flood reference	6.8-10.6	7.5-9.1	0.8-3.8
300' N of J debris removal & dredging in K	20.0-55.9	5.2-8.3	0.4-2.5
200'S of J	12.5-62.8	4.3-7.3	0.8-3.3

Oil Sheen/Debris:
none detected

Wildlife Observations:
terns fishing throughout harbor, numerous small fish observed in top ½ ft of water north of wood street

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Very high background turbidity observed north of wood St. on ebb tide, ranging 15.7-31.4 NTU, averaging approx. 25 NTU. Brief ephemeral plumes of up to 30 NTU above background observed 200' downcurrent of two operational debris removals in Area K. During flood tide, turbidity 300' N of the same activity in Area K ranged 20.0-55.9, approximately 45 NTU above background.

Sampling Crew: D. Rogers, K. McCartney

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G, Area K
Dredging Description	dredging in G, 2 debris removal in K
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	sunny, 85°, winds 10-15 kts W

Date: July 22, 2010
Page: 1 of

Tide Information	
High	0544
Low	1108
High	1819
Low	—

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
ebb ref	09:01	41°40.837'	70°55.037	3.3	0.74	31.4	24.88	0.66	27.84	1000' N of Area M
ebb ref	09:02	"	"	"	1.51	25.1	25.40	0.99	27.94	
ebb ref	09:03	"	"	"	2.60	26.4	25.76	0.87	27.99	
ebb ref	09:04	"	"	"	0.18	~~24.1~~ 15.7	23.98	2.15	27.48	
200's DR in K	09:32	41°40.335'	70°54.940'	4.2	0.82	18.8	~~22~~ 22.95	7.26	26.99	200's of 2 DR barges
"	09:34	"	"	"	2.01	27.0	27.09	5.37	26.90	in Area K
"	09:35	"	"	"	3.24	19.3	22.80	4.36	26.63	during dredging
"	09:37	"	"	"	1.49	34.2	24.53	5.30	27.20	in G
"	09:40	"	"	"	1.50	14.1	23.07	6.97	27.08	
"	09:47	"	"	"	1.46	50.9	23.60	5.79	27.01	
"	09:49	"	"	"	1.47	32.2	25.22	6.00	27.17	
"	09:58	"	"	"	1.48	62.8	25.60	5.76	27.18	
"	10:01	"	"	"	1.46	21.1	26.81	5.46	27.19	
"	10:26	"	"	"	1.50	33.4	26.33	5.04	27.09	
"	10:43	"	"	"	1.49	12.5	28.22	4.61	26.86	dredging in K begins
"	11:09	"	"	"	1.63	23.3	25.87	6.71	27.22	
"	11:17	"	"	"	1.65	48.0	27.15	5.87	27.24	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area K
Dredging Description	debris removal in K (2), dredging in K
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, 85°, winds NW 10-15 kts

Date: July 22, 2010
Page: 2 of

Tide Information	
High	0544
Low	1108
High	1819
Low	—

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
flood ref	12:08	41°39.796'	70°54.986'	~~3~~ 4.3	Φ.79	1Φ.6	25.27	9.Φ8	27.78	1000' S of K
flood ref	12:09	"	"	"	3.59	6.8	28.41	8.15	26.83	
flood ref	12:12	"	"	"	3.8Φ	8.5	28.6Φ	7.49	26.64	
300' N DR in K	12:29	41°40.488'	70°54.936'	3.5	Φ.45	2Φ.Φ	25.69	8.51	28.75	300' N of 2 DR in K
"	12:30	"	"	"	1.65	4Φ.5	26.4Φ	5.68	27.72	
"	12:31	"	"	"	2.49	41.1	27.Φ9	5.2Φ	27.29	
"	12:34	"	"	"	1.38	26.2	25.85	7.33	28.36	
"	12:54	"	"	"	1.46	36.6	25.81	6.44	28.32	
"	13:02	"	"	"	1.41	59.9	26.Φ7	5.64	27.62	dredging in K resumes
"	13:12	"	"	"	1.42	42.Φ	2565	6.29	28.3Φ	
"	13:17	"	"	"	1.41	31.7	2551	7.57	28.49	
"	13:34	"	"	"	1.36	53.7	25.68	6.9Φ	27.99	
"	14:14	"	"	"	1.4Φ	24.4	26.89	8.Φ1	28.23	
"	14:17	"	"	"	1.41	45.Φ	26.15	7.27	28.3Φ	
"	14:23	"	"	"	1.42	22.9	27.23	8.25	28.24	
"	14:49	"	"	"	1.40	4Φ.9	26.68	7.26	28.Φ6	
"		"	"	"	1.38	36.Φ	26.24	7.58	28.38	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 7/26/2010

Weather: Sunny Clear, wind Northerly @ 5-10 increased WSW 6-20

Tides:

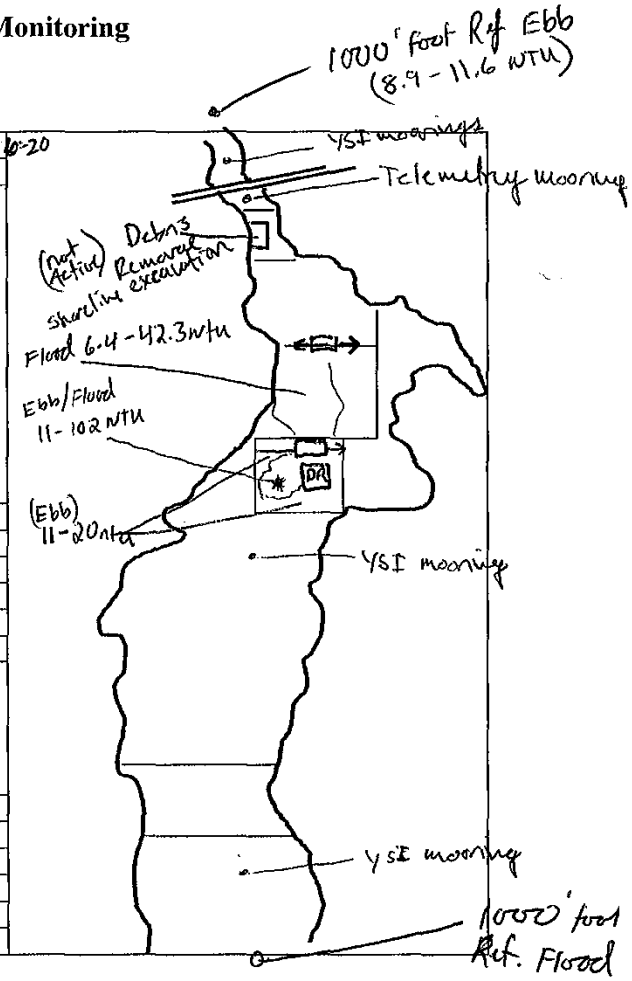
3.8'	@	0852
0.3'	@	1410
4.1'	@	2113

Monitoring Period:

From: 0850 To:

Tidal Stages: (HWS) Ebb LWS Flood

Dredging Activity:
Morning Dredging on Boundry of G and I
Debris Removal throughout morning in Area K
1340 All Activity stopped
1418 Dredge begins work
1440 Debris Removal begins work again



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
WEST boundry of (K)	12 - 19	6 - 7	1 - 2'
150' SW of Debris Removal	19 - 38	6.9 - 4.6	0.6 - 2.4
" "	102	4.6	1.63
" "	17 - 102	4.8 - 5.8	1.64
200' South of Dredge	16 - 23	4.8 - 4.9	1.63 - 1.74
250' North of Dredge	6.4 - 42.3	3.2 - 7.3	0.32 - 5.04

Oil Sheen/Debris:
No sheen/Debris observed associated with Dredge/Debris Removal. slight sheen observed around boom

Wildlife Observations:
Occasional Fish jumping, numerous terns, Cormorants, and gulls, Osprey, Blue Heron

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: YSI moorings recovered, cleaned, calibrated and redeployed. A range of NTU's from Ebb - Background values to above 100 ntu observed within close proximity to Debris Removal and Down river of Dredge. Values dropped back to low to High teens outside the 200' range. Flood - Background values to 42 NTU observed ~ 250' north of Dredge and Debris Removal Activity. NTU levels Averaged in the mid to High teens. Dissolved Oxygen levels ranged from 3 mg/L near bottom to 7 mg/L at the surface throughout all Area

Sampling Crew: M. Walsh, D. Rogers

Chief Scientist Signature: Mike Walsh

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	~~West~~ Area G/J, Area K, Debris Removal Area K
Dredging Description	West to east in Area G/J, west to east in Area K
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	AM Sunny, wind NNW @ 5-10 / PM mostly sunny, wind west 10-20

Date	7/26/2010
Page	1 of 2

Tide Information	
High	3.8' @ 0852
Low	0.3' @ 1410
High	4.1 @ 2113
Low	

	Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
Ebb	4000' North Ref	1139			2.8	0.73	8.9	21.15	3.02	26.73	
		1140				1.82	11.6	27.53	2.55	26.82	
	150' from Debris Removal	1249			4.2	0.607	73.4	23.95	6.96	26.77	
		1251				1.320	38.2	24.12	6.07	26.34	
		1252				2.431	19.0	27.96	4.61	25.66	
	150' SW of Debris Removal	1300	41°40.365	-70°54.945	4.1	1.63	102.1	26.11	4.85	25.91	
	"	1308			4.0	1.63	64.2	25.26	4.83	26.14	
	"	1310			4.0	1.63	23.4	25.22	5.07	26.12	
	"	1317			4.0	1.64	18.7	27.70	4.44	25.79	
	"	1331			3.9	1.64	16.9	26.79	5.01	26.12	
	"	1335			3.9	1.63	11.4	27.38	4.91	25.80	Debris Removal stopped
	"	1355			3.8	1.63	23.6	26.51	4.83	26.47	NO ACTIVITY DRG or DR
	200' South of Dredge	1424			4.5	1.74	16.0	27.79	5.97	26.75	Dredge Active

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	North Boundry of Area K / Middle of Area K
Dredging Description	West to East in Area K
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Mostly Sunny, Breezy WNW 10-20

Date	7/26/2010
Page	2 of 2

Tide Information	
High	3.8' @ 0852
Low	0.3' @ 1410
High	4.1' @ 2113
Low	

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
250' north of Dredge	1443	41° 40.451	-70° 54.934	5.9	0.32	6.4	22.95	7.36	27.32	Dredge and Debris
	1445				2.07	14.2	27.40	5.01	26.05	Removal Activity
	1446	41° 40.451	-70° 54.934		5.04	9.7	28.04	3.24	25.71	Switch Flood Tide
"	1503				0.57	15.2	26.13	5.83	24.57	
"	1510				1.57	42.3	23.55	5.61	26.75	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 7/28/2010

Weather: Sunny, Hot, Breezy @ 15-20 gusting to 25

Tides:

0.2 @	@	0326
3.9 @	@	1009
0.3 @	@	1535

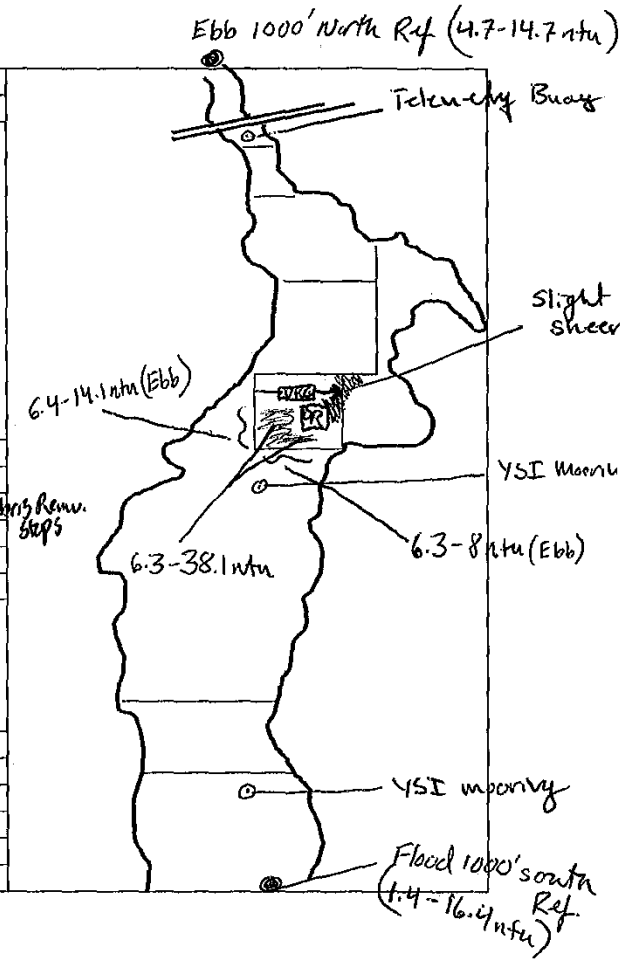
Monitoring Period:

From: 0920 To: 1545

Tidal Stages: (HWS) (Ebb) LWS Flood

Dredging Activity:

AM Clogged pipeline No dredging
Am. Stop and Go Debris Removal
11:40 Dredging begins
11:20 Dredge Stops/ pumps full / 1201 Dredge Resumes / 1315 Debris Remv. Stops
1420 Dredge Stops pumps full / 1500 Dredge Resumes
1450 Debris Removal Resumes



Turbidity Summary:

	Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor ~~water~~ Depth (ft)
Flood	1000' South Ref	1.4 - 16.4	6.46 - 4.69	1.29 - 9.97
Ebb	1000' North Ref	4.7 - 14.7	6.98 - 1.78	1.14 - 9.78
Outside South Boundary of K		6.3 - 8	8.39	1.78
South West Boundary of K		6.4 - 14.1	7.77 - 8.51	1.81 - 2.21
100' Southwest of Debris Remv.		44.2	7.83	2.49
200' South of Dredge		6.3 - 38.1	8.99 - 10.90	0.78 - 5.07

Oil Sheen/Debris:

Slight sheen observed around Debris Removal And Dredge

Wildlife Observations:

Numerous Terns and Gulls feeding, Occasional Osprey and Egrets, Blue Herons, Seen.

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: YSI mooring Data downloaded. Turbidity readings ranged from single digits to 20 - 40 ntu for short periods while both Debris removal and Dredge were working. An occasional higher spike was seen but not reproducible (50-60 ntu). During slack low and in conjunction with the gusty Southwest wind elevated readings were seen (20-40 ntu) when neither the Dredge or Debris Rivers working.

Sampling Crew: M. Walsh D. Rogers

Chief Scientist Signature: Mike Walsh

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	North side Area K / Debris Removal middle of Area K
Dredging Description	West to East / ~~not Active~~ Debris Removal Stop and Go
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, Hot, Breezy SW 10-15 gusting to 25

Date	7/28/2010
Page	1 of 2

Tide Information	
High	3.9' @ 1009
Low	0.2' @ 0326
High	3.8' @ 1226
Low	0.3' @ 1535

	Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Flood	1000' South Ref	0937			11.5	1.29	1.4	6.46	28.56	24.80	
		0938			~~4.6~~	4.6	1.5	5.35	29.56	24.23	
		0939				9.97	16.4	4.69	29.62	24.14	
Ebb	1000' North Ref	1009			5.4	1.14	4.7	6.98	26.04	27.00	
		1010				2.40	5.3	5.81	26.87	26.98	
		1011				4.78	14.7	1.78	27.09	27.03	
	South Boundary of Area K	1055				1.78	6.3	8.39	25.01	26.16	500' from Dredge
South	West Boundary of Area K	1100	Vessel			2.01	14.1	8.50	26.50	26.15	300' from Dredge
	"	1108				1.81	3.3	7.27	26.95	26.56	200' from Dredge
	"	1136		Moving		2.21	6.4	8.51	26.22	26.64	200' from Debris Removal
	100' south of Debris Removal	1142				1.74	9.6	8.66	25.42	26.50	
	100' South west of Debris Removal	1147				2.49	44.2	7.83	26.22	26.41	
	200' South west of Dredge / Debris Remo.	1157	41° 40.359	-70° 54.953	6.3	0.78	10.5	8.99	24.85	26.65	
		1159	~~70° 54.955~~			3.52	20.9	6.33	27.83	26.10	
		1200				5.07	14.4	5.26	28.84	25.41	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	North side of Area K / Debris Removal middle of Area K
Dredging Description	West to East / Debris Removal stop and Go
Survey Vessel	George Hampson
Chief Scientist	M Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, Hot, Breezy SW @ 10-15 Increasing 15-20 gusting to 25

Date	7/28/2010
Page	2 of 2

Tide Information	
High	3.9' @ 1009
Low	0.2' @ 0326
High	3.2' @ 2226
Low	0.3' @ 1535

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
200' South west of Dredge and Debris Remv.	1228	41° 40.359	-70° 54.953	6.0	2.08	6.3	26.27	8.98	26.88	
200' South of Dredge	1340			4.7	2.15	30.1	25.04	10.04	27.32	Turbidity Appears due to shallow water and High Wind
200' South of Dredge	1425			4.4	1.87	14.7	23.60	10.90	27.80	
11	1450			3.7	1.85	38.1	22.59	10.87	28.08	Debris Removal Resumed
11	1526			3.8	1.25	48.6	22.44	11.14	27.48	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: August 2, 2010
Weather: sunny, 75°, winds 5 kts SE-S
Tides: GORGEOUS!

low	@	06:21
high	@	13:22
low	@	19:10

Monitoring Period:

From: 0830 To: 15:40

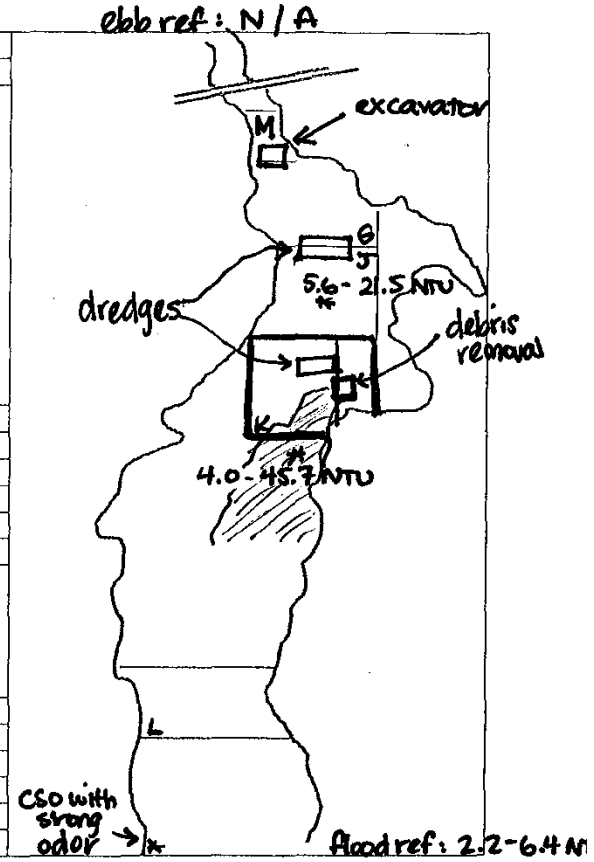
Tidal Stages: (HWS) (Ebb) LWS (Flood)

Dredging Activity:
morning: dredging in Area K
debris removal in Area K

afternoon: dredging at boundary of G/J
debris removal in Area K

Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
flood ref	2.2-6.4	5.7-8.2	0.9-4.6
ebb ref → NA: could not pass pipeline in J / cables			
300' N DR in K & DR in K	5.6-21.5	3.4-10.7	1.0-6.9
300' S DR in K	4.0-45.7	7.2-10.7	1.0-4.4



Oil Sheen/Debris:
Strong wastewater odor near CSO south of Area L

Wildlife Observations:
many waterfowl, occasional fish jumping, crab swimming near Sawyer St. dock

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: A very strong wastewater odor was noted in the vicinity of the CSO north of Pierce Mill Cove on the western bank during low tide in the morning. Monitoring efforts surrounded dredging in Area K and the boundary of Areas G & J, and debris removal in K observed slightly elevated turbidities, especially during the ebb tide, south of the activity. Readings were ~15 NTU above background during the flood tide and ~40 NTU above background during ebb. During the ebb tide, the plume was clearly visible, distinct from the clearer water in the channel to the west, however ach turbidity values in the plume did not exceed 50 NTU at a distance of 300' down current of activity. Dissolved oxygen concentrations were in a normal range throughout the day. An ebb reference reading was not [illegible]

Sampling Crew: K. McCarthy, D. Rogers

Chief Scientist Signature: Kathryn McCarthy

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area K
Dredging Description	dredging in K
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, 75°, winds 5kts SE-S

Date	~~8/3~~ 8/2/10
Page	1 of 2

Tide Information	
High	01:00
Low	06:21
High	13:22
Low	19:10

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
flood ref	08:52	41°39.819'	70°54.984'	~~5~~.8	Φ.97	2.2	8.18	28.11	24.13	
flood ref	08:53	"	"	"	4.19	2.7	6.26	29.36	23.97	
flood ref	08:54	"	"	"	4.59	6.4	5.74	29.39	24.14	
300' N Drg in K	09:11	41°40.473'	70°54.910'	7.6	1.Φ1	16.6	6.14	27.19	24.8Φ	
"	09:12	"	"	"	4.Φ7	9.8	5.Φ4	27.89	24.75	
"	09:14	"	"	"	5.89	19.5	3.49	28.1Φ	24.69	
"	09:15	"	"	"	1.56	19.7	6.Φ2	27.36	24.86	depth of highest turbidity reading
"	09:21	"	"	"	1.45	13.6	7.Φ4	27.31	24.88	
"	09:29	"	"	"	1.45	21.5	6.65	27.35	24.9Φ	
"	09:46	"	"	"	1.45	1Φ.1	8.3Φ	26.77	25.14	
"	10:03	"	"	"	1.47	12.7	8.Φ3	27.Φ7	25.Φ9	
"	10:17	"	"	"	1.46	7.6	8.35	26.70	24.97	
"	10:34	"	"	"	1.47	8.9	8.66	26.84	25.Φ5	dredging paused
"	10:43	"	"	"	1.43	6.1	9.64	26.5Φ	25.11	active debris removal in K → ~900' away
"	11:09	"	"	"	1.47	7.Φ	9.72	26.89	25.Φ8	dredging resumed
"	11:21	"	"	"	1.46	7.7	8.62	27.Φ1	25.Φ4	
"	11:24	"	"	"	1.47	5.6	9.Φ2	27.Φ7	24.95	
"	12:09	"	"	"	1.44	8.Φ	9.67	26.98	25.25	
"	12:24	"	"	"	1.88	9.6	9.70	27.29	25.14	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area K, Area G/J
Dredging Description	dredging in Area G/J (boundary), debris removal in Area K
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, 75°, winds 5kts SE-S

Date: 8/2/10
Page: 2 of 2

Tide Information	
High	01:00
Low	06:21
High	13:22
Low	19:10

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	Salinity	DO	Temp	Notes
300'S DR in K	13:24	41°40.307'	70°54.957'	5.8	0.98	11.0	27.99	10.00	25.42	
"	13:25	"	"	"	2.40	4.0	28.27	9.45	25.13	
"	13:29	"	"	"	~~5.0 4.40~~	12.7	28.28	9.39	25.05	
"	13:35	"	"	"	1.28	13.6	27.86	9.94	25.46	
"	13:41	"	"	"	1.26	22.7	27.85	9.43	25.50	
"	13:48	"	"	"	1.27	30.1	27.83	9.14	25.68	
"	14:22	"	"	"	1.28	24.4	27.95	9.10	25.51	
"	14:28	"	"	"	1.28	35.2	27.90	8.62	25.47	
"	14:35	"	"	"	1.25	43.0	27.90	8.16	25.36	
"	14:39	"	"	"	1.26	45.7	27.70	7.21	25.44	
"	14:42	"	"	"	1.27	27.6	27.74	8.36	25.39	
"	14:49	"	"	"	1.26	10.9	27.82	10.28	25.91	
"	14:54	"	"	"	1.27	7.1	27.76	10.62	25.95	
"	15:09	"	"	"	1.25	19.0	27.66	10.04	25.90	
"	15:16	"	"	"	1.24	16.4	27.62	9.79	25.89	
"	15:28	"	"	"	1.27	12.3	27.62	9.56	25.83	

WOODS HOLE

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: August 5, 2010

Weather: overcast, hazy, 85°, Thunderstorms in morning

Tides: mids 10-15 kts SW

high	@	03:44
low	@	09:15
high	@	16:12

Monitoring Period:

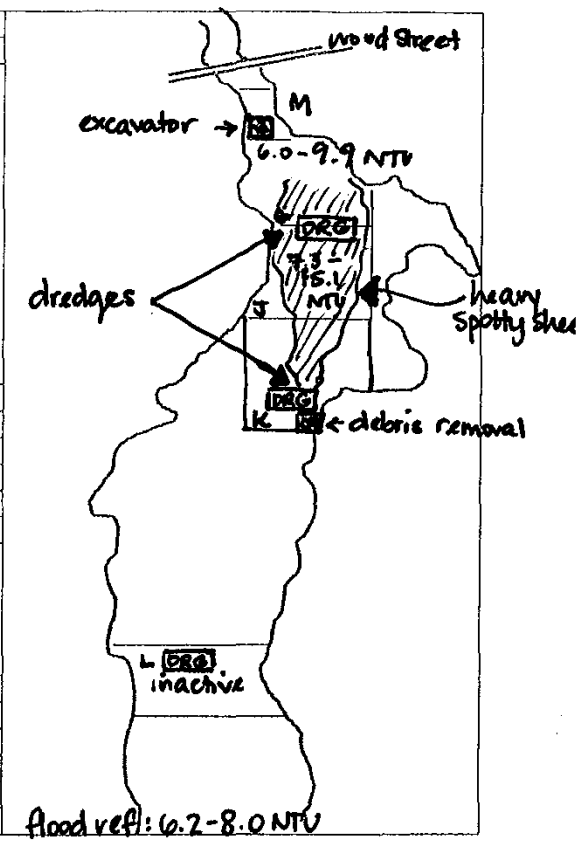
From: 08:50 To: 15:50 (no work ≈ 10:15 - 12:15 due to thunderstorms)

Tidal Stages: (HWS) Ebb (LWS) (Flood)

Dredging Activity:

morning: dredging in Area K

afternoon: debris removal in Area K
dredging in Area K
dredging in Area G



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
• flood reference	6.2-8.0	3.95-5.05	1.0-7.4
• 300' N of dredge in Area K	7.3-12.6	1.90-5.25	0.8-5.5
• 300 N of dredge in G	6.0-9.9	4.88-9.71	0.8-4.3
• 300'N of dredge & debris removal in K	8.2-15.1	3.11-7.43	0.9-5.6

Oil Sheen/Debris:

Sheen and strong odor from CSOs near Coggeshall St. and Pierce Mill Cove heavy oily sheen observed spreading north from dredge & debris removal in Area K during flood tide with strong SW winds

Wildlife Observations:

many terns fishing in Areas G, J, N and K during morning

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	~~Turbidity (1L)~~
Total PCB (1L)	Dissolved PCB (2x1L)
~~Toxicity (5 gal)~~	Metals (500ml)

Notes: Very low dissolved oxygen concentration during morning hours observed throughout harbor. Numerous terns and other water fowl observed fishing / feeding in northern areas and near Wood Street. Work was shut down for two hours in the late morning due to thunderstorms in the area. Turbidity was generally low surrounding all activity in Area K during the morning and early afternoon and was low surrounding activity in Area G in the late afternoon.

Sampling Crew: K. McCartney, D. Rogers

Chief Scientist Signature: Kathleen McCartney

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area K
Dredging Description	dredging in K (am), debris removal in K (pm)
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	Dan Rogers
Other Personnel	—
Weather Conditions	Overcast, hazy, 85°, T-storms, winds 10-15 kts SW

Date	8/5/10
Page	1 of 2

Tide Information	
High	0344
Low	0915
High	1612
Low	2300

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
flood ref.	09:00	41°39.835	70°55.ϕϕ1	9.5	1.ϕ2	6.2	5.ϕ5	27.54	25.46	
flood ref.	09:01	"	"	"	5.3ϕ	6.8	3.95	29.77	25.2ϕ	
flood ref	09:02	"	"	"	7.4ϕ	8.ϕ	4.22	30.1ϕ	25.ϕ9	
300' N DRG in K	09:36	41°40.472	70°54.911'	5.8	ϕ.84	7.4	4.11	22.88	25.57	dredging paused
"	09:37	"	"	"	3.4ϕ	7.3	2.83	27.12	25.51	
"	09:38	"	"	"	5.52	7.9	1.9ϕ	27.74	25.39	
"	09:40	"	"	"	1.51	9.8	3.65	24.76	25.55	dredging resumes
"	09:43	"	"	"	1.53	12.6	3.93	24.44	25.52	
"	10:12	"	"	"	1.55	9.1	5.25	24.ϕ9	25.6ϕ	
300' N DRG in K	13:39	41°40.468'	70°54.937'	6.5	ϕ.99	13.4	6.16	25.59	26.32	both dredging &
"	13:41	"	"	"	3.26	9.2	5.57	25.73	25.92	debris removal active
"	13:42	"	"	"	5.59	8.2	3.11	26.36	25.6ϕ	
"	13:45	"	"	"	1.63	1ϕ.2	5.96	25.75	26.29	
"	13:54	"	"	"	1.63	12.9	6.71	25.59	26.47	
"	13:55	"	"	"	ϕ.99	13.5	7.ϕ9	25.12	26.5ϕ	
"	14:18	"	"	"	ϕ.98	12.4	7.43	25.13	26.88	
"	14:27	"	"	"	ϕ.99	15.1	7.36	25.1ϕ	26.79	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area G
Dredging Description	dredging in Area G (pm)
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	overcast, winds 10-15 kts SW

Date	8/5/10
Page	2 of 2

Tide Information	
High	0344
Low	0915
High	1612
Low	2300

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
300' N DRGING	14:40	41°40.602'	70°54.966'	5.2	0.82	6.3	9.48	20.85	27.47	setting up dredge in G
"	14:41	"	"	"	2.69	8.9	6.76	25.05	26.28	
"	14:43	"	"	"	4.25	9.9	4.95	25.72	25.75	
"	14:58	"	"	"	2.16	9.3	6.37	22.00	27.19	dredging active
"	15:09	"	"	"	2.15	8.8	7.19	24.32	26.34	
"	15:14	"	"	"	2.16	8.2	8.40	21.35	27.42	
"	15:17	"	"	"	2.15	9.1	7.15	24.44	26.45	
"	15:22	"	"	"	2.16	7.4	8.77	23.60	26.75	
"	15:24	"	"	"	0.97	6.0	9.71	20.79	27.89	
"	15:28	"	"	"	4.24	8.7	4.88	25.87	25.94	
"	15:30	"	"	"	4.25	9.3	4.96	25.90	25.96	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 8/9/10
Weather: Hazy, Humid, Wind SW 5-10 Knts
Tides:

High	@	0742
Low	@	1327
High	@	2008

Monitoring Period:

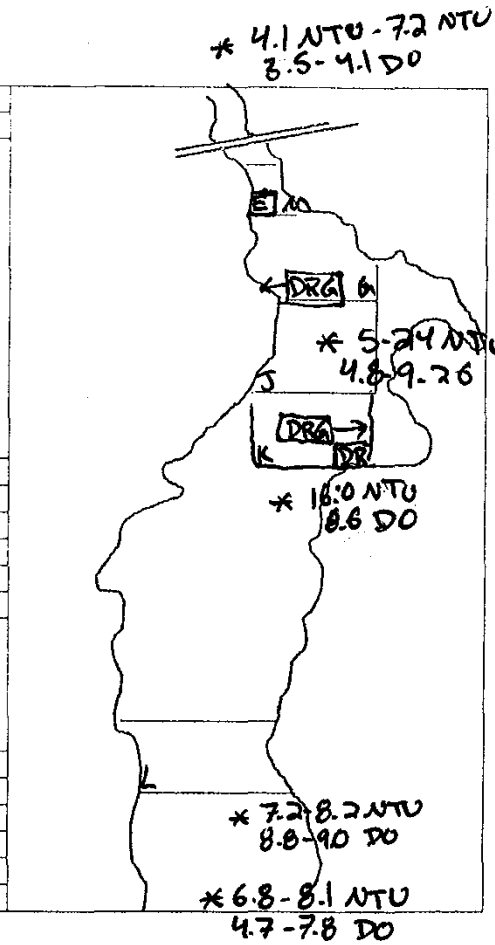
From 0845 To: 1520

Tidal Stages: HWS (Ebb) (LW) (Flood)

Dredging Activity:
Morning: Debris Removal in Area K
Shore line excavating in Area M
Dredging in Area G
Afternoon: Dredging in Area K

Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Ebb Reference	4.1-7.2	3.5-4.1	0.9-4.1
Flood Reference	6.8-8.1	4.7-7.8	1.0-8.2
S Area L	7.2-8.2	8.8-9.0	0.9-2.9
S-Area-K	16.0	8.6	2.7
300N of DRG in K	5-24	4.8-9.20	0.9-6.3



Oil Sheen/Debris:
None

Wildlife Observations:
Terns, Gulls, Cormorants throughout harbor, feeding on small fish (Silver sides)

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Elevated dissolved oxygen concentration at surface water (>10).
Birds throughout harbor feeding on bait fish (Menheden, silver sides).
Calibrated and cleaned all sondes including real-time sonde.

Sampling Crew: D. Bailey, M. Walsh

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	DR in Area K + M
Dredging Description	DRG in Area G/J
Survey Vessel	R/V George Hampson
Chief Scientist	D. Bailey
Sampling Technician	—
Vessel Captain	M. Webb
Other Personnel	—
Weather Conditions	Hazy, Humid, Wind

Date: 8/9/16
Page: 1 of

Tide Information	
High	0742
Low	0116
High	2008
Low	1327

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Ebb Ref	9:19	41°40.833	70°55.032	5.3	0.94	4.1	4.13	22.60	25.16	
	9:20	" "	" "	"	2.77	6.4	3.54	27.21	25.40	
	9:20	" "	" "	"	4.18	7.2	3.74	27.62	25.36	
Flood Ref	1336	41°39.803	70°54.907	9.3	1.01	6.8	7.75	28.73	26.45	
	1337	" "	" "	"	4.50	8.1	6.73	29.57	26.82	
	~~1338~~	~~" "~~	~~" "~~	~~"~~	~~8.18~~	~~7.2~~	~~4.76~~	~~29.53~~	~~25.06~~	
SArea L	1351	41°39.905	70°55.014	3.9	0.98	7.2	8.83	28.44	27.33	
	1352	" "	" "	4	2.90	8.2	~~28.57~~ 9.03	28.57	27.17	
SArea K	1405	41°40.283	70°54.988	2.7	1.54	16.6	8.61	27.24	27.58	
300' N of	1413	41°40.427	70°54.923	6.9	0.90	11.8	9.20	25.98	27.80	
DRG in K	1414	" "	" "	"	3.01	11.7	8.67	27.57	26.16	
	1416	" "	" "	"	6.33	5.7	4.85	29.33	24.92	
	1444	" "	" "	"	1.59	24.0	9.21	26.69	27.89	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: August 12, 2010
Weather: sunny, 80° winds 5-10 kts E → SE
Tides:

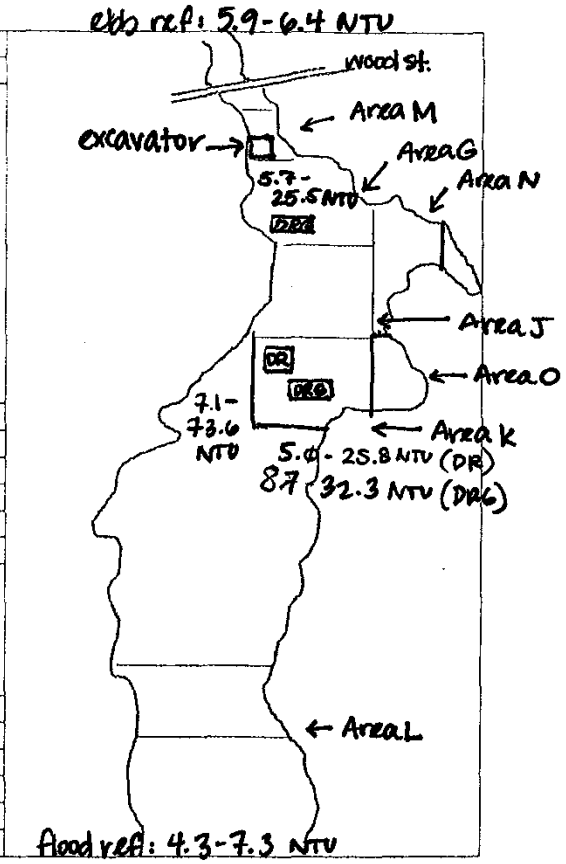
low	@	03:39
high	@	10:15
low	@	15:59

Monitoring Period:

From: 08:50 To: 1535

Tidal Stages: (HWS) (Ebb) LWS (Flood)

Dredging Activity:
dredging in Area G (am & pm)
debris removal in Area K (late am)
excavation in Area M (pm)
dredging in Area K (pm)



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
flood ref	4.3-7.3	5.28-5.38	0.6-11.5
ebb ref	6.4-5.9	4.03-5.81	0.6-5.4
200'N of dredge in G	5.7-25.5	4.21-6.24	0.6-4.8
300'S of debris removal in K	5.0-25.8	4.67-7.08	0.7-7.1
300'SSW of DR in K	7.1-73.6	4.76-7.51	0.7-4.0
300'S of dredge in K	8.7-32.3	6.77-7.65	1.7

Oil Sheen/Debris:
spotty sheen near dredge in Area G

Wildlife Observations:
Abundant terns, gulls, cormorants, etc fishing in northern areas

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	~~Turbidity (1L)~~
Total PCB (1L)	~~Dissolved PCB (2x1L)~~
~~Toxicity (5 gal)~~	~~Metals (500ml)~~

Notes: Elevated turbidity was observed downcurrent of debris removal in Area K during the ebb tide. Readings were generally 20-60 NTU with a maximum of 73.6 NTU observed. The location of the elevated readings was between Area K and the western shoreline. Highest readings were observed at a depth of approximately 3 feet. Turbidity elsewhere (farther downstream or in Area K) was lower, not exceeding 30 NTU. Abundant waterfowl (terns, gulls, cormorants) were feeding throughout Areas K, O, J, N and G.

Sampling Crew: M. Walsh, K. McCartney

Chief Scientist Signature: Kathleen McCartney

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area G, Area K
Dredging Description	dredging in G (am), debris removal in K (late am)
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	Sunny, 80°, winds E → SE 5-10 kts

Date: 8/12/10
Page: 1 of 3

Tide Information	
High	——
Low	03:39
High	10:15
Low	15:59

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
flood ref	09:00	41°39.828'	70°55.010'	12.0	0.60	4.3	5.38	30.44	25.37	
flood ref	09:02	"	"	"	7.02	6.9	5.30	30.47	25.36	
flood ref	09:03	"	"	"	11.48	7.3	5.28	30.48	25.36	
250' N of DRGING	09:25	41°40.579'	70°54.960'	7.0	0.61	5.7	6.24	29.03	25.88	
"	09:26	"	"	"	2.99	7.3	5.69	29.30	25.94	
"	09:27	"	"	"	4.75	25.5	4.21	29.41	25.81	bumped bottom with sensor = higher turbidity
"	09:29	"	"	"	3.59	11.5	4.74	29.32	25.92	
"	10:03	"	"	"	3.37	15.0	5.03	29.37	25.90	
"	10:10	"	"	"	3.37	21.4	4.37	29.38	25.78	
"	10:13	"	"	"	3.38	9.7	5.16	29.32	26.03	
ebb ref	10:39	41°40.835'	70°55.035'	6.6	0.60	5.9	5.81	27.95	26.96	
ebb ref	10:40	"	"	"	3.07	5.9	4.63	29.09	26.11	
ebb ref	10:41	"	"	"	5.35	6.4	4.03	29.09	25.91	
300' S DR of DRG in K	11:26	41°40.339'	70°54.960'	8.8	0.75	6.7	6.43	29.69	25.95	debris removal inactive
"	11:27	"	"	"	4.00	5.0	5.43	29.98	25.63	
"	11:29	"	"	"	7.66	9.3	4.81	30.06	25.51	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area K, Area G, Area M,
Dredging Description	debris removal in K (late am), dredging in G (am + pm), excavation in M (pm)
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	sunny, 80°, winds E → SE 5-10 kts

Date: 8/12/10
Page: 2 of 3

Tide Information	
High	—
Low	03:39
High	10:15
Low	15:59

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
300's DR in K	11:35	41°40.339'	70°54.960'	8.8'	7.10	8.7	4.81	30.07	25.52	
"	11:51	"	"	"	7.11	~~X~~ 5.4	4.67	30.09	25.54	
"	12:15	"	"	"	7.11	6.7	5.03	30.01	25.61	
"	12:29	"	"	"	6.94	12.0	4.74	30.02	25.58	
"	12:31	"	"	"	6.87	16.4	4.71	30.02	25.58	
"	12:34	"	"	"	6.90	25.8	4.79	30.01	25.58	
"	12:35	"	"	"	6.89	11.2	4.74	30.00	25.59	
"	12:54	"	"	"	0.69	6.6	7.08	29.57	26.55	
300' SSW DR in K	13:03	↖	↗		1.52	58.9	6.20	29.56	26.27	moved outside of Area K, closer to western shoreline
"	13:04	Vessel	moving		0.53	50.6	6.36	29.32	26.28	
"	13:05		↙	↘	3.20	21.8	5.07	29.82	25.80	
300' SSW DR in K	13:15	41°40.342'	70°54.993'	6.4'	0.70	7.1	7.51	29.52	26.80	
"	13:16	"	"	"	1.45	23.2	7.05	29.54	26.75	
"	13:18	"	"	"	2.99	46.6	6.03	29.53	26.49	
"	13:19	"	"	"	4.02	14.0	4.95	29.85	25.74	
"	13:22	"	"	"	3.21	53.1	5.15	29.75	25.95	
"	13:25	"	"	"	3.22	59.5	5.84	29.50	26.62	
"	13:29	"	"	"	3.22	25.0	4.79	29.80	25.91	

WOODS HOLEGROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area K, Area G, Area M
Dredging Description	debris removal in K (pm) dredging in 6 (pm) excavation in M(pm)
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	sunny, 80° winds E → SE 5-10 kts

Date	8/12/10
Page	3 of 3

Tide Information	
High	—
Low	03:39
High	10:15
Low	15:59

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
300' SSW of DR in K	13:32	41°40.342'	70°54.993	6.4	3.18	68.4	5.12	29.46	26.77	
"	13:35	"	"	"	3.21	73.6	5.17	29.72	25.88	
"	13:35	"	"	"	3.21	45.5	4.76	29.66	26.02	
"	13:39	"	"	"	3.20	44.4	4.97	29.74	25.88	
300's of DR in K	14:46	41°40.296'	70°54.972'	8.5.0	1.68	32.3	6.78	29.74	26.45	
"	14:49	"	"	"	1.69	28.3	6.88	29.72.	26.39	
"	14:55	"	"	"	1.70	9.8	7.40	29.63	26.44	
"	15:03	"	"	"	1.70	8.7	7.65	29.58	26.50	
"	15:10	"	"	"	1.70	12.6	6.77	29.61	26.37	
"	15:15	"	"	"	1.64	13.1	7.25	29.53	26.45	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 8/16/2010

Weather: Overcast Rain/Drizzle Wind 5-15 SWest

Tides:

3.8'	@	0117
0.2'	@	0633
4.3'	@	1353

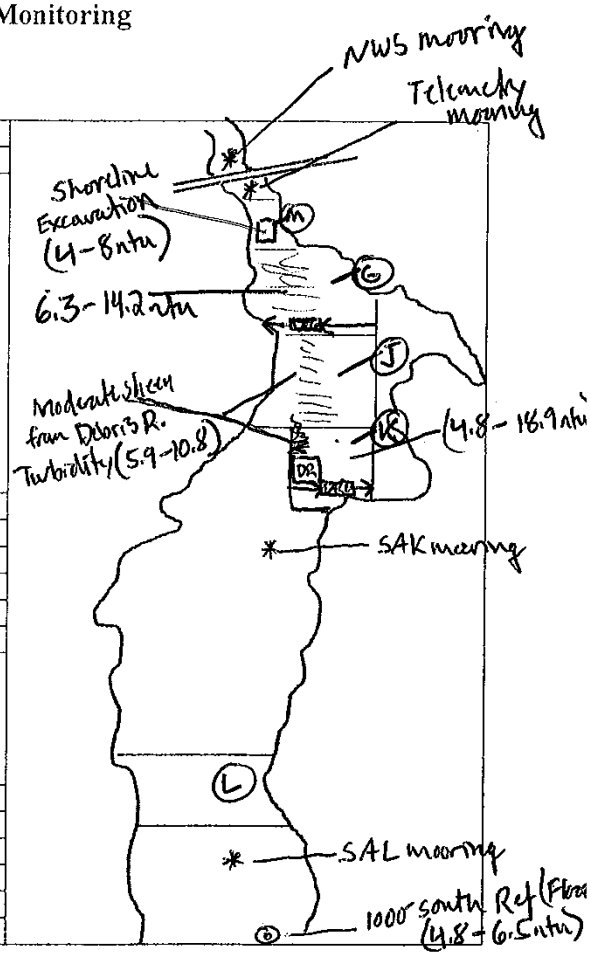
Monitoring Period:

From: 0900 To: 1545

Tidal Stages: (HWS) (Ebb) LWS (Flood)

Dredging Activity:

West to east in South portion of Area K
1026 Dredge Activity moves to Area G
1026 Debris Removal moves to S. West corner of Area K
1400 Debris Removal Stopped
1400 Shoreline excavation Begins
1500 Shoreline excavation ends.



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/~~water~~ Depth (ft)
AreaK vessel moving	6.5-12.5	5.3-5.5	1.2-1.3
AreaK 250' North of Dredge	5.5-18.9	5.1-5.4	0.9-6.1
AreaK 250' North of Debris Rem.	5.9-10.8	5.8-6.3	0.9-7.0
AreaG 200' North of Dredge	6.3-14.2	6.22-7.97	1.8-3.6
AreaM 50' to 150' from Shoreline excavation (vessel mooring)	4.0-8.1	5.9-7.8	1.0'-3.0'

Oil Sheen/Debris: Slight to moderate sheen observed Along western boundry of AreaK from debris Removal. This sheen Appeared to move north with wind and tide to Area J, G and M. A Slight sheen WAS observed in Area M due to shoreline excavation.

Wildlife Observations:
Numerous Terns, Gulls and Cormorants Feeding.

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Turbidity levels remained <20 ntu in All Areas today. Within 50' feet of shoreline excavation turbidity did not exceed 8.1 ntu. 250 feet north of Dredging with push boats working turbidity only reached 18.9 ntu. Dissolved Oxygen levels ranged between 5.13 - 8.1 mg/L throughout all areas.

Sampling Crew: M. Walsh, D. Rogers

Chief Scientist Signature: Michael Walsh

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area K / South — No Active Debris Removal
Dredging Description	West to East
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	
Weather Conditions	Overcast Rain/Drizzle SW 5-10

Date	8/16/2010
Page	1 of 2

Tide Information	
High	3.8' @ 1:17
Low	0.2' @ 0633
High	4.3' @ 1353
Low	0.7' @ 2026

	Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Flood	1000' Ref	0921			9.9	0.59	6.2	5.73	30.38	23.53	
		0922				4.49	4.8	5.72	30.50	23.54	
		0923				8.31	6.5	5.47	30.59	23.54	
150'	North of Dredge	0941				1.24	12.4	5.34	29.44	23.29	Area K
250'	North of Dredge	0945		Vessel Moving		1.32	6.5	5.54	29.46	23.33	" "
		0947			7.2	6.99	6.9	5.40	29.49	23.37	Area K
		0949			7.2	3.65	5.5	5.43	29.50	23.41	" "
		0951			7.2	6.10	4.7	5.13	29.59	23.50	Area K
250'	North of Dredge	1004				0.90	9.2	5.20	29.51	23.34	Push Boats working
		1007				0.90	15.0	5.13	29.51	23.34	
		1012				0.90	18.9	5.36	29.47	23.16	Area K
250'	North of Debris Removal	1106	41°40.438	70°54.949	8.3	1.01	6.8	6.15	29.51	23.30	Debris Removal South west corner of Area K
					8.3	3.94	7.3	6.17	29.53	23.29	Strong H_2S odor down wind of D. Removal
					8.3	7.03	10.8	5.86	29.54	23.27	
"	"	1122			8.4	0.96	5.9	6.32	29.52	23.36	Area K

Water Quality Monitoring Summary Report
W912WJ-09-D-0001
Delivery Order: 0010-03
December 2010

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	South Boundary of Area G / DRemoval SW corner of Area
Dredging Description	East to West
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Cloudy (occasional showers) SW 5-10

Date: 8/16/2010
Page: 2 of 2

Tide Information		
High	3.8' @	0117
Low	0.2' @	0633
High	4.3' @	1353
Low	0.7' @	2026

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
~~Area G~~	1259	41° 40.581	-70° 54.962	5.4	1.10	7.6	7.50	28.51	23.63	200' north of Dredge
200' north of Dredge	1300	~~70° 54.962~~			2.25	8.7	6.86	29.10	23.59	Area G
	1302				4.42	9.4	6.72	29.27	23.56	
	1346				1.88	6.3	7.97	28.63	23.73	
	1356				3.65	14.2	6.68	29.28	23.64	Area G
Vessel Moving	1400-1430	50'-150' in all Areas surrounding Shoreline excavation			1.0-3.5	4-8 ntu	5.9-8.1	28-29	23-	Area M
250' South of Dredge	1459	41° 40.483	-70° 54.966	8.1	1.3	14.2	6.37	29.47	23.58	Area J

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: August 19, 2010
Weather: sunny, 85°, winds 5-10 kts S
Tides:

high	@	04:21
low	@	10:09
high	@	17:03

Monitoring Period:

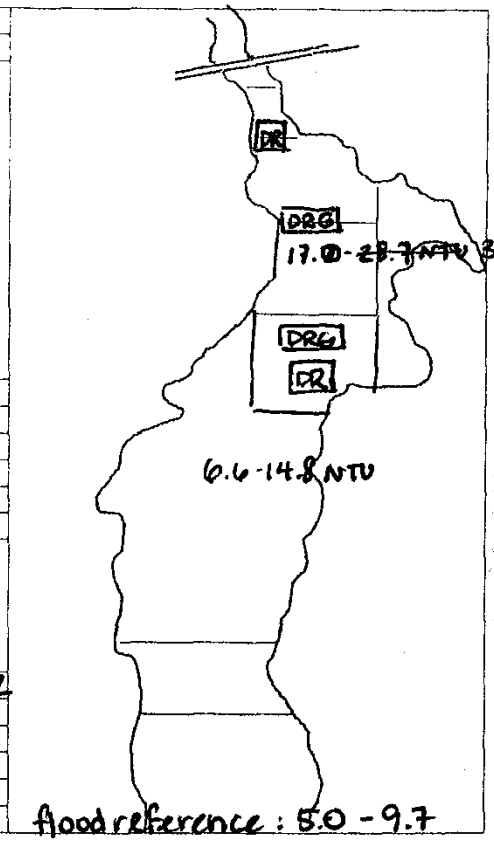
From: 09:00 To: 1600

Tidal Stages: HWS, (Ebb) (LWS) (Flood)

Dredging Activity:
Morning: dredging and debris removal in Area K

afternoon: dredging and debris removal in Area K

late afternoon: dredging in Area G



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
flood reference	5.0-9.7	4.89-10.10	0.8-7.1
300' S of DR/DRG in K	6.6-14.8	4.12-9.80	0.8-3.2
300' N of DR/DRG in K	17.0-32.8	2.37-9.35	1.0-6.1
300' N of DRG in G	11.8-12.4	11.49-11.60	0.8-3.5

Oil Sheen/Debris:
Strong H_2S/petrol odor during debris removal in Area K. moderate sheen observed down current of activities in K

Wildlife Observations:
many birds (terns, gulls, cormorants, egrets, herons, osprey), a few stressed/dead fish north of Wood Street

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	Turbidity (1L)
Total PCB (1L)	~~Dissolved PCB (2x1L)~~
~~Toxicity (5 gal)~~	~~Metals (500ml)~~

Notes: A few stressed/dying/dead fish were observed (less than 10 fish total throughout day) mainly north of Wood Street. Many terns, gulls, cormorants, etc feeding on fish. A moderate sheen and strong H_2S odor were noted during activities in Area K. Very high DO concentration during the afternoon. Low turbidity surrounding all operations (>30 NTU above background)

Sampling Crew: D. Rogers, K. McCartney

Chief Scientist Signature: Kathleen McCar

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area K
Dredging Description	debris removal in K, dredging in K
Survey Vessel	RV George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	sunny, 85° winds 5-10 kts S

Date: 8/19/10
Page: 1 of

Tide Information	
High	04:21
Low	10:09
High	17:03
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
300'S of DR in K	09:19	41°40.303'	70°54.969'	4.0	0.86	8.5	8.00	28.69	24.95	300'S of DR, 600'S of DRG
"	09:20	"	"	"	1.99	10.1	5.14	29.32	24.91	
"	09:21	"	"	"	3.20	12.4	4.12	29.42	24.89	
"	09:27	"	"	"	2.06	6.6	6.35	28.99	24.98	
"	09:42	"	"	"	0.28	7.0	8.54	28.29	25.41	
"	10:07	"	"	"	0.86	12.6	9.32	28.62	25.24	
"	10:12	"	"	"	0.84	14.8	9.35	28.49	25.43	
"	10:35	"	"	"	0.81	8.9	9.80	28.37	25.79	
flood ref	10:44	41°39.842'	70°55.016'	9.1	0.81	5.1	10.10	28.62	25.61	
flood ref	10:45	"	"	"	4.95	5.0	5.51	30.27	24.37	
flood ref	10:46	"	"	"	7.10	9.7	4.89	30.28	24.34	
300' N of DR in K	10:56	41° 40.459'	70°54.938'	6.8	1.02	17.0	6.44	28.49	25.69	300' N of DR, ~ 200 N of DRG
"	10:57	"	"	"	3.45	20.4	4.24	29.09	25.08	
"	10:58	"	"	"	6.09	13.7	2.37	29.37	24.93	
"	10:59	"	"	"	2.04	21.7	5.09	28.74	25.29	
"	11:04	"	"	"	2.00	25.0	4.82	28.79	25.25	
"	11:36	"	"	"	2.02	32.8	5.40	28.75	25.46	
"	11:57	"	"	"	2.01	26.6	6.13	28.72	25.63	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Area K / Area G
Dredging Description	dredging and debris removal in Area K, dredging in G
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Sunny, 85° winds 5-10 kts S

Date	8/19/10
Page	2 of

Tide Information	
High	04:21
Low	10:09
High	17:03
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
300'N of DR/DRGing K	12:26	41°40.458'	70°54.999'	7.3	2.05	24.4	7.60	28.42	26.20	
"	12:44	"	"	"	2.04	28.7	6.92	28.45	25.99	
"	13:40	"	"	"	3.12	19.7	8.44	28.55	26.42	
"	14:17	"	"	"	3.10	17.2	9.45	28.50	26.59	
300'N of DRGing	15:04	41°40.597'	70°54.952'	4.8	0.89	12.4	11.53	28.24	27.49	
"	15:05	"	"	"	2.25	12.0	11.59	28.26	27.51	
"	15:06	"	"	"	3.52	11.9	11.49	28.29	27.57	
"	15:22	"	"	"	0.95	11.8	11.60	28.26	27.52	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 8/23/10
Weather: Rainy Wind: 15-25 Knts
Tides:

High	@	0738
Low	@	1342
High	@	1957

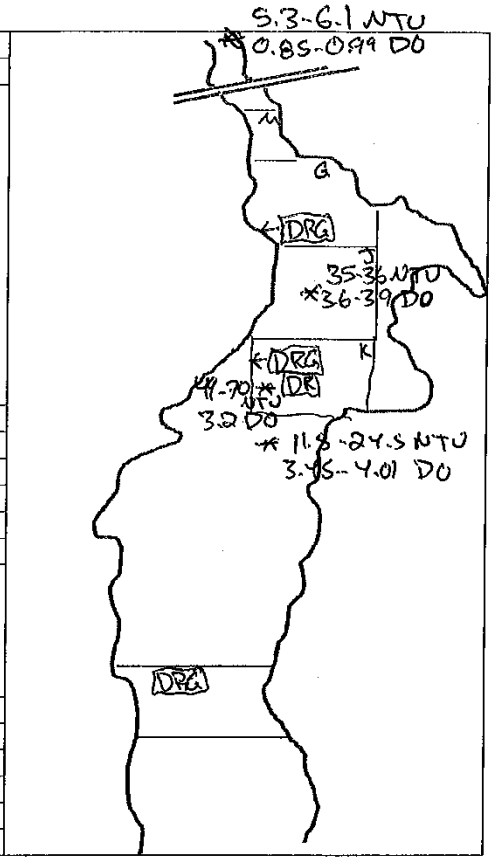
Monitoring Period:

From: 0830 To: 1530

Tidal Stages: HWS (Ebb) LWS (Flood)

Dredging Activity:
Morning: Dredging in Area G
Debris Remoal in Area K

Afternoon: Dredging in Area K
Debris Removal in Area K



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Ebb Ref	5.3-6.1	0.85-0.99	0.7-3.4
200's of DR in Area K	11.5-24.5	3.95-4.01	0.7-4.4
200's of DRG in Area K	49.1-74.4	3.2	0.9-3.94
200' N of DRG in Area K	35.2-36.5	36-3.9	0.8-4.6

Oil Sheen/Debris:
None

Wildlife Observations:
Birds throughout the harbor feeding on bait fish

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Birds: Terns, Gulls, Great Blue Heron, Egrets

High turbidity observed next to debris removal in K after it had stopped for an extended period of time, 200' South of dredging in K.

Sampling Crew: R. Bailey, D. Rodgers

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	Dredging in Area K + G
Dredging Description	
Survey Vessel	R/V George Hampson
Chief Scientist	D. Bailey
Sampling Technician	—
Vessel Captain	D. Rodgers
Other Personnel	
Weather Conditions	Rainy

Date	8/23/10
Page	1 of 1

Tide Information	
High	0738
Low	1342
High	1957
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Ebb Ref	9:16	41°40.834	70°55.035	4.4	0.70	6.1	0.99	28.21	24.68	
	9:17	" "	" "	"	2.30	5.6	0.85	28.94	24.68	
	9:18	" "	" "	"	3.42	5.3	0.97	28.97	24.60	
200' S of DR	10:34	41°40.334	70°54.945	5.0	0.72	12.1	3.84	29.05	23.19	
in K	10:35	" "	" "	"	2.53	11.5	4.01	29.08	23.20	
	10:36	" "	" "	"	4.45	11.6	3.60	29.33	23.15	
	11:44	" "	" "	"	1.33	24.5	3.45	29.06	23.10	
200'S of	13:14	41°40.360	70°54.956	4.4	0.90	74.4	3.29	28.83	23.13	
DRG in K	13:15	41°40.360	70°54.956	"	2.23	51.1	3.26	28.82	23.07	
	13:16	" "	" "	"	3.94	49.1	3.23	28.81	23.06	
200'N of	14:18	41°40.456	70°54.910	5.9	0.82	35.2	3.90	28.82	22.74	
DRG in K	14:19	" "	" "	"	2.55	35.4	3.70	28.82	22.74	
	14:20	" "	" "	"	4.45	36.5	3.61	28.81	22.74	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: August 26, 2010
Weather: partly sunny, 75°, winds W → SW 5-10 kts
Tides:

low	@	02:51
high	@	09:34
low	@	15:14

Monitoring Period:

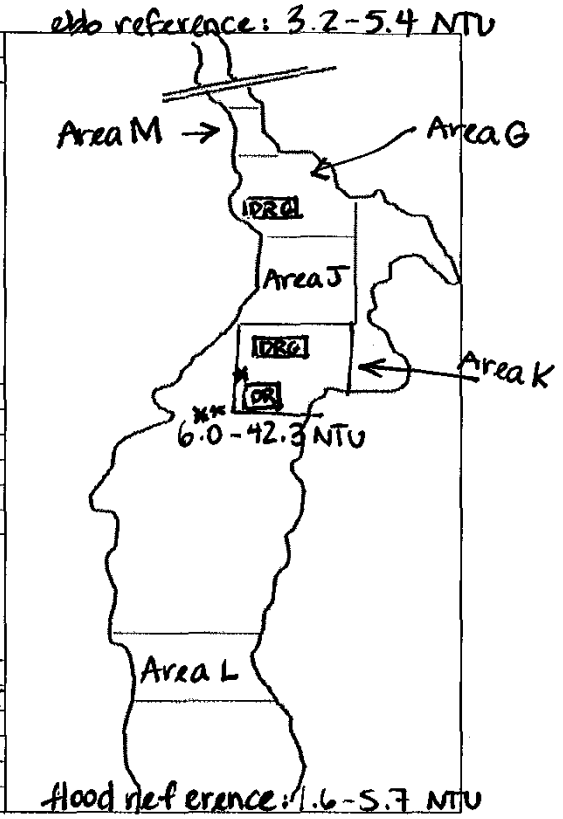
From: 08:40 To: 15:40

Tidal Stages: HWS (Ebb) LWS (Flood)

Dredging Activity:

morning: dredging in Area G
debris removal in Area K

afternoon: dredging in Area K



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
ebb reference	3.2-5.4	2.83-5.28	0.5-4.0
100'-300' S of DRinK	6.0-42.3	3.01-4.88	0.5-4.5
~300' S of DRinK	5.1-28.5	3.06-4.69	0.9-2.5
flood reference	1.6-5.7	4.71-5.72	1.0-17.5

Oil Sheen/Debris:
none observed

Wildlife Observations:
fish jumping, abundant terns, gulls, cormorants, numerous blue crabs

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	Turbidity (1L)
Total PCB (1L)	~~Dissolved PCB (2x1L)~~
~~Toxicity (5 gal)~~	~~Metals (500ml)~~

Notes: all water quality moorings were recovered for routine maintenance and redeployed. several blue crabs were observed on the moorings during recovery. Highest turbidity readings (near 50 NTU) were observed approx. 100' SW of debris removal in K. Turbidity decreased with increasing distance away from activity. Excavation of Area M was completed yesterday (8/25) and equipment was removed today.

Sampling Crew: K. McCartney, M. Walsh

Chief Scientist Signature: Karen McCarthy

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G Area K
Dredging Description	dredging in G (am) debris removal in K, dredging in K (pm)
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	sunny, winds W→SW 5-10 kts

Date: 8/26/10
Page: 1 of

Tide Information	
High	
Low	02:51
High	09:34
Low	15:14

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
ebb ref	11:27	41°40.833'	70°55.038'	5.4	0.55	3.2	5.28	15.92	20.70	1000' N of Area M
ebb ref	11:27	"	"	"	2.71	3.7	283	27.16	21.49	
ebb ref	11:29	"	"	"	4.02	5.4	3.04	27.37	21.52	
300'S of DR in K	11:49	41°40.278'	70°54.982'	6.5	0.66	19.4	3.62	25.50	21.54	at the SAK mooring
"	11:50	"	"	"	3.06	12.1	3.13	28.27	21.41	"
"	11:51	"	"	"	4.52	14.8	3.75	28.52	21.42	"
S boundary of K	12:12	41°40.332'	70°54.970'	moving	2.87	34.2	3.33	27.64	21.42	100' S of DR in K
SW boundary of K	12:13	41°40.336	70°54.978'		2.54	39.9	3.29	27.71	21.44	100' SW of DR in K
300' SW of DR in K	12:21	41°40.301'	70°54.992'	6.2	0.55	42.3	3.78	25.57	21.58	~~300'~~
"	12:22	"	"	"	2.80	23.6	3.01	28.06	21.43	
"	12:23	"	"	"	5.01	19.6	3.01	28.37	21.42	
"	12:46	"	"	"	0.77	7.4	3.83	25.07	21.77	
"	13:10	"	"	"	0.87	6.0	4.88	24.00	24.97	
200's of DR in K	13:26	41°40.351'	70°54.955'		0.88	5.6	4.69	22.02	22.65	~300' S/SW
"	13:26	"	"	"	2.50	7.3	3.31	27.73	21.49	
"	13:27	"	"	"	1.74	6.8	3.64	26.41	21.82	
"	13:44	"	"	"	1.67	5.1	3.33	27.15	21.62	
"	13:59	"	"	"	1.67	7.8	3.48	25.81	21.90	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area K
Dredging Description	dredging in Area K
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarney
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	Sunny

Date: 8/26/10
Page: 2 of

Tide Information	
High	
Low	02:51
High	09:34
Low	15:14

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
300' S of DR6 in K	14:06	41°40.352'	70°54.955'		1.67	14.8	3.30	26.76	21.72	
"	14:10	"	"		1.58	28.5	3.06	26.65	21.77	
"	14:15	"	"		1.55	12.1	3.64	24.55	22.28	
"	14:50	"	"		1.61	20.1	3.96	23.78	22.59	dredging stopped last 20min
"	15:05	"	"		1.62	16.7	3.47	25.12	22.33	dredging still stopped
"	15:15	"	"		1.63	10.9	3.52	23.96	22.79	" "
flood ref	15:35	41°39.211'	70°55.175'	18.5	1.07	1.6	5.72	28.41	22.77	
flood ref.	15:36	"	"	"	7.55	1.8	5.06	28.92	21.69	
flood ref	15:37	"	"	"	17.45	5.7	4.71	29.59	21.46	

WOODS HOLE GROUP

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: August 30, 2010
Weather: sunny, 80° wind NW → SW @ 5-10 kts
Tides:

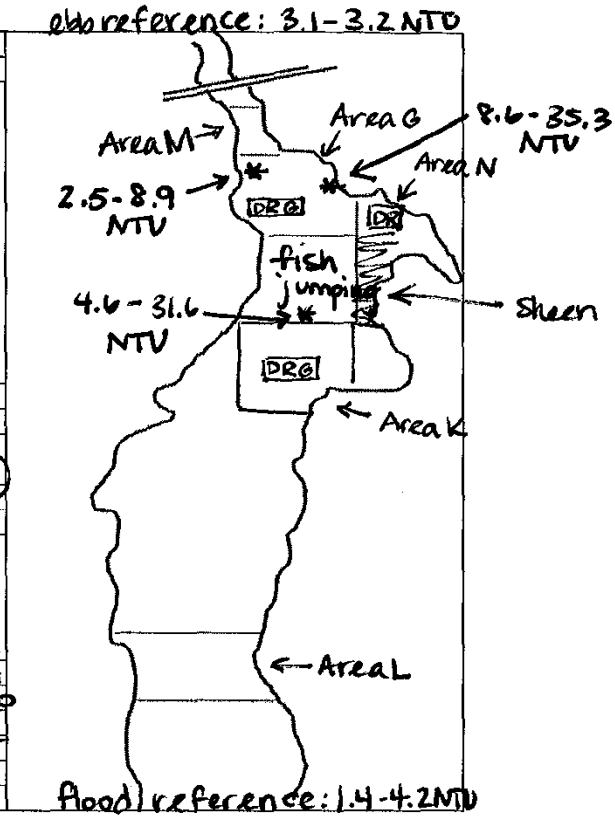
low	@	05:03
high	@	12:01
low	@	17:10

Monitoring Period:

From: 08:45 To: 15:45

Tidal Stages: (HWS) (Ebb) LWS (Flood)

Dredging Activity:
dredging in Area K (early am - late pm)
dredging in Area G (am, early pm)
debris removal in Area N (am, early pm)



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
flood reference	1.4-4.2	6.93-7.42	1.0-9.7
ebb reference	3.1-3.2	9.93-10.78	1.0-4.4
100'-300' N of dredge in G	2.5-8.9	7.72-8.65	0.5-2.0
" and W of DR in N	8.6-35.3	7.45-8.44	~2.0
200'-300' S of dredge in G	4.6-31.6	8.08-11.65	0.4-1.5

Oil Sheen/Debris:
moderate sheen from debris removal in Area N

Wildlife Observations:
many larger fish jumping throughout harbor, numerous terns, gulls, cormorants (although fewer than past weeks)

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Low turbidity readings observed surrounding all activities. Higher (normal levels) DO concentration than last week. Many larger fish (snapper blues?) feeding on baitfish throughout harbor. moderate sheen observed near debris removal in Area N: no associated turbidity.

Sampling Crew: M. Walsh, K. McCartney

Chief Scientist Signature: Paul Ricca

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G, Area N
Dredging Description	dredging in G, debris removal in N
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	Sunny, 80°, wind NW → SW 5-10 kts

Date 8/30/10
Page 1 of 2

Tide Information	
High	
Low	05:03
High	12:01
Low	17:40

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
flood ref	08:55	GPS not functioning		11.0	1.04	1.4	7.42	27.91	22.81	
flood ref	08:57			"	5.04	3.2	6.03	29.03	22.37	
flood ref	08:58			"	9.65	4.2	5.93	29.03	22.36	
200' N of DRGing	09:17			8.1	1.05	6.3	6.97	26.31	23.60	dredge not currently active
"	09:18			"	3.50	3.4	6.27	27.83	23.22	↓
"	09:20			"	6.71	8.8	3.88	28.35	23.13	
250' N of DRGing	09:31			3.4	0.50	3.7	8.22	26.90	24.26	mobilizing dredge
"	09:31			"	2.01	2.9	8.11	27.33	24.11	"
"	10:02			"	0.97	2.5	8.65	27.23	24.35	"
"	10:31			"	0.97	4.8	8.50	27.34	24.21	"
	10:44			"	1.07	6.6	8.39	27.18	24.23	300' W of active DR in N
300' NW of DR in N	11:37			moving	2.47	8.6	8.22	27.81	23.88	"
100' W of DR in N	11:39			5.8	2.08	27.0	8.15	27.50	23.86	
"	11:40			"	2.21	35.3	7.45	27.75	23.79	vessel moving
"	11:42	↓		"	2.03	12.7	8.15	26.56	24.94	
"	11:42			"	2.21	10.6	8.44	27.77	24.03	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G. Area N
Dredging Description	dredging in G, debris removal in N
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	Sunny, 80° wind S–10 kts NW → SW

Date 8/30/10
Page 2 of 2

Tide Information	
High	
Low	05:03
High	12:01
Low	17:40

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
100' N of DR in G	11:58	GPS not	functioning	moving	2.28	8.9	8.22	27.33	24.25	
100' NW of DR in N	12:14			moving	2.21	6.8	7.72	27.85	23.63	
ebb ref	12:31			5.4	1.01	3.1	10.55	26.78	25.02	
ebb ref	12:32			"	2.60	3.2	10.78	27.32	24.64	
ebb ref	12:32			"	4.35	3.1	9.93	27.47	24.49	
200' S of DR in N	13:10			moving	1.52	17.2	11.49	27.67	24.29	moderate sheen, H_2S odor
100' SW of DR in N	13:26			"	1.00	7.0	9.92	27.06	24.57	250' SE of DR6 in G
"	13:29			"	1.19	4.6	11.10	27.01	24.94	"
"	13:43			"	0.61	9.0	9.94	27.03	24.70	
"	13:47			"	0.62	12.4	9.63	27.12	24.65	
"	14:24			"	0.40	8.5	11.65	25.25	25.42	
200' S of DR6 in G	14:59			"	1.12	10.8	11.42	27.32	25.59	using push boats
"	15:01				1.13	31.6	8.68	27.56	24.27	
"	15:09				0.93	22.2	8.14	27.72	23.96	
"	15:16				0.77	14.0	9.67	27.43	24.23	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

8.2 - 10.2 NTU
ebb reference ~~8.2 - 10.2 NTU~~

Date: 9/02/2010
Weather: Hot, 80-90's, SW 10 Kts
Tides:

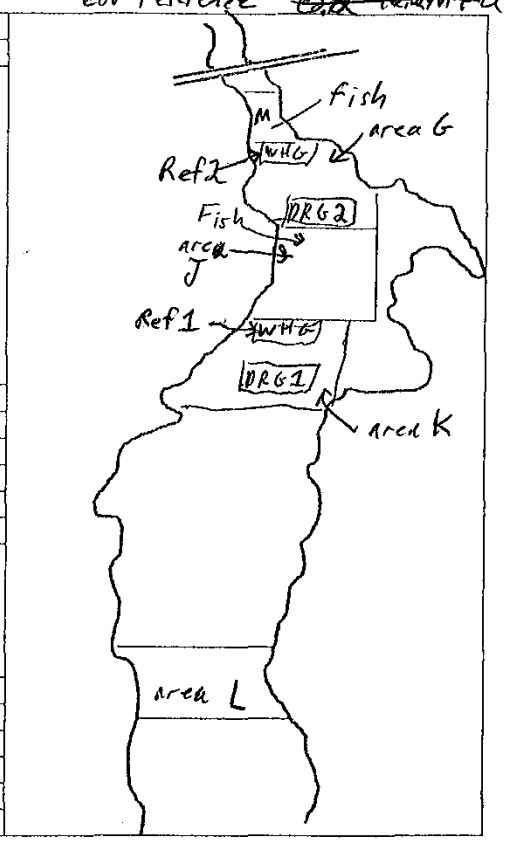
High	@	1441
Low	@	0730
	@	

Monitoring Period:

From: 0850 To: 1215

Tidal Stages: HWS Ebb LWS Flood

Dredging Activity:
Dredging in area K 0907 → 1002
Dredging in area G 1030 → end



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Ref 1 200ft N DRG1	6.3-16.0	8.04-10.67	1-5
Ref 2 200ft N DRG2	7.2-16.2	9.86-11.1	0.8-2.4
Ebb reference	8.2-10.2	7.7-8.14	0.6-2.3

Oil Sheen/Debris:
none observed

Wildlife Observations:
fish jumping, abundant terns, gulls, cormorants, blue crabs

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: All water quality moorings (NWS, SAL, SAK) data downloaded
Max turbidity 16 NTU. Operations ended early
so boat could be pulled at high tide

Sampling Crew: M. Buck, D. Rogers

Chief Scientist Signature: Michael Buck

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area K; Area G
Dredging Description	dredging in K & G
Survey Vessel	George Hampson
Chief Scientist	
Sampling Technician	Mitchell Buck
Vessel Captain	Dan Rogers
Other Personnel	
Weather Conditions	Sunny 80/90s, Wind SW 10 kts

Date 9/2/2010
Page 1 of 2

Tide Information	
High	
Low	0730
High	~~0~~ MAB 1441
Low	

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Area K Ref	0913			6.1 ft	1.094ft	8 NTU	10.67 mg/L	26.93	25.77	GPS broke, no positions
Area K Ref	0917			~~2.975~~	2.975	8.1	10.32	28.32	25.83	
Area K Ref	0918			6.1	5.062	16.0	8.04	29.05	25.26	
Area K	0931			6.1	4.252	6.3	9.87	28.82	25.49	
Area K	0950			6.1	4.268	15.7	9.64	28.69	25.57	
Area G Ref	1014			3.2	0.817	8.1	9.86	25.93	26.12	
Area G Ref	1015			3.2	1.506	8.0	10.00	26.75	26.04	
Area G Ref	1016			3.2	2.21	11.2	9.96	27.27	26.07	
Area G	1030			3.2	1.904	8.8	9.95	27.27	26.02	
N. Wood St.	1050			3.1	0.658	8.2	8.94	24.74	26.37	
N. Wood St	1051			3.1	1.856	9.2	8.73	25.87	26.33	
N. Wood St	1052			3.1	2.285	10.2	7.7	26.72	26.20	
Area G	1109			3.9	0.860	7.8	10.41	25.84	26.34	
Area G	1110			3.9	2.093	9.0	10.20	27.88	26.03	
Area G	1111			3.9	2.410	9.0	11.1	27.60	25.99	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area K, Area G
Dredging Description	Dredging Area G & K
Survey Vessel	George Hampson
Chief Scientist	Mitchell Buck
Sampling Technician	—
Vessel Captain	Dan Rogers
Other Personnel	
Weather Conditions	Sunny, 80/90's, winds SW 10 kts

Date	9/2/2010
Page	2 of 2

Tide Information	
High	
Low	0730
High	1441
Low	

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Area G	1125			1.33 ↔	3.9	7.9	10.76	26.2	26.31	
Area G	1130			3.9	1.3 1	7.2	10.78	26.12	26.35	ended early to pull back for hurricane Earl

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 9/8/2010 morning T-storms

Weather: partly Sunny Breezy Southwest ~ 15-25

Tides:

-0.4	@	0140
5.1	@	0812
-0.6	@	1354

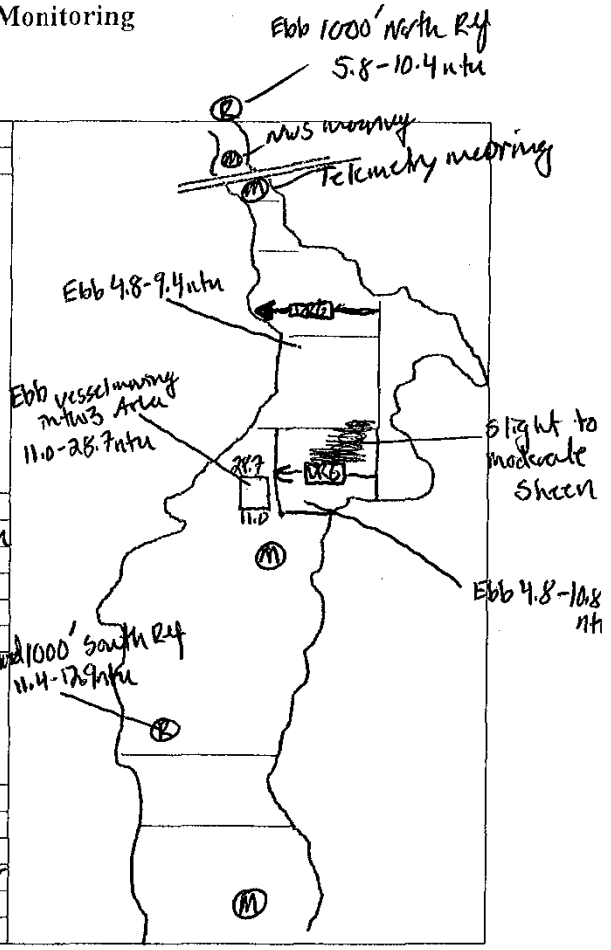
Monitoring Period:

From: 0845 To: 1530

Tidal Stages: HWS (Ebb) (LWS) (Flood)

Dredging Activity:

East to West middle Southwest corner of Area G
East to west middle of Area K
No Debris Removal, Debris Removal finished for season



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
Ebb 1000' N. Ref	5.8-10.4	4.8-5.9	0.5'-6.2'
Area G 250' South of Dredge	4.8-7.1	6.9-5.2	0.4'-8.8'
Area K 200' South of Dredge	4.8-6.1	7.0-7.8	0.6'-4.9'
vessel mooring	11-28	8.6-9.2	0.5'-1.2'
Flood South Ref 1000'	11.4-12.9	8.1-8.8	0.6'-2.2'
Area K 250' North of Dredge	8.8-19.2	4.6-10.17	0.6-4.4

Oil Sheen/Debris:

Slight to moderate sheen (with odor) drifting north of Dredge in Area K on strong South west wind

Wildlife Observations:

Many Terns, gulls, Cormorants, Egrets and an occasional osprey feeding on small and larger fish breaking water surface

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes:

Called off water due to Thunderstorms from 1045-1145

Very low Turbidity values observed throughout the day. During morning hours Turbidity values rarely exceeded 10ntu near Dredge Activity. Only occasionally during the afternoon did turbidity values exceed 15-20 ntu near dredge Activity. An occasional spike to 28 ntu was observed in the afternoon within 75 feet of Dredge Activity, with a very low tide and a strong southwest wind. Dissolved Oxygen values ranged from 4.8 in the morning to 10 mg/l in the Afternoon

Sampling Crew: M. Walsh, D. Rogers

Chief Scientist Signature: Michael Walsh

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G
Dredging Description	~~Area~~ East to West in Southwest Corner of Area G
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Partly Sunny Breezy SW ~15-25 T-Storms

Date	9/8/2010
Page	1 of 2

Tide Information	
High	5.1 @ 0812
Low	-0.4 @ 0140
High	4.9 @ 2035
Low	-0.6 @ 1359

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
1000' north Ebb Right	0910			7.1	0.52	5.8	5.91	18.66	22.52	
	0912				3.42	6.6	5.06	25.39	23.58	
	0913				6.20	10.4	4.82	25.74	23.56	
750' south of Dredge	0940			11.8	0.45	7.1	6.98	23.49	23.35	Dredging Area G
	0941				5.20	4.8	5.50	27.37	23.14	
	0942				8.89	6.0	5.79	27.95	22.98	
" "	10:07				6.68	9.4	7.44	23.18	23.21	Dredging Area G
200' south of Dredge Area K	10:16	41°40.353	70°54.948	6.5	0.76	4.9	7.74	26.31	23.41	Dredge moved to Area K
	10:17				3.01	4.8	7.02	26.58	23.17	
	10:19				4.98	5.8	5.66	27.25	23.12	
" "	10:40			6.3	0.66	6.1	7.85	25.16	23.38	" "
	1203	41°40.355	70°54.945	4.3	0.65	5.5	8.77	24.02	23.40	
200' south of Dredge Area K	1204				2.99	10.8	6.21	26.57	23.21	Dredging in Area K
" "	1309	"	"	3.0	0.45	7.0	8.98	23.85	23.54	" "
"	1327	"	"	3.0	0.46	9.3	9.23	23.27	23.67	" "

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area K
Dredging Description	west to East middle of Area K
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Mostly Sunny Breezy SW ~ 15 - 25

Date	9/8/2010
Page	2 of 2

Tide Information	
High	5.1 @ 0812
Low	-0.4 @ 0140
High	4.9 @ 2035
Low	-0.6 @ 13:59

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
vessel moving	1343	—	—		0.51	11.0	9.20	23.83	23.88	300' S. West of Dredge in Area K
" "	1346	—	—		0.57	17.6	8.62	24.05	24.03	250' west southwest of Dredge
" "	1349	—	—		0.54	23.4	8.57	23.76	23.89	200' south west of Dredge
" "	1351	—	—		0.54	21.6	8.66	23.83	23.89	150' south west of Dredge
" "	1353	—	—		0.49	23.4	8.86	24.00	23.73	100' south west of Dredge
" "	1355	—	—		1.21	28.7	9.04	22.99	23.92	75' west of Dredge
South Reference 200' north of Area L	1402	41° 40.087	070° 55.077	4.4	0.69	11.4	8.81	25.46	24.18	
	1403				2.25	12.9	8.14	26.19	23.98	
250' north of Dredge in Area K	1414	41° 40.438	070° 54.944	5.7	0.62	10.2	10.17	21.00	24.20	
	1415			5.7	2.48	8.8	7.38	24.45	23.52	
	1416			5.7	4.41	13.1	4.61	27.65	23.4	
" "	1449	"	"			14.9	10.13	22.57	24.38	
" "	1503	"	"		1.21	19.2	10.17	23.16	24.58	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: 9/9/2010

Weather: mostly Sunny / wind west @ 10-15

Tides:

4.9 5.4	@	0902
-0.6	@	1451
4.9	@	2124

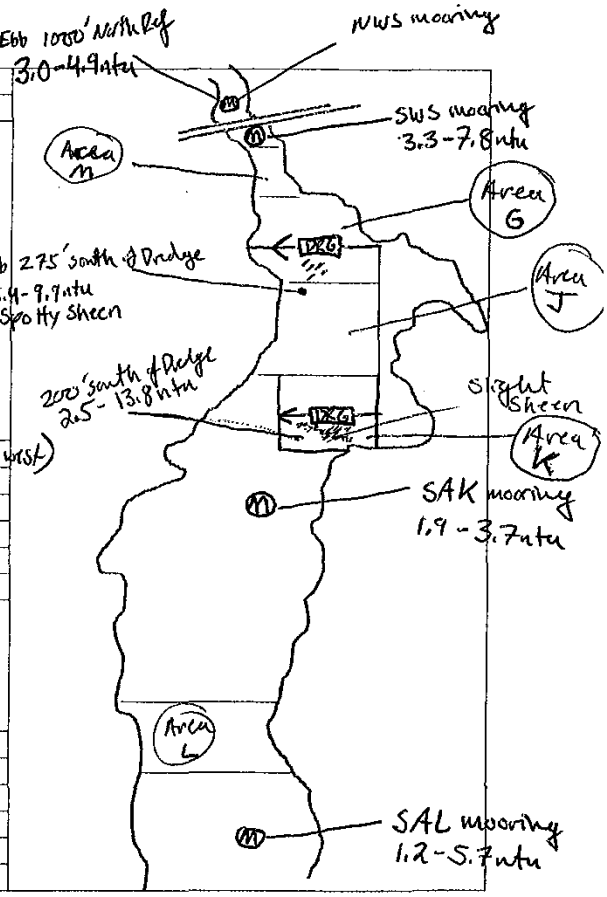
Monitoring Period:

From: 0815 To: 1525

Tidal Stages: (HWS) (Ebb) (LWS) (Flood)

Dredging Activity:

Dredging Area K early morning (East to West)
Dredging Area G mid morning to early afternoon (East to West)
Debris Removal Finished for Season



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/~~water~~ Depth (ft)
1000' North Ref.	3.0 - 4.9	5.35 - 6.76	0.5 - 2.56
275' South of Dredge Area G	5.4 - 9.9	5.15 - 6.93	0.6 - 6.49
200' South of Dredge Area K	2.5 - 13.8	6.93 - 8.08	0.9 - 2.1

Oil Sheen/Debris:

Spotty sheen observed during Dredging in Area G. Slight sheen observed South east of Dredge in Area K.

Wildlife Observations:

Numerous Gull, Terns, Egrets, Cormorants and Herons seen Feeding on large and small Fish breaking waters surface.

Samples Collected for Laboratory Analysis - Sample IDs:

TSS (1L)	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

(Real-Time)

Notes: All moorings recovered, cleaned calibrated and redeployed. Telemetry buoy removed from South of Wood Street. Standard YSI mooring put back in its place.

Turbidity values in the single digits throughout the day (1.2 - 9.9 ntu) An occasional spike to the mid-teens was spotted when monitoring in close proximity to dredging and at time of low tide. Slight/spotty sheen was observed in both Areas G and K during dredging but there was no elevated turbidity Associated.

Sampling Crew: M. Walsh, D. Rogers

Chief Scientist Signature: Michael Walsh

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	Area G middle
Dredging Description	East to west
Survey Vessel	George Hampson
Chief Scientist	M. Walsh
Sampling Technician	D. Rogers
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Mostly Sunny / wind WNW 10-15

Date 9/9/2010
Page 1 of

Tide Information	
High	5.4' @ 0902
Low	-0.6 @ 0230
High	4.9 @ 1924
Low	-0.6 @ 1457

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
275' south of Dredge	1241	41° 40.502	070° 54.938	7.5	0.62	5.4	6.93	27.32	23.59	Dredging in Area G
" "	1241				3.59	4.9	5.94	28.73	22.60	Inactive due to full
" "	1242				6.49	9.9	5.15	29.12	22.57	Pipeline
1000' north Refrence	1229	41° 40.720	070° 55.072	3.7	0.55	3.0	6.76	27.23	23.61	TAKen at NWS mooring
					1.59	3.5	5.94	28.09	23.24	due to low Tide
					2.56	4.9	5.35	28.25	23.01	
	1247	Dredging moved to Area K due to low Tide								
200' south of Dredge	1326	41° 40.350	070° 54.949	3.6	0.98	2.5	8.08	26.43	23.07	Dredging Inactive due
	1327				2.21	3.1	7.94	26.43	23.06	to full system.
" "	1345			3.2	0.87	2.5	8.45	26.35	23.01	Dredging Active
					2.15	5.7	6.93	28.74	22.84	" "
" "	1409				1.759	13.8	7.59	28.05	23.00	" "
" "	1444			2.8	1.73	9.3	7.92	27.98	23.08	" "

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: September 13, 2010
Weather: Overcast, few showers
Tides:

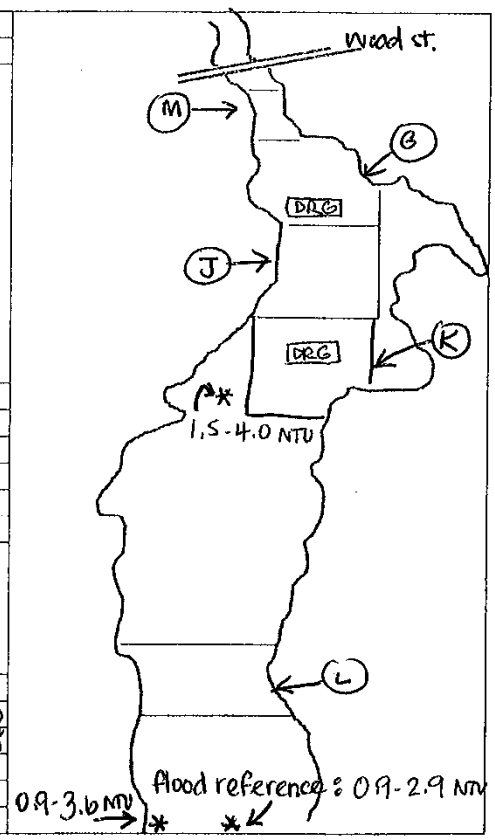
low	@	05:12
high	@	12:32
low	@	18:16

Monitoring Period:

From: 08:30 To: 15:15

Tidal Stages: HWS, (Ebb) LWS (Flood)

Dredging Activity:
demobilization - no active dredging



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
flood reference	0.9-2.9	6.01-6.67	1.0-8.3
Area K	1.5-4.0	6.06-7.12	1.5-5.2
Pierce Mill Cove	0.9-3.6	6.17-6.71	0.5-5.0
Sawyer St Dock	1.1-3.3	6.73-7.08	0.4-0.8

Oil Sheen/Debris:
none observed

Wildlife Observations:
fewer gulls, terns, cormorants, egrets, etc., many swans near Sawyer St., fish jumping

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	~~Turbidity (1L)~~
~~Total PCB (2L)~~	~~Dissolved PCB (2x1L)~~
~~Toxicity (5 gal)~~	~~Metals (500ml)~~

Notes: monitored removal of oil booms, moving of pipeline, removal of pipeline. Low turbidity throughout harbor. no observed oily sheens or odors associate with demobilization of dredge equipment.

Sampling Crew: D. Rogers, K. McCartney

Chief Scientist Signature:

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	
Dredging Description	DEMOBILIZATION - NO active dredging
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	Overcast, few showers

Date: 9/13/10
Page: 1 of 2

Tide Information	
High	—
Low	05:12
High	12:32
Low	18:16

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
flood ref	08:49	GPS not	working	9.0	1.08	0.9	6.67	29.92	19.48	
flood ref	08:50			"	4.91	1.1	6.37	30.32	20.01	
flood ref	08:51			"	8.29	2.9	6.01	30.42	20.18	
Area K	09:55			5.6	1.52	1.5	7.12	29.23	19.82	
Area K	09:56			"	2.76	3.1	6.34	29.84	20.19	
Area K	09:57			"	5.19	4.0	6.06	29.90	20.23	
300' N Sawyer St	10:15			5.7	1.30	1.6	6.24	30.47	20.14	removal of oil boom
"	10:16			"	2.59	2.0	6.21	30.47	20.15	
"	10:17			"	4.94	2.3	6.17	30.46	20.14	
"	10:36			"	1.44	2.8	6.22	30.57	20.07	
"	10:49			"	0.96	3.6	6.25	30.58	20.29	
"	11:40			"	1.17	1.7	6.38	30.60	20.34	
"	12:17			"	0.50	1.8	6.36	30.59	20.31	
"	12:43			"	1.87	2.0	6.33	30.44	20.23	
"	13:17			"	1.82	1.2	6.51	30.57	20.37	

WOODS HOLE GROUP

New Bedford Harbor
Water Quality Monitoring *In situ* Data Log Sheet

Dredging Location	
Dredging Description	DEMOBILIZATION
Survey Vessel	R/V George Hampson
Chief Scientist	K. MCCartney
Sampling Technician	—
Vessel Captain	D. Rogers
Other Personnel	—
Weather Conditions	overcast

Date: 9/13/10
Page: 2 of 2

Tide Information	
High	
Low	
High	
Low	

Station Name	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
300' Sawyer St.	13:59			5.7	1.84	0.9	6.71	30.38	20.32	
Sawyer St.	14:29	moving		—	0.54	1.5	6.90	30.42	20.29	
"	14:32	↓		—	0.45	2.8	6.73	30.43	20.29	
"	14:44			—	0.38	3.3	6.92	30.41	20.33	
"	15:00			—	0.78	1.1	7.08	30.41	20.31	

New Bedford Harbor Water Quality Monitoring
Daily Field Report

Date: September 14, 2010
Weather: sunny, pm showers, W → SW winds 10-15 kts
Tides:

low	@	06:58
high	@	13:29
low	@	19:49

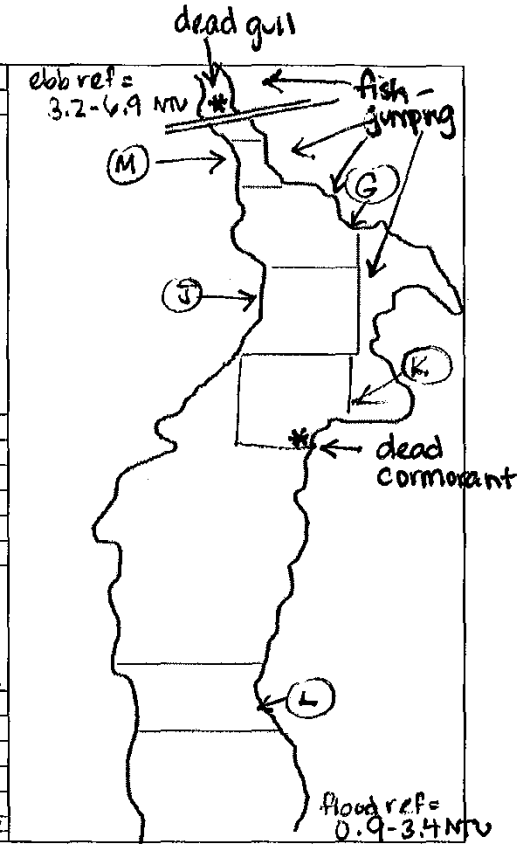
Monitoring Period:

From: 10:00 To: 16:00

Tidal Stages: (HWS) Ebb LWS (Flood)

Dredging Activity:

DEMOBILIZATION - no active dredging



Turbidity Summary:

Location	Turbidity range (NTU)	DO Conc range (mg/L)	Sensor/water Depth (ft)
flood reference	0.9-3.4	6.15-7.38	1.0-10.2
ebb reference	3.2-6.9	7.45-15.45	0.5-5.3
Pierce Mill cove/ Sawyer St dock			
→ flood tide	2.2-4.6	6.49-6.77	0.6-1.7
→ ebb tide	2.0-8.5	6.56-7.52	0.5-1.7

Oil Sheen/Debris:
none observed

Wildlife Observations:
many fish jumping in northern areas (J, G, M and NWS) - blue fish. also osprey, terns, cormorants, gulls, herons, egrets, a dead gull was found north of Wood St a dead cormorant was found in Area K.

Samples Collected for Laboratory Analysis - Sample IDs:

~~TSS (1L)~~	Turbidity (1L)
Total PCB (1L)	Dissolved PCB (2x1L)
Toxicity (5 gal)	Metals (500ml)

Notes: Abundant fish observed jumping during high tide in northern areas. Two dead birds, a gull and a cormorant, were found North of Wood St and in Area K, respectively. Low turbidity observed throughout harbor surrounding all demobilizati activities, including moving pipeline, removing oil boom, and driving sheet piles. A larg algal bloom was observed in northern areas, producing elevated DO levels.

Sampling Crew: M. Walsh, K. McCartney

Chief Scientist Signature:

WOODS HOLE GROUP

/////New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	
Dredging Description	DEMOBILIZATION
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCarthey
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	Sunny, W 10-15 kts → SW afternoon showers

Date: 9/14/10
Page: 1 of 2

Tide Information	
High	00:55
Low	05:58
High	13:29
Low	19:49

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
flood ref	10:17	41°39.809'	70°55.001'	11.0	1.05	0.9	7.38	29.79	19.58	
flood ref	10:18	"	"	"	5.00	1.1	6.64	30.38	19.81	
flood ref	10:19	"	"	"	10.23	3.4	6.15	30.43	19.73	
Pierce Mill Cove	10:49	moving		—	0.60	2.7	6.49	30.40	20.11	
flood Pierce Mill Cove	10:58	41°39.745'	70°55.068'	6.0	1.71	3.7	6.51	30.37	20.01	
Pierce Mill Cove	11:52	"	"	"	1.68	2.2	6.77	30.40	20.32	
Pierce Mill Cove	12:15	41°39.729'	70°55.108'	5.7	0.67	3.0	6.64	30.46	20.46	
Pierce Mill Cove	12:17	"	"	"	1.68	4.6	6.56	30.49	20.35	
Pierce Mill Cove	13:09	"	"	"	1.66	3.3	6.79	30.51	20.55	
ebb Pierce Mill Cove	13:36	"	"	"	1.43	2.6	6.72	30.53	20.58	
Pierce Mill Cove	13:55	"	"	"	1.42	2.1	6.83	30.54	20.57	
Pierce Mill Cove	14:02	—	moving	—	0.99	8.5	6.96	30.35	20.65	~150' away from driving sheet pipes
ebb ref	14:24	41°40.838'	70°55.041'	6.0	0.50	6.9	15.45	24.59	21.42	
ebb ref	14:25			"	2.75	3.2	10.79	28.26	20.74	visible algae in water
ebb ref	14:26			"	5.25	4.6	7.45	28.78	20.59	many fish jumping

WOODS HOLE GROUP

/////New Bedford Harbor
Water Quality Monitoring *In-situ* Data Log Sheet

Dredging Location	DEMOBILIZATION
Dredging Description	
Survey Vessel	R/V George Hampson
Chief Scientist	K. McCartney
Sampling Technician	—
Vessel Captain	M. Walsh
Other Personnel	—
Weather Conditions	Sunny afternoon showers, W → SW winds 10-15 kts

Date 9/14/10
Page 2 of 2

Tide Information	
High	00:55
Low	05:58
High	13:29
Low	19:49

Location	Time	Latitude	Longitude	Water Depth	Sample Depth	Turbidity	DO	Salinity	Temp	Notes
Pierce Mill Cove	15:00	morning		—	1.37	5.9	6.98	30.47	20.56	
Pierce Mill Cove	15:07	"	"	—	0.50	2.1	7.33	30.45	20.61	
Pierce Mill Cove	15:09	"	"	—	0.54	2.0	7.31	30.47	20.71	
Pierce Mill Cove	15:22	"	"	—	1.38	2.6	7.52	30.43	20.72	
Pierce Mill Cove	15:40	"	"	—	1.42	3.3	7.33	30.43	20.60	
Pierce Mill Cove	15:50	"	"	—	1.43	2.9	7.22	30.45	20.63	
Pierce Mill Cove	15:54	"	"	—	1.42	3.4	7.23	30.45	20.64	

APPENDIX B. CONTINUOUS *IN-SITU* FIXED STATION WATER QUALITY TIME SERIES DATA (ON CD)

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APPENDIX B CONTINUOUS *IN-SITU* FIXED STATION WATER QUALITY TIME SERIES DATA

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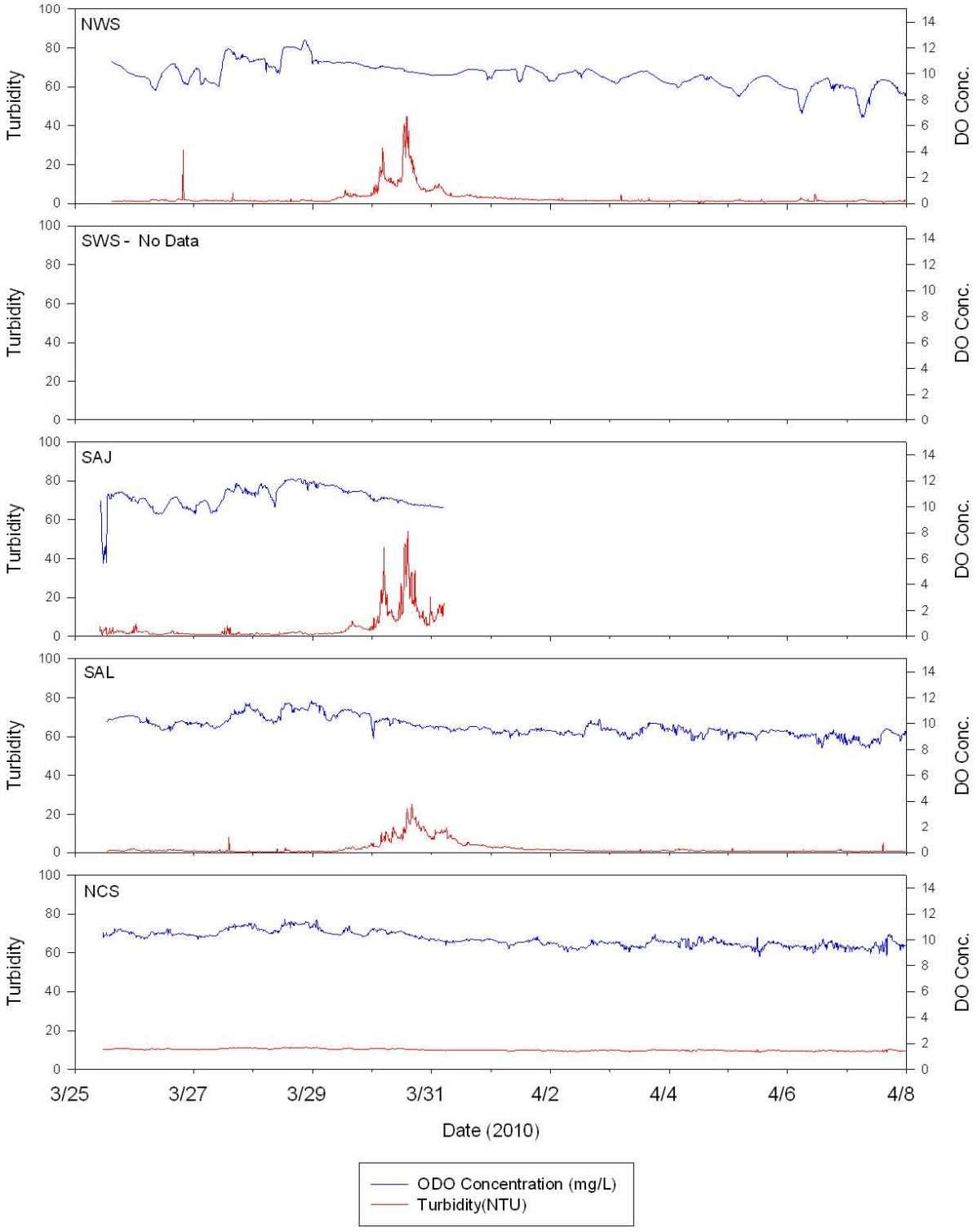
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SAL
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Turbidity
DO Conc.
3/25
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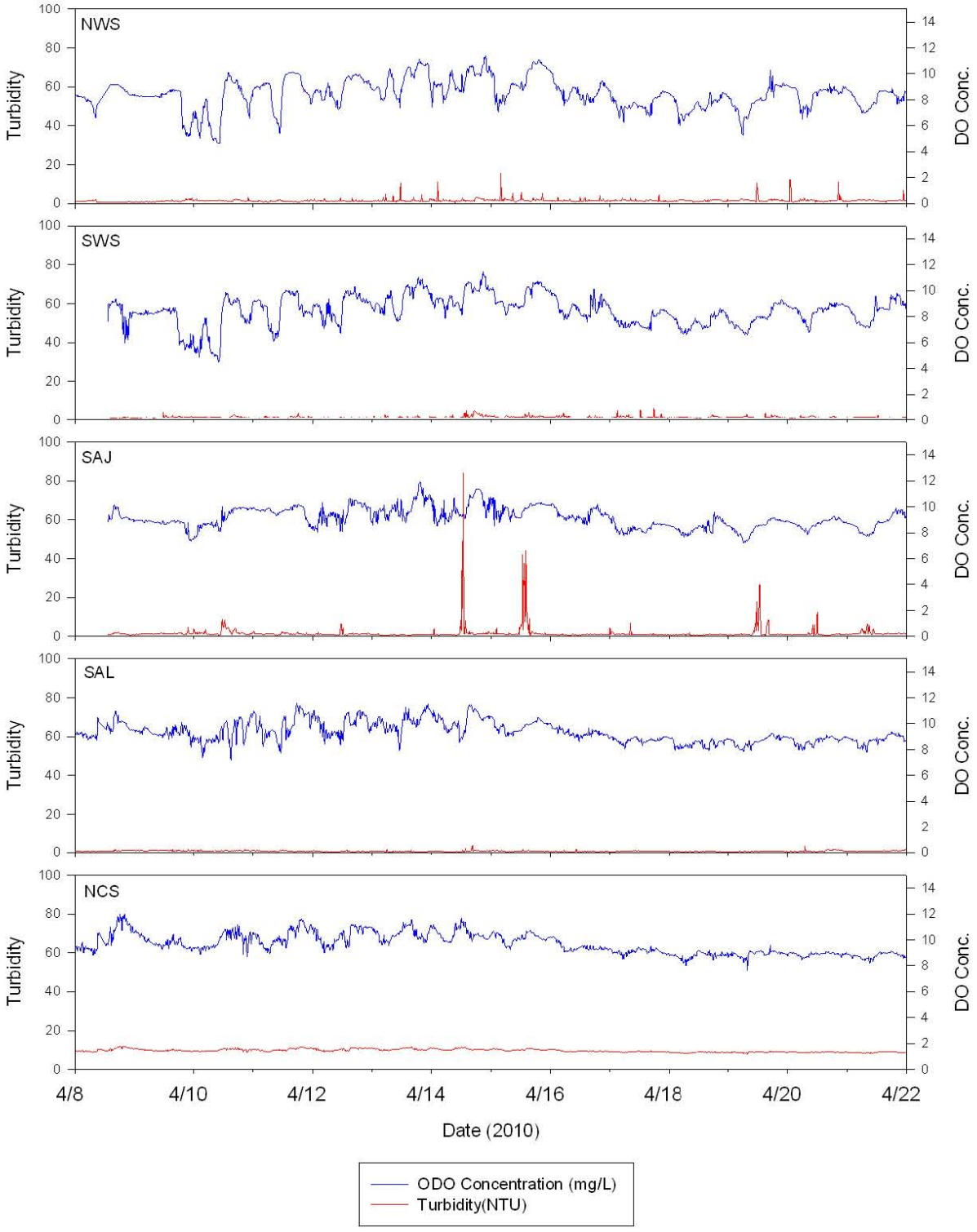
4/4
4/6
4/8
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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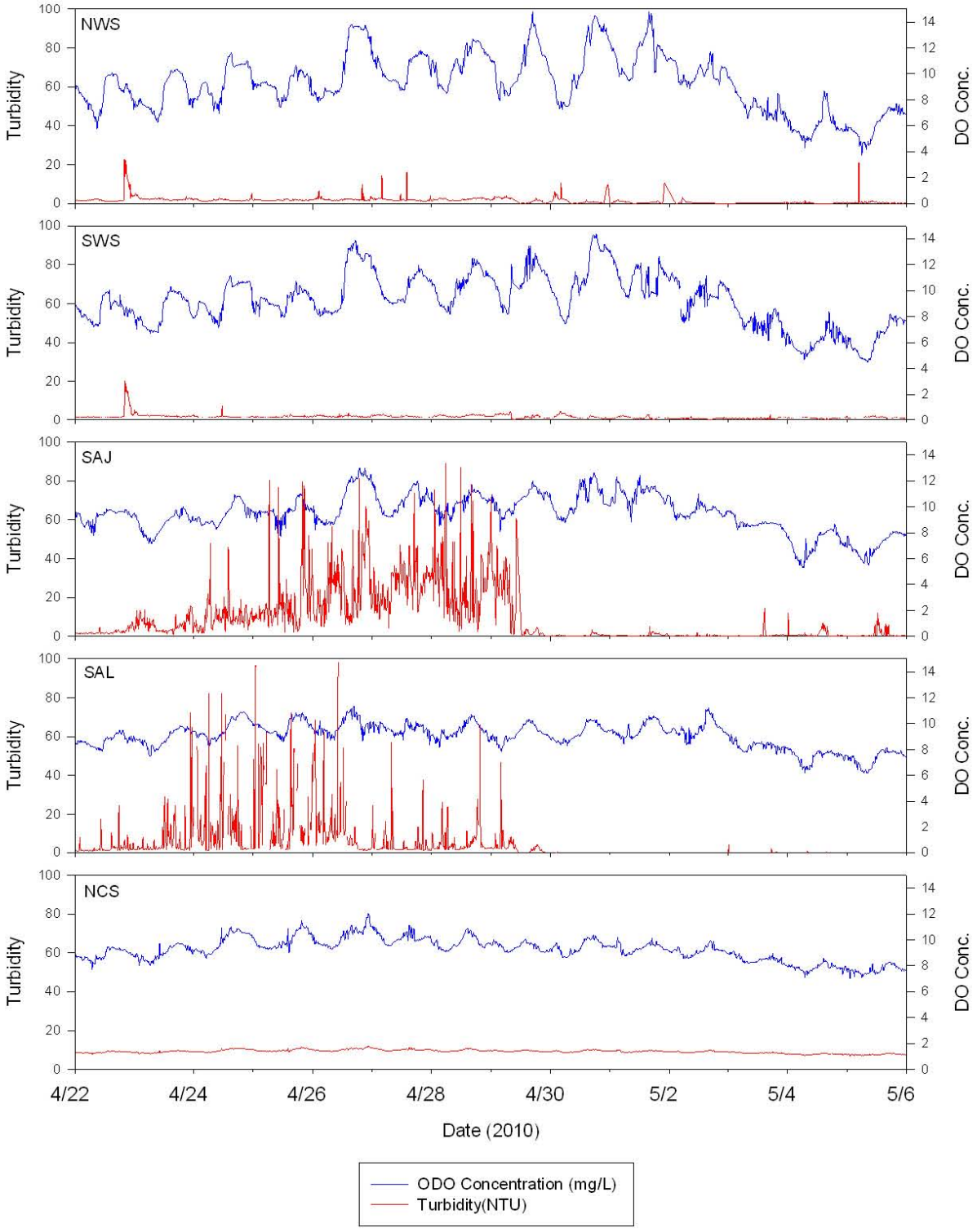
ODO Concentration (mg/L)
Turbidity(NTU)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Turbidity
DO Conc.
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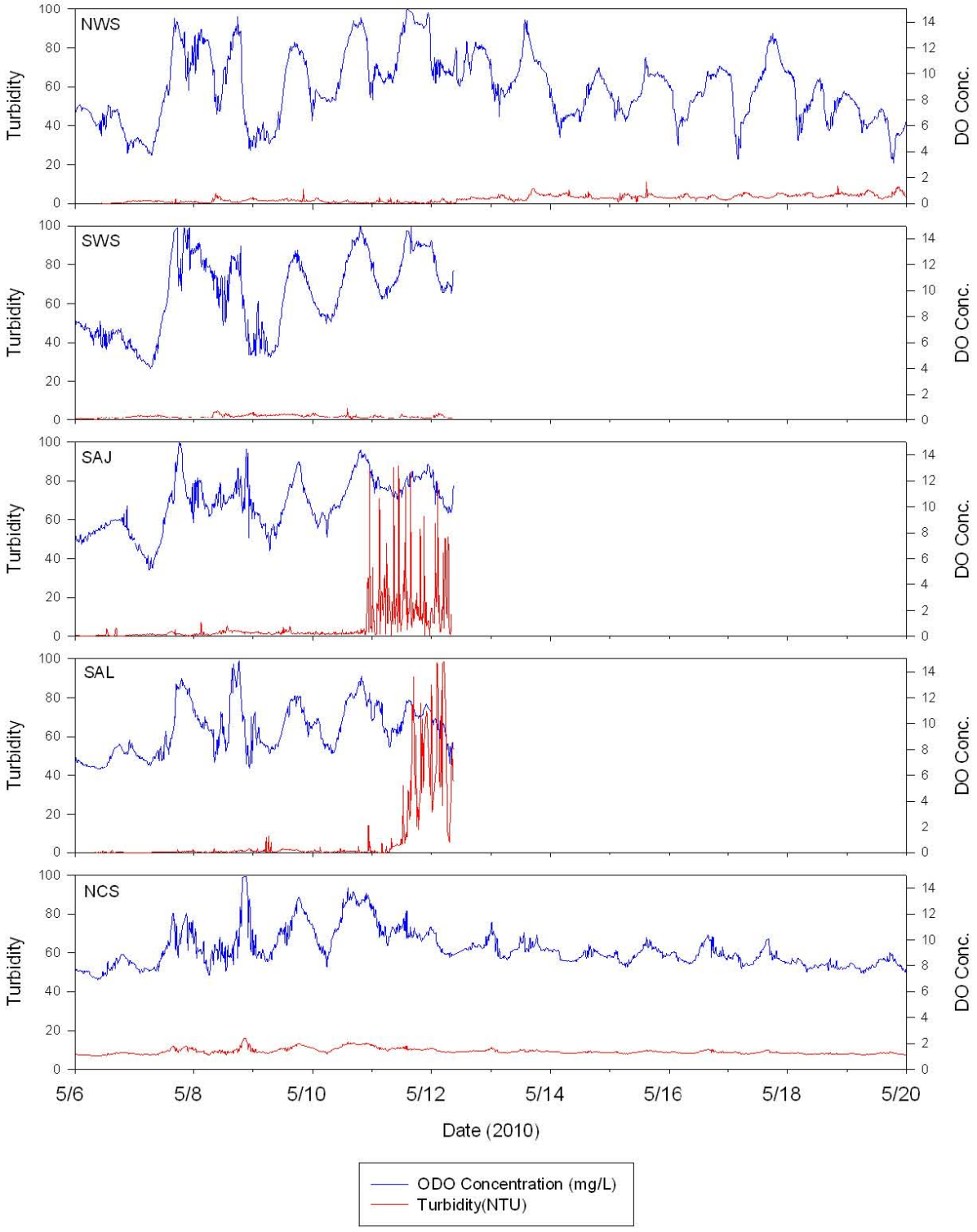
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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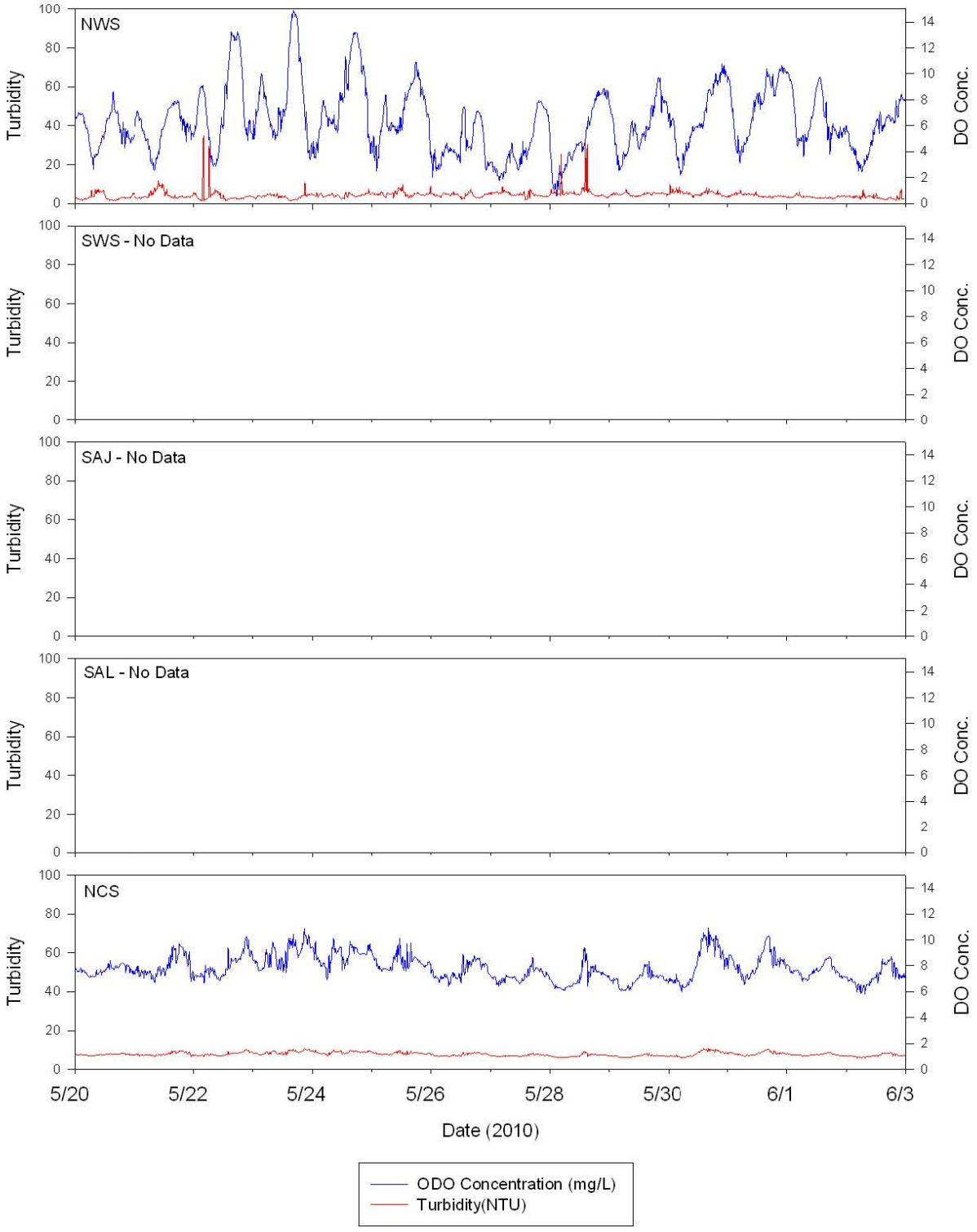
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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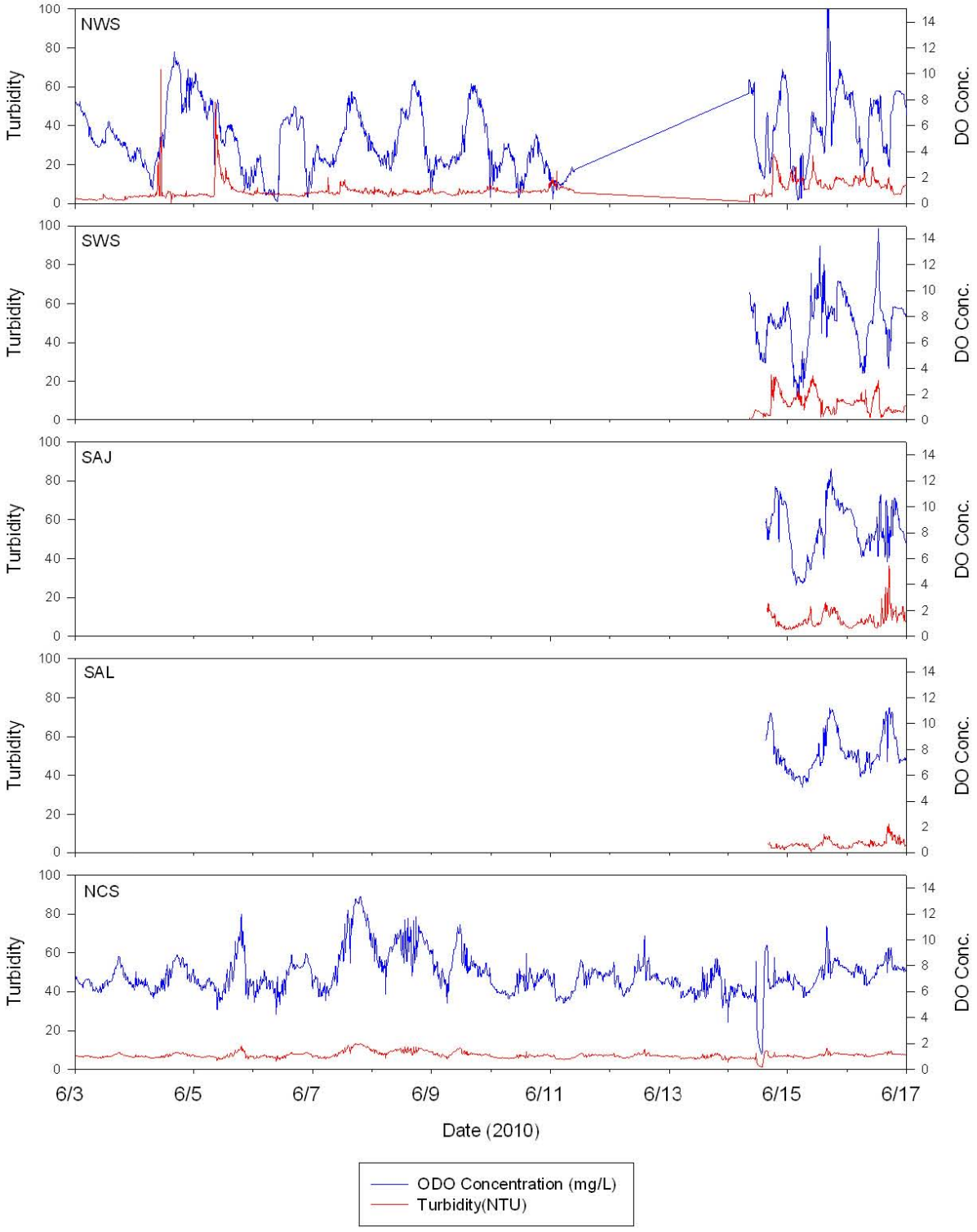
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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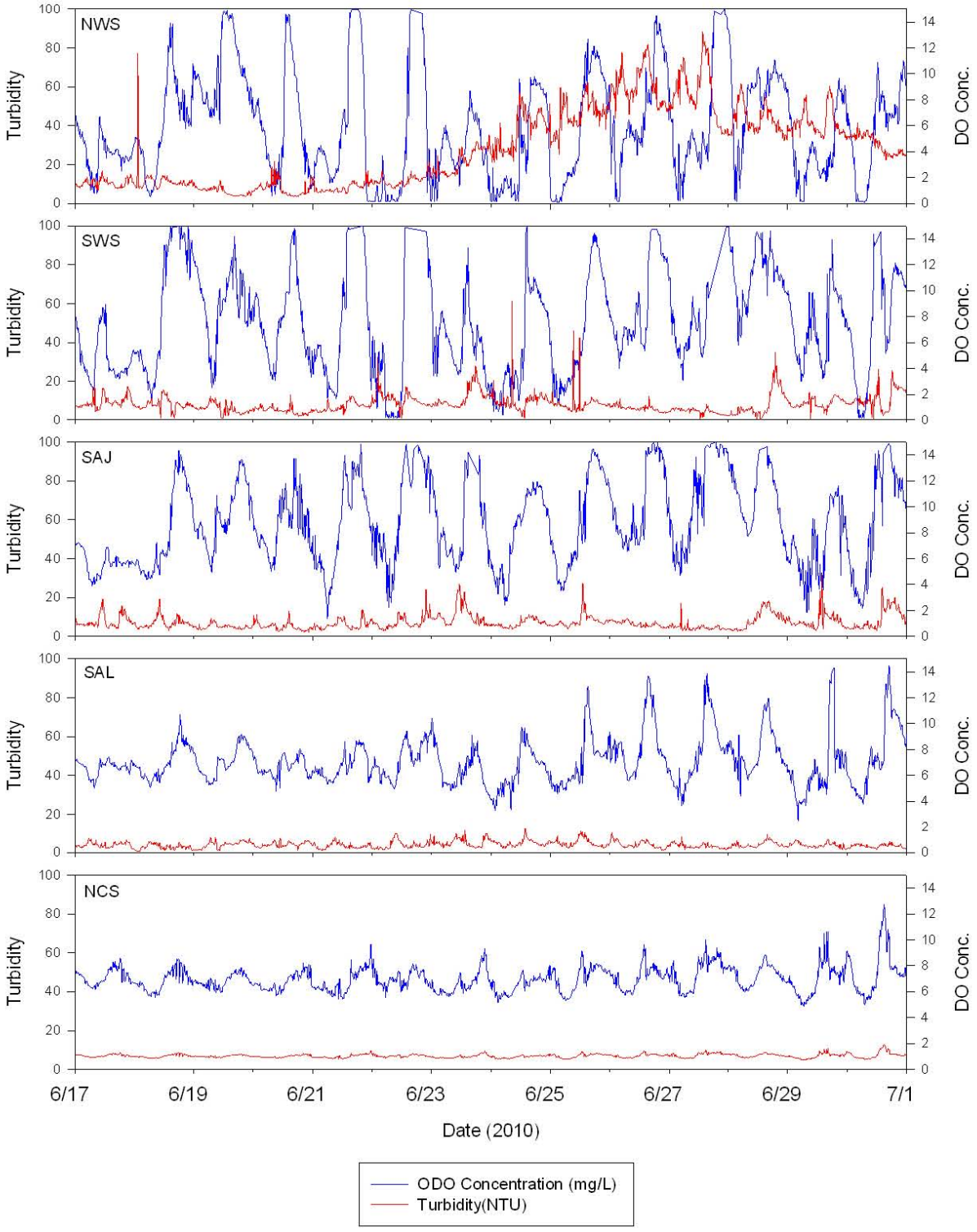
ODO Concentration (mg/L)
Turbidity(NTU)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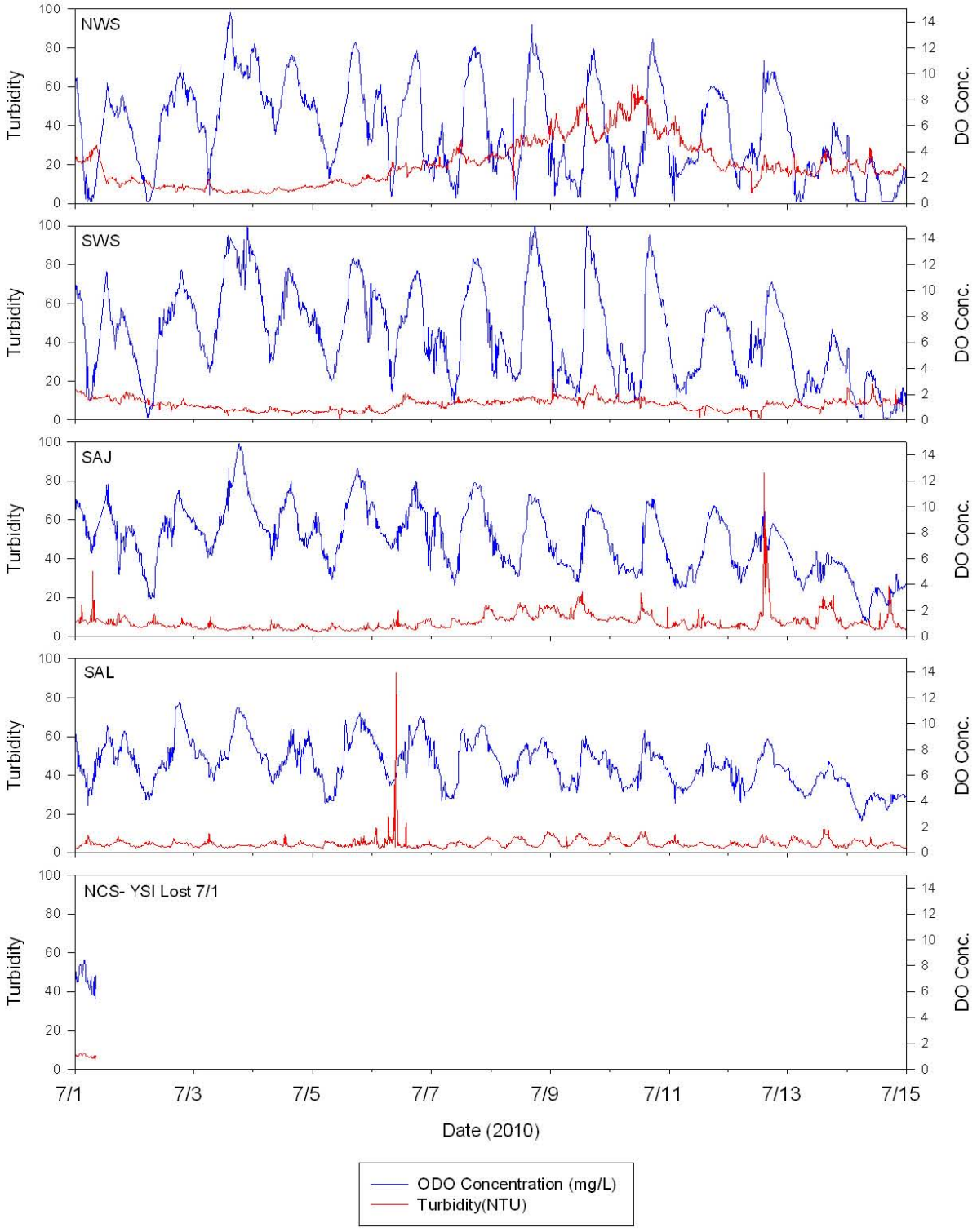
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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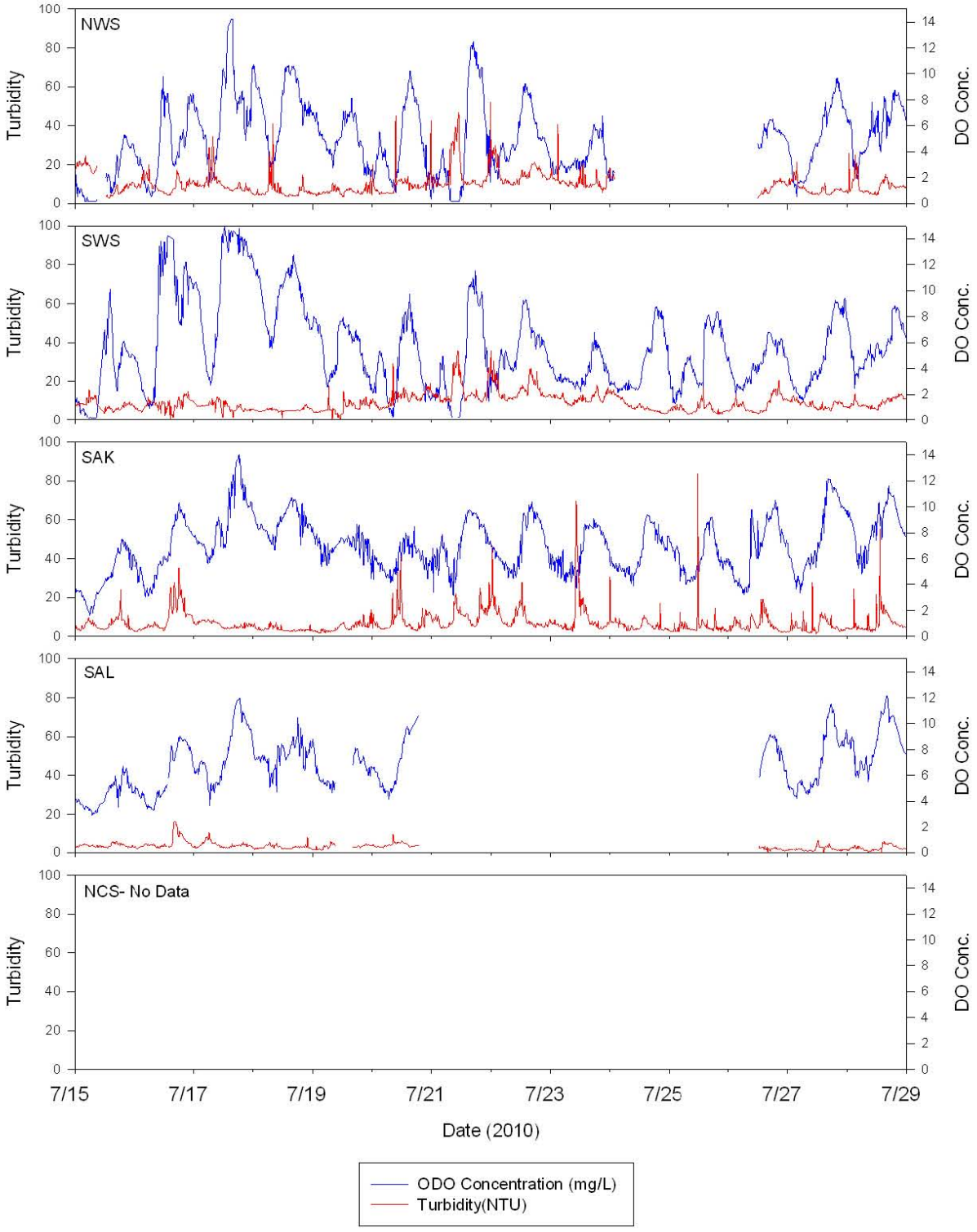
ODO Concentration (mg/L)
Turbidity(NTU)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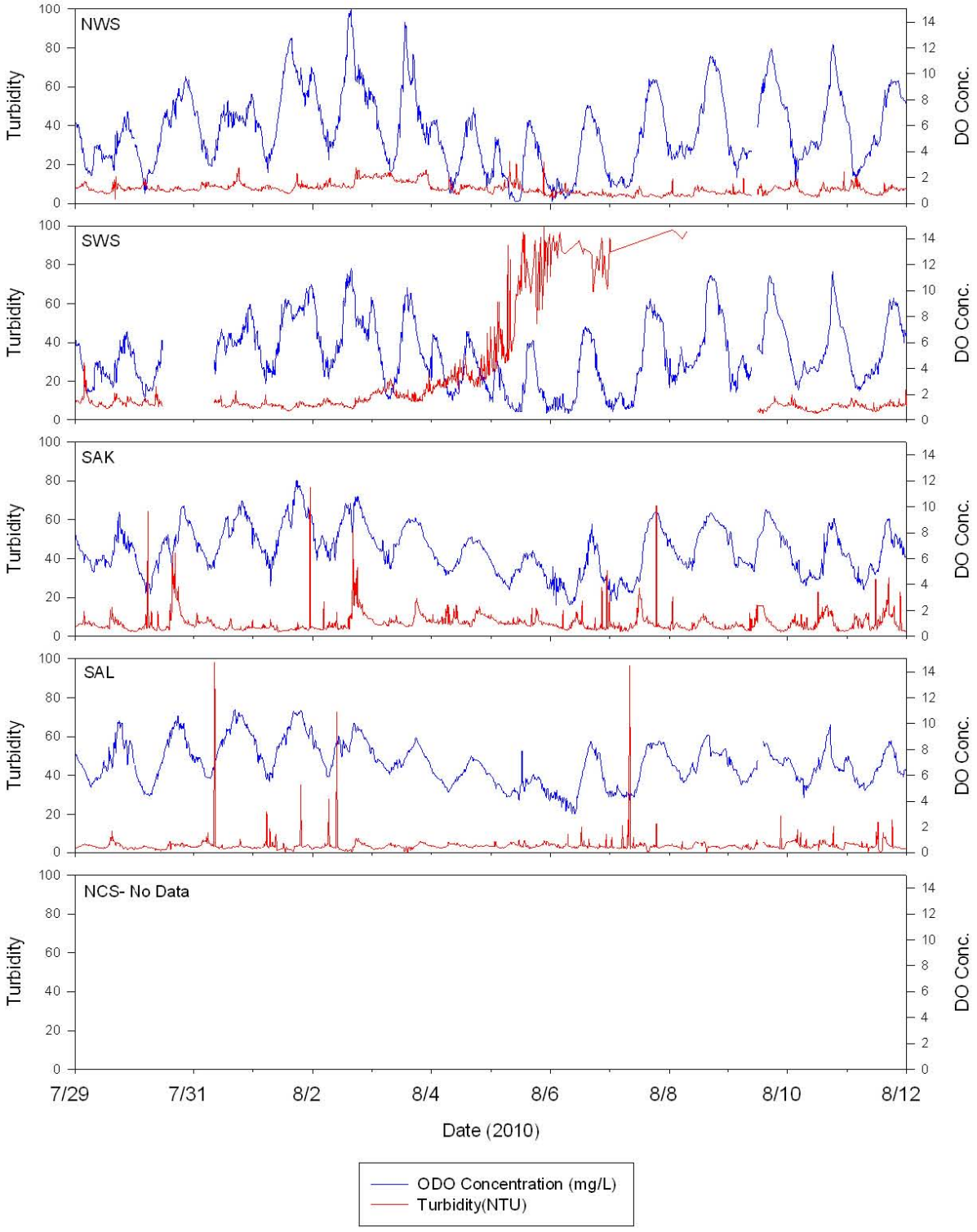
ODO Concentration (mg/L)
Turbidity(NTU)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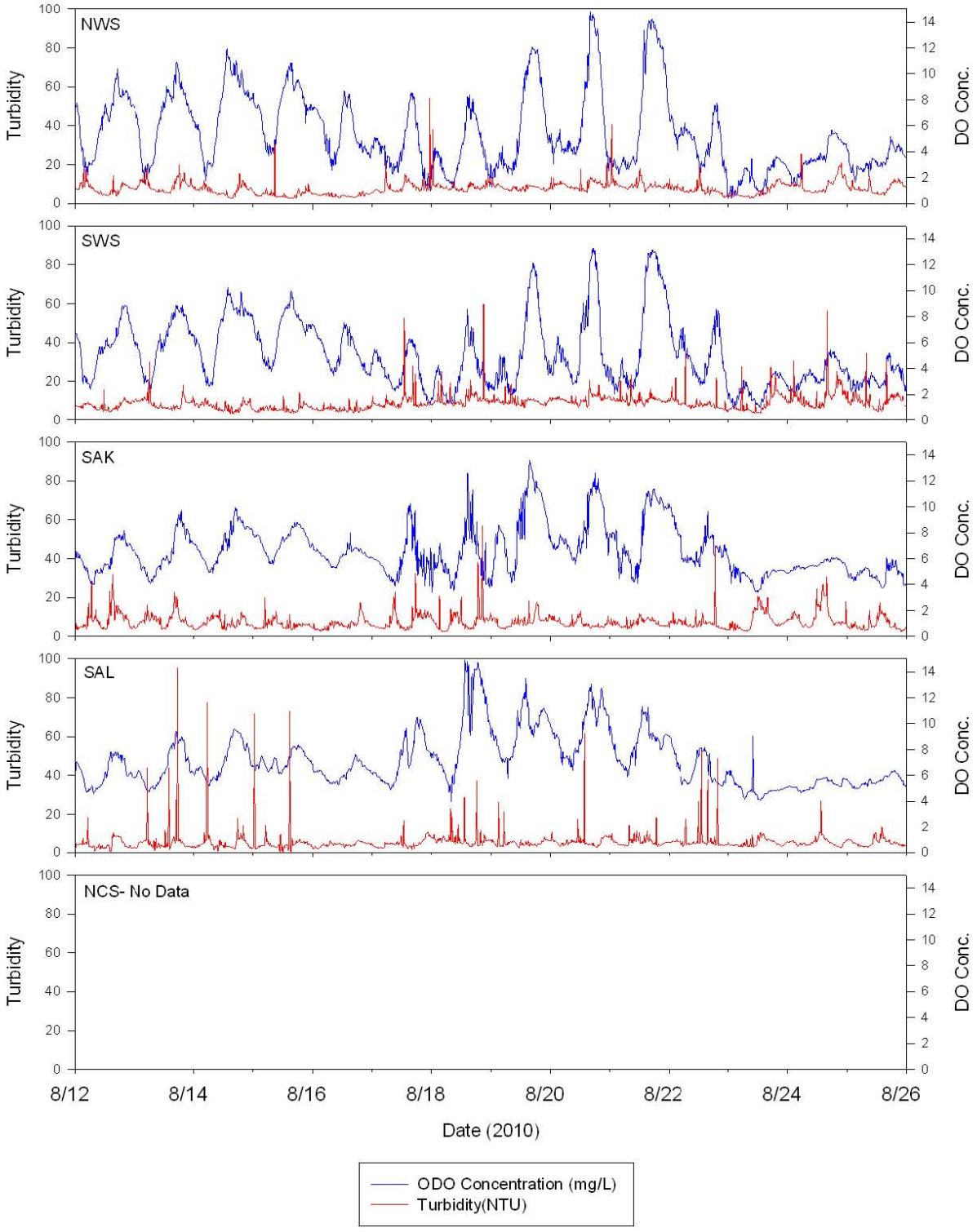
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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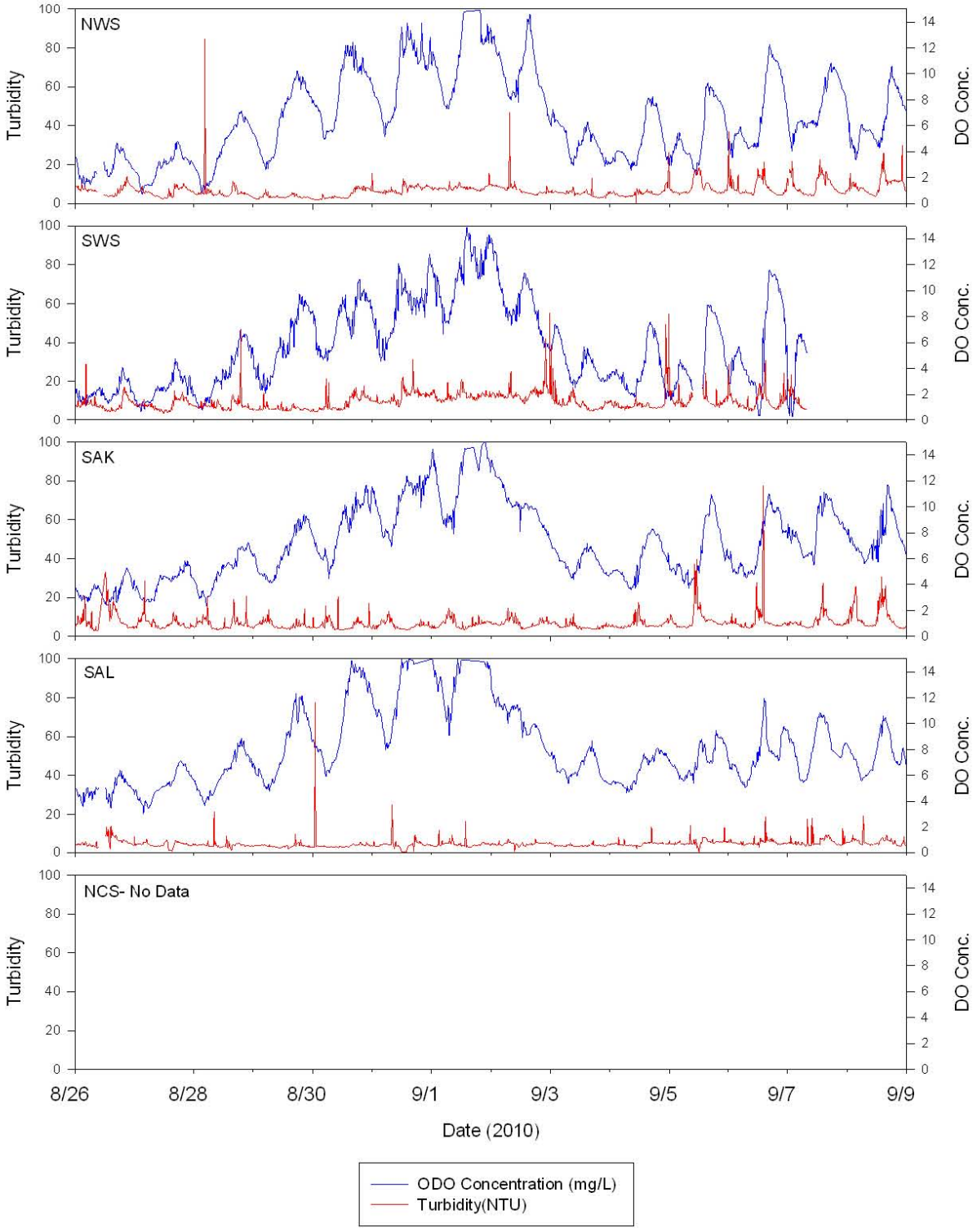
ODO Concentration (mg/L)
Turbidity(NTU)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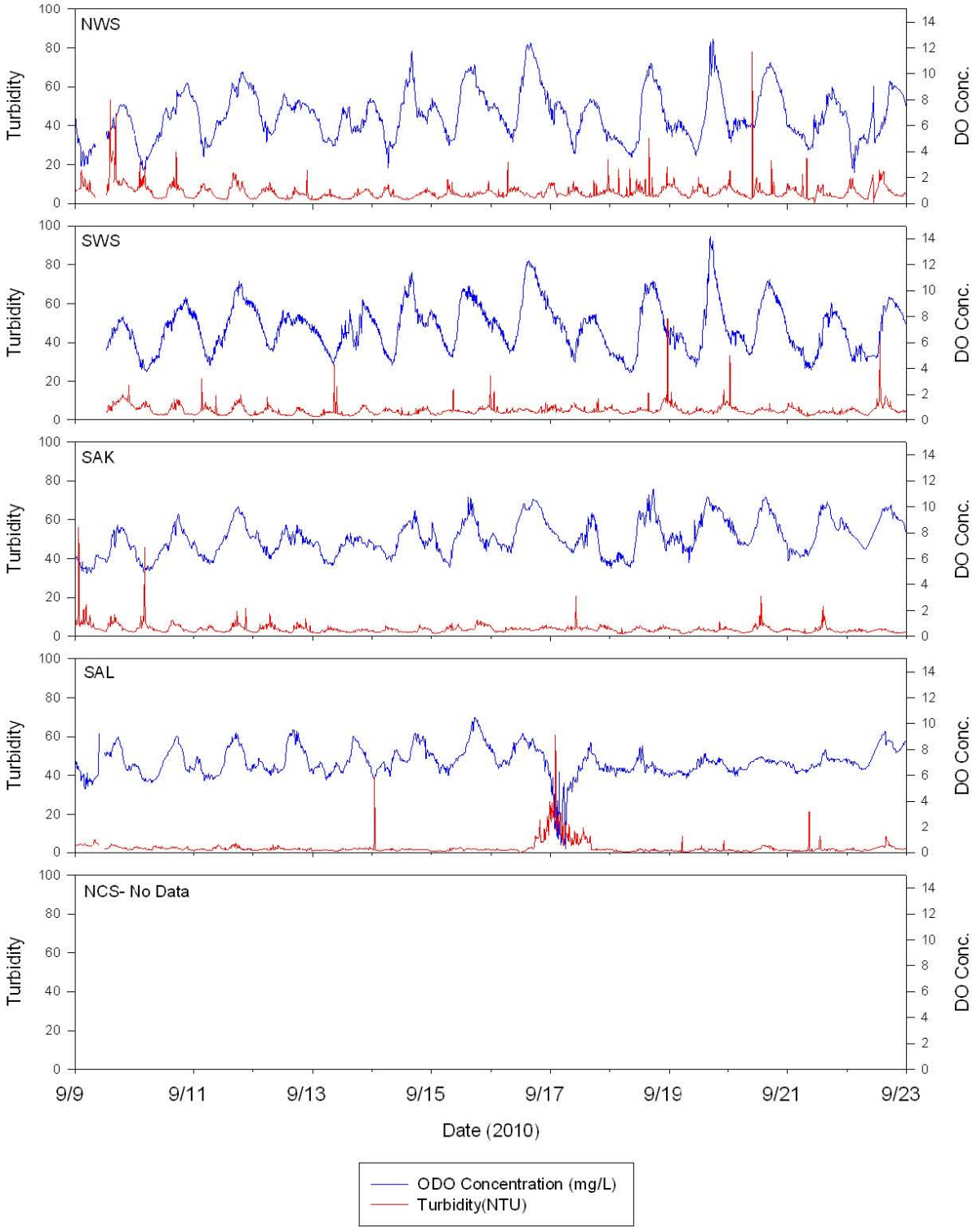
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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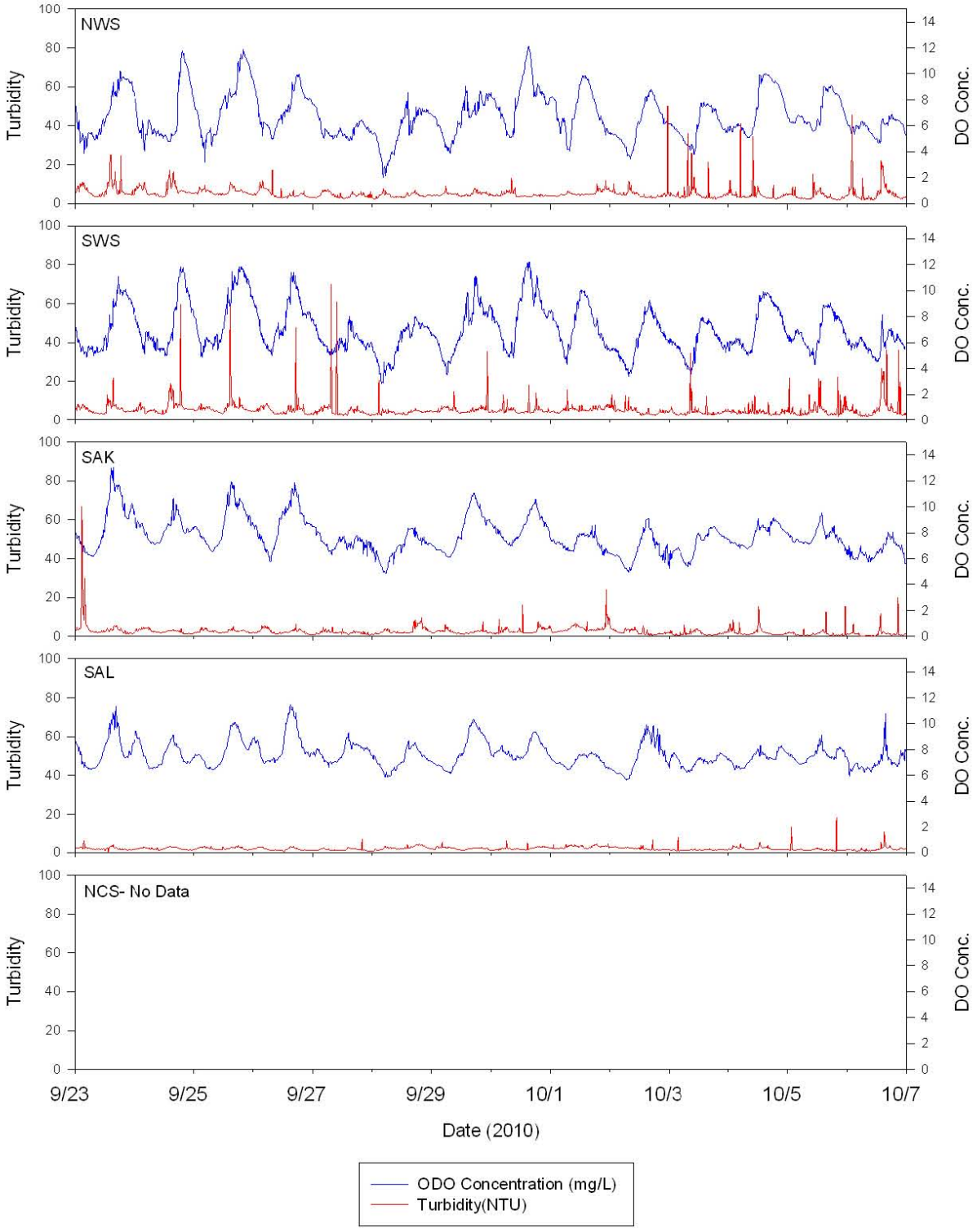
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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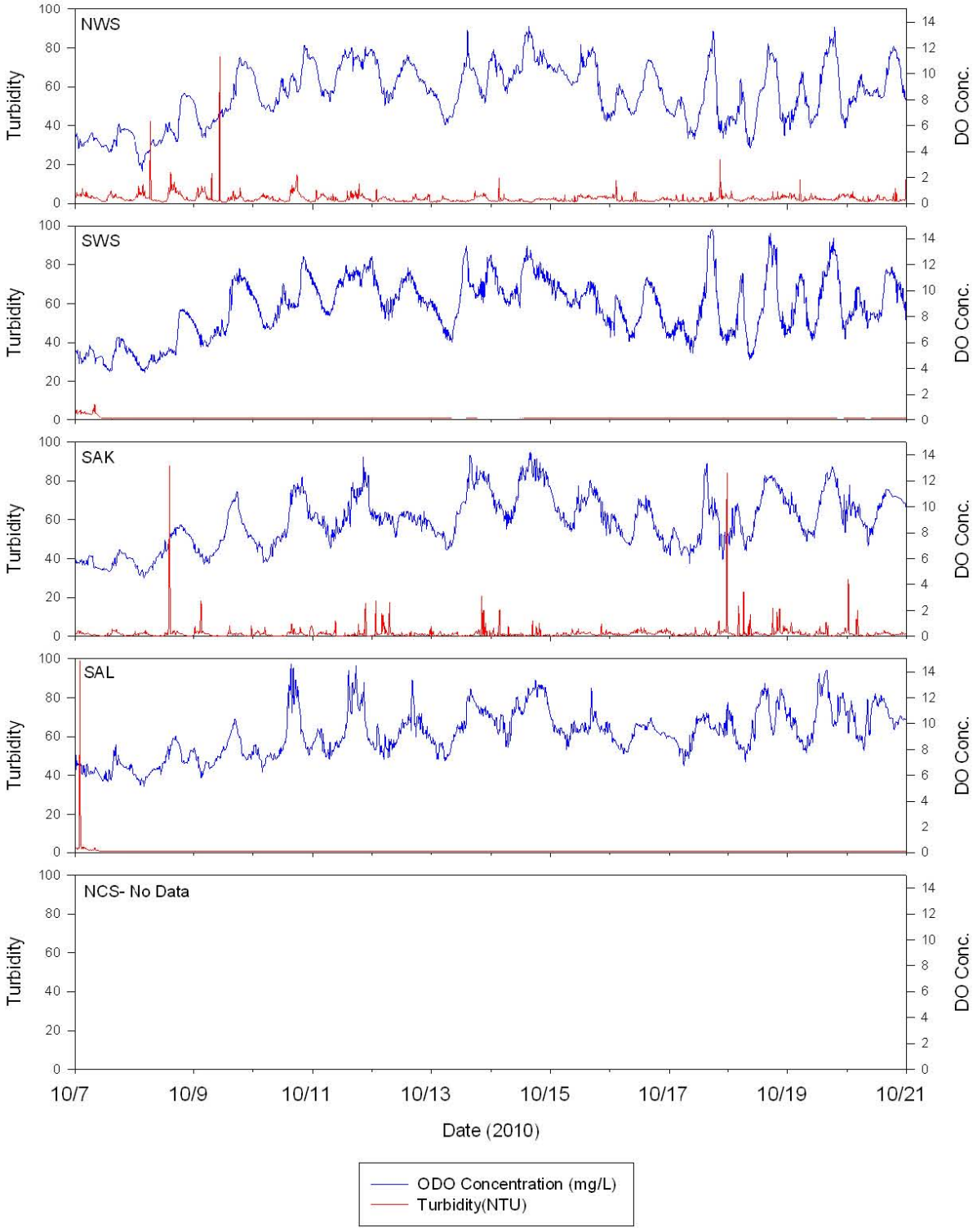
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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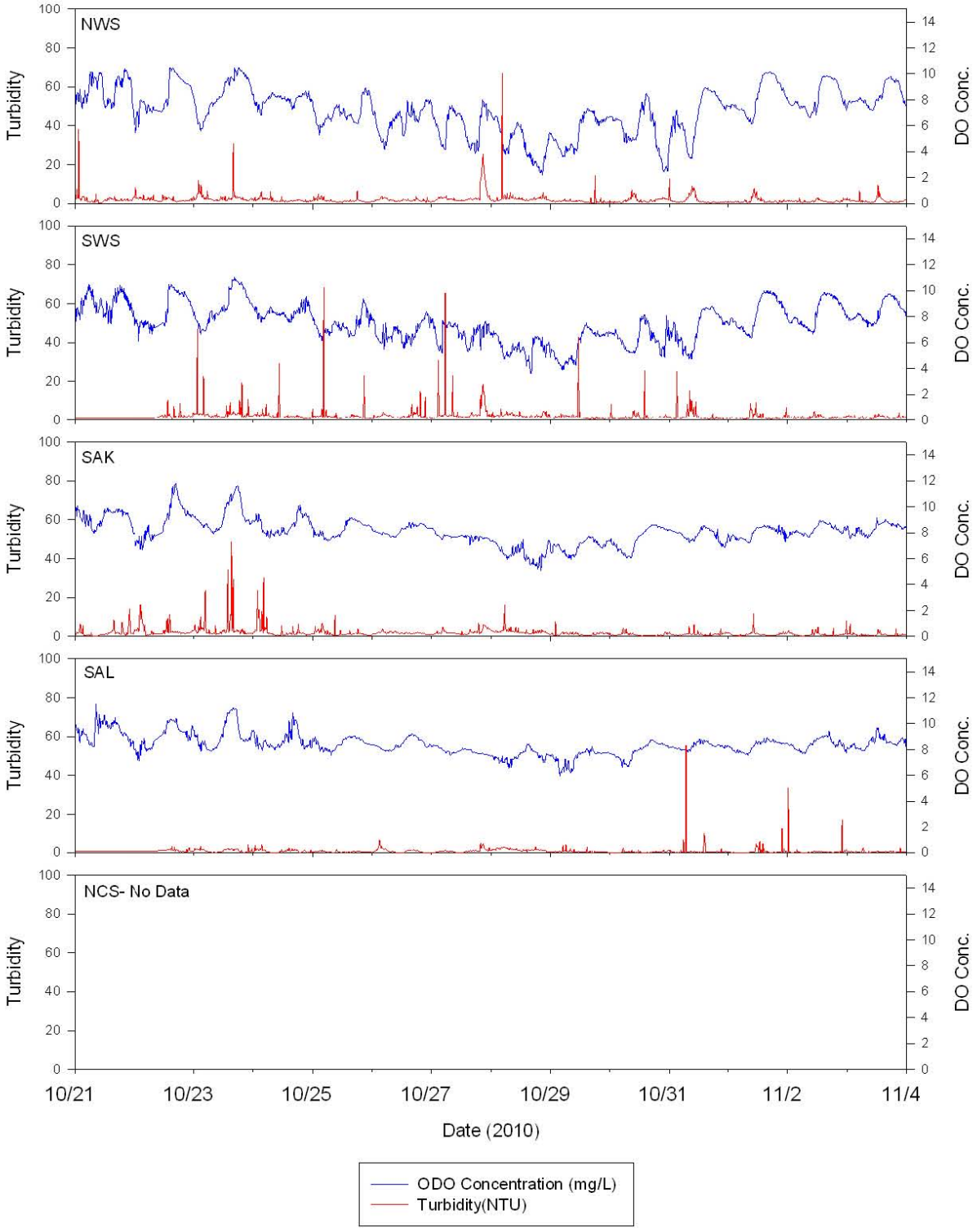
ODO Concentration (mg/L)
Turbidity(NTU)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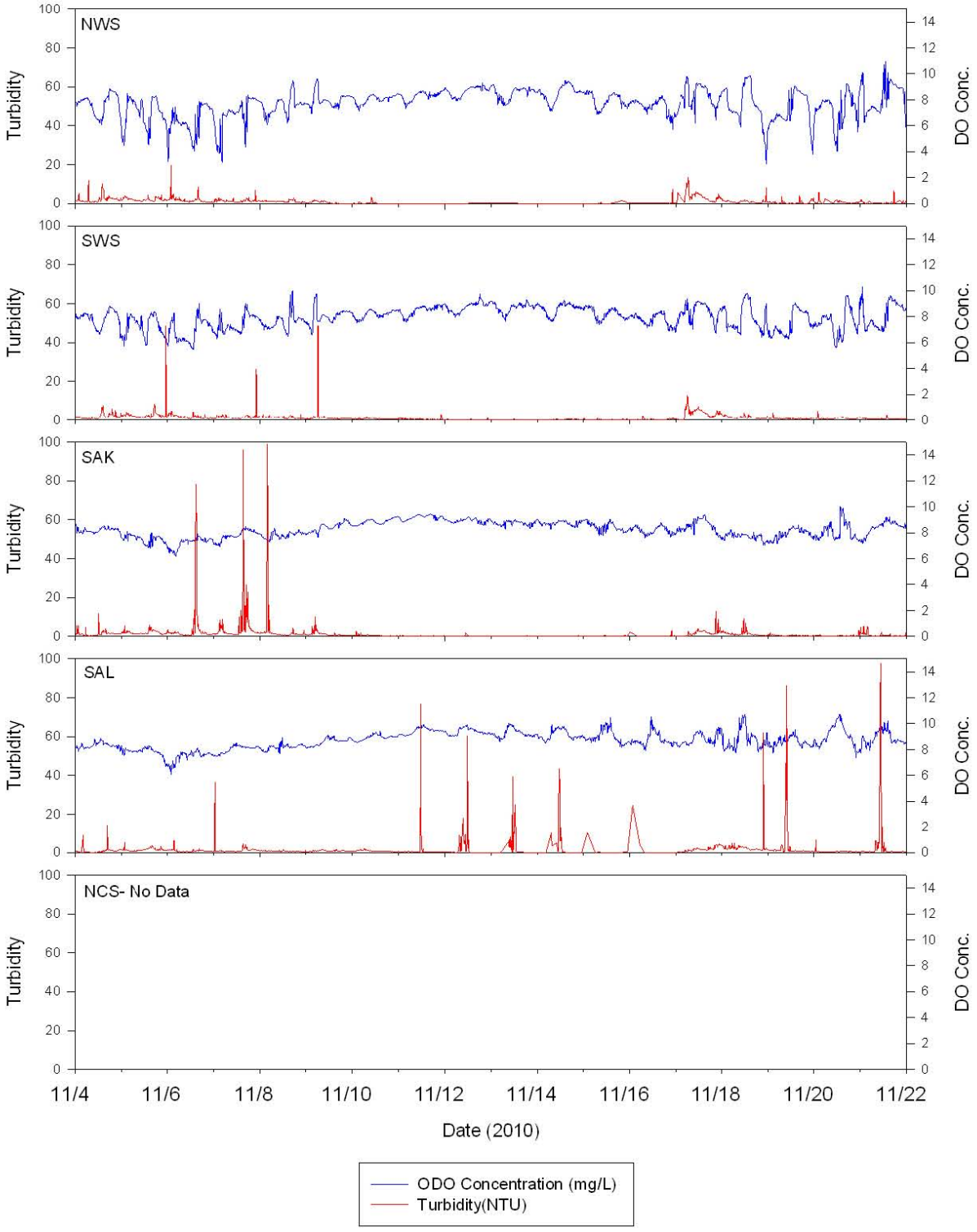
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)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11/16
11/18
11/20
11/22
Date (2010)
ODO Concentration (mg/L)
Turbidity(NTU)

APPENDIX C. ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA (ON CD)

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APPENDIX C ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA

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ANALYTICAL REPORT

Lab Number:	L1008903
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-0010-03
Report Date:	06/25/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1008903
Report Date: 06/25/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1008903-01	WQ-TPC-001-061410	NEW BEDFORD, MA	06/14/10 09:20
L1008903-02	WQ-DPC-001-061410	NEW BEDFORD, MA	06/14/10 09:20
L1008903-03	WQ-TSS-001-061410	NEW BEDFORD, MA	06/14/10 09:20
L1008903-04	WQ-TUR-001-061410	NEW BEDFORD, MA	06/14/10 09:20
L1008903-05	WQ-MET-001-061410	NEW BEDFORD, MA	06/14/10 09:20
L1008903-06	WQ-TPC-002-061410	NEW BEDFORD, MA	06/14/10 09:50
L1008903-07	WQ-DPC-002-061410	NEW BEDFORD, MA	06/14/10 09:50
L1008903-08	WQ-TSS-002-061410	NEW BEDFORD, MA	06/14/10 09:50
L1008903-09	WQ-TUR-002-061410	NEW BEDFORD, MA	06/14/10 09:50
L1008903-10	WQ-MET-002-061410	NEW BEDFORD, MA	06/14/10 09:20
L1008903-11	WQ-TPC-003-061410	NEW BEDFORD, MA	06/14/10 12:15
L1008903-12	WQ-TPC-003-061410 REP	NEW BEDFORD, MA	06/14/10 12:15
L1008903-13	WQ-DPC-003-061410	NEW BEDFORD, MA	06/14/10 12:15
L1008903-14	WQ-DPC-003-061410 REP	NEW BEDFORD, MA	06/14/10 12:15
L1008903-15	WQ-TSS-003-061410	NEW BEDFORD, MA	06/14/10 12:15
L1008903-16	WQ-TSS-003-061410 REP	NEW BEDFORD, MA	06/14/10 12:15
L1008903-17	WQ-TUR-003-061410	NEW BEDFORD, MA	06/14/10 12:15
L1008903-18	WQ-TUR-003-061410 REP	NEW BEDFORD, MA	06/14/10 12:15
L1008903-19	WQ-MET-003-061410	NEW BEDFORD, MA	06/14/10 12:15
L1008903-20	WQ-MET-003-061410 REP	NEW BEDFORD, MA	06/14/10 12:15
L1008903-21	WQ-TPC-004-061410	NEW BEDFORD, MA	06/14/10 13:10
L1008903-22	WQ-DPC-004-061410	NEW BEDFORD, MA	06/14/10 13:10
L1008903-23	WQ-TSS-004-061410	NEW BEDFORD, MA	06/14/10 13:10
L1008903-24	WQ-TUR-004-061410	NEW BEDFORD, MA	06/14/10 13:10
L1008903-25	WQ-MET-004-061410	NEW BEDFORD, MA	06/14/10 13:10
L1008903-26	WQ-TPC-001-061510	NEW BEDFORD, MA	06/15/10 09:15
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L1008903-28	WQ-TSS-001-061510	NEW BEDFORD, MA	06/14/10 09:15
L1008903-29	WQ-TUR-001-061510	NEW BEDFORD, MA	06/14/10 09:15
L1008903-30	WQ-MET-001-061510	NEW BEDFORD, MA	06/14/10 09:15
L1008903-31	WQ-TPC-002-061510	NEW BEDFORD, MA	06/15/10 10:00

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1008903-32	WQ-DPC-002-061510	NEW BEDFORD, MA	06/15/10 10:00
L1008903-33	WQ-TSS-002-061510	NEW BEDFORD, MA	06/15/10 10:00
L1008903-34	WQ-TUR-002-061510	NEW BEDFORD, MA	06/15/10 10:00
L1008903-35	WQ-MET-002-061510	NEW BEDFORD, MA	06/15/10 10:00
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L1008903-37	WQ-DPC-003-061510	NEW BEDFORD, MA	06/15/10 14:45
L1008903-38	WQ-TSS-003-061510	NEW BEDFORD, MA	06/15/10 14:45
L1008903-39	WQ-TUR-003-061510	NEW BEDFORD, MA	06/15/10 14:45
L1008903-40	WQ-MET-003-061510	NEW BEDFORD, MA	06/15/10 14:45
L1008903-41	WQ-TPC-004-061510	NEW BEDFORD, MA	06/15/10 13:15
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L1008903-43	WQ-TSS-004-061510	NEW BEDFORD, MA	06/15/10 13:15
L1008903-44	WQ-TUR-004-061510	NEW BEDFORD, MA	06/15/10 13:15
L1008903-45	WQ-MET-004-061510	NEW BEDFORD, MA	06/15/10 13:15
L1008903-46	WQ-TPC-001-061510-EB	NEW BEDFORD, MA	06/15/10 15:10
L1008903-47	WQ-DPC-001-061510-EB	NEW BEDFORD, MA	06/15/10 15:10
L1008903-48	WQ-MET-001-061510-EB	NEW BEDFORD, MA	06/15/10 15:10

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1008903
Project Number:	TO-0010-03	**Report Date:**	06/25/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Samples were received intact on June 15, 2010. Upon receipt, samples that were marked dissolved on the chain of custody were filtered through a 0.45 micron filter thereby creating the dissolved sample.

PCB Congeners by 8082

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.
L1008903-01,11,12,26, and 36 were re-analyzed on dilution in order to quantitate the sample within the

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1008903
Project Number:	TO-0010-03	**Report Date:**	06/25/10

Case Narrative (continued)

calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

The WG418400-4 and WG418400-5 MS/MSD recoveries, performed on L1008903-11, are outside the acceptance criteria for multipe compounds due to target hits in sample. The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the sample utilized for the MS/MSD.

The WG418400-7 MS/MSD %RPD, performed on L1008903-13, are outside the acceptance criteria for Cl3-BZ#18 (35%). The spike recoveries are both within QC 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: 06/25/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-01	Date Collected:	06/14/10 09:20
Client ID:	WQ-TPC-001-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 19:56	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.09579		ug/l	0.00103	--	1
Cl3-BZ#18	0.21635	E	ug/l	0.00103	--	1
Cl4-BZ#66	ND		ug/l	0.00103	--	1
Cl5-BZ#118	0.01913		ug/l	0.00103	--	1
Cl7-BZ#187	0.0037		ug/l	0.00103	--	1
Cl6-BZ#128	0.00336		ug/l	0.00103	--	1
Cl7-BZ#180	0.00241		ug/l	0.00103	--	1
Cl8-BZ#195	ND		ug/l	0.00103	--	1
Cl9-BZ#206	ND		ug/l	0.00103	--	1
Cl10-BZ#209	ND		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-01	Date Collected:	06/14/10 09:20
Client ID:	WQ-TPC-001-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 19:56	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.23035	E	ug/l	0.00103	--	1
Cl4-BZ#52	0.25844	E	ug/l	0.00103	--	1
Cl4-BZ#44	0.07843		ug/l	0.00103	--	1
Cl5-BZ#101	0.04177		ug/l	0.00103	--	1
Cl6-BZ#153	0.01876		ug/l	0.00103	--	1
Cl5-BZ#105	0.00385		ug/l	0.00103	--	1
Cl6-BZ#138	0.00808		ug/l	0.00103	--	1
Cl7-BZ#170	0.00187		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-01 D	Date Collected:	06/14/10 09:20
Client ID:	WQ-TPC-001-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 16:23	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	0.14231		ug/l	0.00515	--	5
Cl4-BZ#52	0.16966		ug/l	0.00515	--	5

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-01 D	Date Collected:	06/14/10 09:20
Client ID:	WQ-TPC-001-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 16:23	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.12585		ug/l	0.00515	--	5

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-02	Date Collected:	06/14/10 09:20
Client ID:	WQ-DPC-001-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 20:37	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	0.02035		ug/l	0.00105	--	1
Cl4-BZ#66	ND		ug/l	0.00105	--	1
Cl5-BZ#118	ND		ug/l	0.00105	--	1
Cl5-BZ#105	ND		ug/l	0.00105	--	1
Cl6-BZ#138	ND		ug/l	0.00105	--	1
Cl7-BZ#187	ND		ug/l	0.00105	--	1
Cl6-BZ#128	ND		ug/l	0.00105	--	1
Cl7-BZ#180	ND		ug/l	0.00105	--	1
Cl7-BZ#170	ND		ug/l	0.00105	--	1
Cl8-BZ#195	ND		ug/l	0.00105	--	1
Cl9-BZ#206	ND		ug/l	0.00105	--	1
Cl10-BZ#209	ND		ug/l	0.00105	--	1

DBOB	82	30-150
BZ 198	79	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-02	Date Collected:	06/14/10 09:20
Client ID:	WQ-DPC-001-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 20:37	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.00978		ug/l	0.00105	--	1
Cl3-BZ#28	0.00457		ug/l	0.00105	--	1
Cl4-BZ#52	0.00660		ug/l	0.00105	--	1
Cl4-BZ#44	0.00171		ug/l	0.00105	--	1
Cl5-BZ#101	0.00107		ug/l	0.00105	--	1
Cl6-BZ#153	ND		ug/l	0.00105	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-06	Date Collected:	06/14/10 09:50
Client ID:	WQ-TPC-002-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 21:18	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	0.03639		ug/l	0.00100	--	1
Cl4-BZ#52	0.04876		ug/l	0.00100	--	1
Cl4-BZ#66	0.02414		ug/l	0.00100	--	1
Cl5-BZ#118	0.01534		ug/l	0.00100	--	1
Cl6-BZ#138	0.01088		ug/l	0.00100	--	1
Cl6-BZ#128	0.00291		ug/l	0.00100	--	1
Cl7-BZ#180	0.00252		ug/l	0.00100	--	1
Cl8-BZ#195	ND		ug/l	0.00100	--	1
Cl9-BZ#206	ND		ug/l	0.00100	--	1
Cl10-BZ#209	ND		ug/l	0.00100	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	84		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-06	Date Collected:	06/14/10 09:50
Client ID:	WQ-TPC-002-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 21:18	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.01435		ug/l	0.00100	--	1
Cl3-BZ#28	0.04252		ug/l	0.00100	--	1
Cl4-BZ#44	0.01784		ug/l	0.00100	--	1
Cl5-BZ#101	0.01651		ug/l	0.00100	--	1
Cl6-BZ#153	0.01232		ug/l	0.00100	--	1
Cl5-BZ#105	0.00352		ug/l	0.00100	--	1
Cl7-BZ#187	0.00242		ug/l	0.00100	--	1
Cl7-BZ#170	0.00166		ug/l	0.00100	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	84		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-07	Date Collected:	06/14/10 09:50
Client ID:	WQ-DPC-002-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 21:59	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.00637		ug/l	0.00104	--	1
Cl3-BZ#18	0.01514		ug/l	0.00104	--	1
Cl4-BZ#52	0.00967		ug/l	0.00104	--	1
Cl4-BZ#44	0.00272		ug/l	0.00104	--	1
Cl4-BZ#66	ND		ug/l	0.00104	--	1
Cl5-BZ#118	0.00120		ug/l	0.00104	--	1
Cl5-BZ#105	ND		ug/l	0.00104	--	1
Cl6-BZ#138	ND		ug/l	0.00104	--	1
Cl7-BZ#187	ND		ug/l	0.00104	--	1
Cl6-BZ#128	ND		ug/l	0.00104	--	1
Cl7-BZ#180	ND		ug/l	0.00104	--	1
Cl7-BZ#170	ND		ug/l	0.00104	--	1
Cl8-BZ#195	ND		ug/l	0.00104	--	1
Cl9-BZ#206	ND		ug/l	0.00104	--	1
Cl10-BZ#209	ND		ug/l	0.00104	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	57		30-150
BZ 198	78		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-07	Date Collected:	06/14/10 09:50
Client ID:	WQ-DPC-002-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 21:59	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.00552		ug/l	0.00104	--	1
Cl5-BZ#101	0.00136		ug/l	0.00104	--	1
Cl6-BZ#153	0.00106		ug/l	0.00104	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	57		30-150
BZ 198	78		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-11	Date Collected:	06/14/10 12:15
Client ID:	WQ-TPC-003-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 22:40	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.34857	E	ug/l	0.00106	--	1
Cl3-BZ#18	0.38919	E	ug/l	0.00106	--	1
Cl4-BZ#52	0.49155	E	ug/l	0.00106	--	1
Cl4-BZ#66	ND		ug/l	0.00106	--	1
Cl5-BZ#118	0.03657		ug/l	0.00106	--	1
Cl7-BZ#187	0.01135		ug/l	0.00106	--	1
Cl6-BZ#128	0.00825		ug/l	0.00106	--	1
Cl7-BZ#170	0.00640		ug/l	0.00106	--	1
Cl8-BZ#195	ND		ug/l	0.00106	--	1
Cl9-BZ#206	0.00167		ug/l	0.00106	--	1
Cl10-BZ#209	ND		ug/l	0.00106	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-11	Date Collected:	06/14/10 12:15
Client ID:	WQ-TPC-003-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/23/10 22:40	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.29204	E	ug/l	0.00106	--	1
Cl4-BZ#44	0.13914		ug/l	0.00106	--	1
Cl5-BZ#101	0.05965		ug/l	0.00106	--	1
Cl6-BZ#153	0.04510		ug/l	0.00106	--	1
Cl5-BZ#105	0.00733		ug/l	0.00106	--	1
Cl6-BZ#138	0.01930		ug/l	0.00106	--	1
Cl7-BZ#180	0.00798		ug/l	0.00106	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-11 D	Date Collected:	06/14/10 12:15
Client ID:	WQ-TPC-003-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 17:03	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.21174		ug/l	0.00532	--	5
Cl3-BZ#18	0.23110		ug/l	0.00532	--	5
Cl4-BZ#52	0.28295		ug/l	0.00532	--	5

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-11 D	Date Collected:	06/14/10 12:15
Client ID:	WQ-TPC-003-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 17:03	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.16268		ug/l	0.00532	--	5

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-12	Date Collected:	06/14/10 12:15
Client ID:	WQ-TPC-003-061410 REP	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 02:04	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.37496	E	ug/l	0.00103	--	1
Cl3-BZ#18	0.37160	E	ug/l	0.00103	--	1
Cl4-BZ#52	0.47042	E	ug/l	0.00103	--	1
Cl4-BZ#66	ND		ug/l	0.00103	--	1
Cl5-BZ#118	0.03401		ug/l	0.00103	--	1
Cl6-BZ#128	0.00786		ug/l	0.00103	--	1
Cl7-BZ#170	0.00628		ug/l	0.00103	--	1
Cl8-BZ#195	0.00192		ug/l	0.00103	--	1
Cl9-BZ#206	0.00202		ug/l	0.00103	--	1
Cl10-BZ#209	ND		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	75		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-12	Date Collected:	06/14/10 12:15
Client ID:	WQ-TPC-003-061410 REP	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 02:04	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.26266	E	ug/l	0.00103	--	1
Cl4-BZ#44	0.14870		ug/l	0.00103	--	1
Cl5-BZ#101	0.06390		ug/l	0.00103	--	1
Cl6-BZ#153	0.04337		ug/l	0.00103	--	1
Cl5-BZ#105	0.01076		ug/l	0.00103	--	1
Cl6-BZ#138	0.01830		ug/l	0.00103	--	1
Cl7-BZ#187	0.01203		ug/l	0.00103	--	1
Cl7-BZ#180	0.00897		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	75		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-12 D	Date Collected:	06/14/10 12:15
Client ID:	WQ-TPC-003-061410 REP	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 19:06	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.22297		ug/l	0.00515	--	5
Cl3-BZ#18	0.22225		ug/l	0.00515	--	5
Cl4-BZ#52	0.27006		ug/l	0.00515	--	5

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-12 D	Date Collected:	06/14/10 12:15
Client ID:	WQ-TPC-003-061410 REP	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 19:06	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.15292		ug/l	0.00515	--	5

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-13	Date Collected:	06/14/10 12:15
Client ID:	WQ-DPC-003-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 02:45	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.03155		ug/l	0.00106	--	1
Cl3-BZ#18	0.04565		ug/l	0.00106	--	1
Cl4-BZ#52	0.01655		ug/l	0.00106	--	1
Cl4-BZ#66	ND		ug/l	0.00106	--	1
Cl5-BZ#118	0.00148		ug/l	0.00106	--	1
Cl5-BZ#105	ND		ug/l	0.00106	--	1
Cl6-BZ#138	0.00205		ug/l	0.00106	--	1
Cl7-BZ#187	ND		ug/l	0.00106	--	1
Cl6-BZ#128	ND		ug/l	0.00106	--	1
Cl7-BZ#180	ND		ug/l	0.00106	--	1
Cl7-BZ#170	ND		ug/l	0.00106	--	1
Cl8-BZ#195	ND		ug/l	0.00106	--	1
Cl9-BZ#206	ND		ug/l	0.00106	--	1
Cl10-BZ#209	ND		ug/l	0.00106	--	1

DBOB	66	30-150
BZ 198	65	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-13	Date Collected:	06/14/10 12:15
Client ID:	WQ-DPC-003-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 02:45	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.00771		ug/l	0.00106	--	1
Cl4-BZ#44	0.00418		ug/l	0.00106	--	1
Cl5-BZ#101	0.00254		ug/l	0.00106	--	1
Cl6-BZ#153	0.0020		ug/l	0.00106	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	66		30-150
BZ 198	65		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-14	Date Collected:	06/14/10 12:15
Client ID:	WQ-DPC-003-061410 REP	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 04:48	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.04425		ug/l	0.00105	--	1
Cl3-BZ#18	0.05083		ug/l	0.00105	--	1
Cl4-BZ#66	ND		ug/l	0.00105	--	1
Cl5-BZ#101	ND		ug/l	0.00105	--	1
Cl5-BZ#118	ND		ug/l	0.00105	--	1
Cl5-BZ#105	ND		ug/l	0.00105	--	1
Cl6-BZ#138	ND		ug/l	0.00105	--	1
Cl7-BZ#187	ND		ug/l	0.00105	--	1
Cl6-BZ#128	ND		ug/l	0.00105	--	1
Cl7-BZ#180	ND		ug/l	0.00105	--	1
Cl7-BZ#170	ND		ug/l	0.00105	--	1
Cl8-BZ#195	ND		ug/l	0.00105	--	1
Cl9-BZ#206	ND		ug/l	0.00105	--	1
Cl10-BZ#209	ND		ug/l	0.00105	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	86		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-14	Date Collected:	06/14/10 12:15
Client ID:	WQ-DPC-003-061410 REP	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:28
Analytical Date:	06/24/10 04:48	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.00305		ug/l	0.00105	--	1
Cl4-BZ#52	0.00760		ug/l	0.00105	--	1
Cl4-BZ#44	0.00207		ug/l	0.00105	--	1
Cl6-BZ#153	ND		ug/l	0.00105	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	86		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-21	Date Collected:	06/14/10 13:10
Client ID:	WQ-TPC-004-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 05:29	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.09280		ug/l	0.00105	--	1
Cl3-BZ#18	0.16644		ug/l	0.00105	--	1
Cl4-BZ#66	ND		ug/l	0.00105	--	1
Cl5-BZ#118	0.01327		ug/l	0.00105	--	1
Cl6-BZ#138	0.00942		ug/l	0.00105	--	1
Cl6-BZ#128	0.00247		ug/l	0.00105	--	1
Cl7-BZ#170	ND		ug/l	0.00105	--	1
Cl8-BZ#195	ND		ug/l	0.00105	--	1
Cl9-BZ#206	ND		ug/l	0.00105	--	1
Cl10-BZ#209	ND		ug/l	0.00105	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	77		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-21	Date Collected:	06/14/10 13:10
Client ID:	WQ-TPC-004-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 05:29	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.15085		ug/l	0.00105	--	1
Cl4-BZ#52	0.15093		ug/l	0.00105	--	1
Cl4-BZ#44	0.04497		ug/l	0.00105	--	1
Cl5-BZ#101	0.01985		ug/l	0.00105	--	1
Cl6-BZ#153	0.01285		ug/l	0.00105	--	1
Cl5-BZ#105	0.00252		ug/l	0.00105	--	1
Cl7-BZ#187	0.00291		ug/l	0.00105	--	1
Cl7-BZ#180	0.00215		ug/l	0.00105	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	77		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-22	Date Collected:	06/14/10 13:10
Client ID:	WQ-DPC-004-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 06:10	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.01599		ug/l	0.00104	--	1
Cl3-BZ#18	0.05045		ug/l	0.00104	--	1
Cl4-BZ#52	0.00889		ug/l	0.00104	--	1
Cl4-BZ#66	ND		ug/l	0.00104	--	1
Cl5-BZ#118	ND		ug/l	0.00104	--	1
Cl5-BZ#105	ND		ug/l	0.00104	--	1
Cl6-BZ#138	ND		ug/l	0.00104	--	1
Cl7-BZ#187	ND		ug/l	0.00104	--	1
Cl6-BZ#128	ND		ug/l	0.00104	--	1
Cl7-BZ#180	ND		ug/l	0.00104	--	1
Cl7-BZ#170	ND		ug/l	0.00104	--	1
Cl8-BZ#195	ND		ug/l	0.00104	--	1
Cl9-BZ#206	ND		ug/l	0.00104	--	1
Cl10-BZ#209	ND		ug/l	0.00104	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	50		30-150
BZ 198	61		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-22	Date Collected:	06/14/10 13:10
Client ID:	WQ-DPC-004-061410	Date Received:	06/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 06:10	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.00516		ug/l	0.00104	--	1
Cl4-BZ#44	0.00216		ug/l	0.00104	--	1
Cl5-BZ#101	0.00125		ug/l	0.00104	--	1
Cl6-BZ#153	ND		ug/l	0.00104	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	50		30-150
BZ 198	61		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-26	Date Collected:	06/15/10 09:15
Client ID:	WQ-TPC-001-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 06:51	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.22902	E	ug/l	0.00103	--	1
Cl3-BZ#18	0.37055	E	ug/l	0.00103	--	1
Cl4-BZ#52	0.56534	E	ug/l	0.00103	--	1
Cl4-BZ#66	ND		ug/l	0.00103	--	1
Cl5-BZ#118	0.04440		ug/l	0.00103	--	1
Cl7-BZ#180	0.00756		ug/l	0.00103	--	1
Cl7-BZ#170	0.00609		ug/l	0.00103	--	1
Cl8-BZ#195	ND		ug/l	0.00103	--	1
Cl9-BZ#206	0.00163		ug/l	0.00103	--	1
Cl10-BZ#209	ND		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	73		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-26	Date Collected:	06/15/10 09:15
Client ID:	WQ-TPC-001-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 06:51	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.33076	E	ug/l	0.00103	--	1
Cl4-BZ#44	0.15067		ug/l	0.00103	--	1
Cl5-BZ#101	0.07659		ug/l	0.00103	--	1
Cl6-BZ#153	0.05305		ug/l	0.00103	--	1
Cl5-BZ#105	0.00827		ug/l	0.00103	--	1
Cl6-BZ#138	0.01859		ug/l	0.00103	--	1
Cl7-BZ#187	0.01194		ug/l	0.00103	--	1
Cl6-BZ#128	0.00468		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	73		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-26 D	Date Collected:	06/15/10 09:15
Client ID:	WQ-TPC-001-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 19:47	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.15464		ug/l	0.00515	--	5
Cl3-BZ#18	0.25780		ug/l	0.00515	--	5
Cl4-BZ#52	0.37695		ug/l	0.00515	--	5

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-26 D	Date Collected:	06/15/10 09:15
Client ID:	WQ-TPC-001-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 19:47	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.22124		ug/l	0.00515	--	5

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-27	Date Collected:	06/14/10 09:15
Client ID:	WQ-DPC-001-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 07:32	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	0.01393		ug/l	0.00104	--	1
Cl4-BZ#52	0.01277		ug/l	0.00104	--	1
Cl4-BZ#66	ND		ug/l	0.00104	--	1
Cl5-BZ#118	ND		ug/l	0.00104	--	1
Cl5-BZ#105	ND		ug/l	0.00104	--	1
Cl6-BZ#138	ND		ug/l	0.00104	--	1
Cl7-BZ#187	ND		ug/l	0.00104	--	1
Cl6-BZ#128	ND		ug/l	0.00104	--	1
Cl7-BZ#180	ND		ug/l	0.00104	--	1
Cl7-BZ#170	ND		ug/l	0.00104	--	1
Cl8-BZ#195	ND		ug/l	0.00104	--	1
Cl9-BZ#206	ND		ug/l	0.00104	--	1
Cl10-BZ#209	ND		ug/l	0.00104	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	82		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-27	Date Collected:	06/14/10 09:15
Client ID:	WQ-DPC-001-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 07:32	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.00680		ug/l	0.00104	--	1
Cl3-BZ#28	0.00698		ug/l	0.00104	--	1
Cl4-BZ#44	0.00268		ug/l	0.00104	--	1
Cl5-BZ#101	0.00172		ug/l	0.00104	--	1
Cl6-BZ#153	0.00121		ug/l	0.00104	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	82		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-31	Date Collected:	06/15/10 10:00
Client ID:	WQ-TPC-002-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 08:13	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	0.02833		ug/l	0.00106	--	1
Cl4-BZ#52	0.04445		ug/l	0.00106	--	1
Cl4-BZ#66	0.02258		ug/l	0.00106	--	1
Cl5-BZ#118	0.01448		ug/l	0.00106	--	1
Cl7-BZ#170	ND		ug/l	0.00106	--	1
Cl8-BZ#195	ND		ug/l	0.00106	--	1
Cl9-BZ#206	ND		ug/l	0.00106	--	1
Cl10-BZ#209	ND		ug/l	0.00106	--	1

DBOB	65	30-150
BZ 198	66	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-31	Date Collected:	06/15/10 10:00
Client ID:	WQ-TPC-002-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 08:13	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.01322		ug/l	0.00106	--	1
Cl3-BZ#28	0.03653		ug/l	0.00106	--	1
Cl4-BZ#44	0.01599		ug/l	0.00106	--	1
Cl5-BZ#101	0.01522		ug/l	0.00106	--	1
Cl6-BZ#153	0.01188		ug/l	0.00106	--	1
Cl5-BZ#105	0.00335		ug/l	0.00106	--	1
Cl6-BZ#138	0.00680		ug/l	0.00106	--	1
Cl7-BZ#187	0.00239		ug/l	0.00106	--	1
Cl6-BZ#128	0.00188		ug/l	0.00106	--	1
Cl7-BZ#180	0.00227		ug/l	0.00106	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	66		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-32	Date Collected:	06/15/10 10:00
Client ID:	WQ-DPC-002-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 10:15	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	0.01150		ug/l	0.00111	--	1
Cl4-BZ#52	0.00596		ug/l	0.00111	--	1
Cl4-BZ#44	0.00145		ug/l	0.00111	--	1
Cl4-BZ#66	ND		ug/l	0.00111	--	1
Cl5-BZ#101	ND		ug/l	0.00111	--	1
Cl5-BZ#118	ND		ug/l	0.00111	--	1
Cl5-BZ#105	ND		ug/l	0.00111	--	1
Cl6-BZ#138	ND		ug/l	0.00111	--	1
Cl7-BZ#187	ND		ug/l	0.00111	--	1
Cl6-BZ#128	ND		ug/l	0.00111	--	1
Cl7-BZ#180	ND		ug/l	0.00111	--	1
Cl7-BZ#170	ND		ug/l	0.00111	--	1
Cl8-BZ#195	ND		ug/l	0.00111	--	1
Cl9-BZ#206	ND		ug/l	0.00111	--	1
Cl10-BZ#209	ND		ug/l	0.00111	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	64		30-150
BZ 198	81		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-32	Date Collected:	06/15/10 10:00
Client ID:	WQ-DPC-002-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 10:15	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.00716		ug/l	0.00111	--	1
Cl3-BZ#28	0.00417		ug/l	0.00111	--	1
Cl6-BZ#153	ND		ug/l	0.00111	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	64		30-150
BZ 198	81		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-36	Date Collected:	06/15/10 14:45
Client ID:	WQ-TPC-003-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 10:56	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.32927	E	ug/l	0.00100	--	1
Cl3-BZ#18	0.45457	E	ug/l	0.00100	--	1
Cl4-BZ#52	0.55662	E	ug/l	0.00100	--	1
Cl4-BZ#66	ND		ug/l	0.00100	--	1
Cl5-BZ#118	0.03650		ug/l	0.00100	--	1
Cl5-BZ#105	0.01031		ug/l	0.00100	--	1
Cl7-BZ#187	0.01126		ug/l	0.00100	--	1
Cl7-BZ#180	0.00817		ug/l	0.00100	--	1
Cl9-BZ#206	0.00172		ug/l	0.00100	--	1
Cl10-BZ#209	ND		ug/l	0.00100	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	73		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-36	Date Collected:	06/15/10 14:45
Client ID:	WQ-TPC-003-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 10:56	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.41808	E	ug/l	0.00100	--	1
Cl4-BZ#44	0.15310		ug/l	0.00100	--	1
Cl5-BZ#101	0.06270		ug/l	0.00100	--	1
Cl6-BZ#153	0.04350		ug/l	0.00100	--	1
Cl6-BZ#138	0.01638		ug/l	0.00100	--	1
Cl6-BZ#128	0.00398		ug/l	0.00100	--	1
Cl7-BZ#170	0.00496		ug/l	0.00100	--	1
Cl8-BZ#195	0.00146		ug/l	0.00100	--	1

DBOB	82	30-150
BZ 198	73	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-36 D	Date Collected:	06/15/10 14:45
Client ID:	WQ-TPC-003-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 20:28	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.19860		ug/l	0.00500	--	5
Cl3-BZ#18	0.32869		ug/l	0.00500	--	5
Cl4-BZ#52	0.35369		ug/l	0.00500	--	5

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-36 D	Date Collected:	06/15/10 14:45
Client ID:	WQ-TPC-003-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 20:28	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.25362		ug/l	0.00500	--	5

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-37	Date Collected:	06/15/10 14:45
Client ID:	WQ-DPC-003-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 11:37	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#44	ND		ug/l	0.00106	--	1
Cl4-BZ#66	ND		ug/l	0.00106	--	1
Cl5-BZ#101	ND		ug/l	0.00106	--	1
Cl5-BZ#118	ND		ug/l	0.00106	--	1
Cl5-BZ#105	ND		ug/l	0.00106	--	1
Cl6-BZ#138	ND		ug/l	0.00106	--	1
Cl7-BZ#187	ND		ug/l	0.00106	--	1
Cl6-BZ#128	ND		ug/l	0.00106	--	1
Cl7-BZ#180	ND		ug/l	0.00106	--	1
Cl7-BZ#170	ND		ug/l	0.00106	--	1
Cl8-BZ#195	ND		ug/l	0.00106	--	1
Cl9-BZ#206	ND		ug/l	0.00106	--	1
Cl10-BZ#209	ND		ug/l	0.00106	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	39		30-150
BZ 198	48		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-37	Date Collected:	06/15/10 14:45
Client ID:	WQ-DPC-003-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 11:37	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.00788		ug/l	0.00106	--	1
Cl3-BZ#18	0.01320		ug/l	0.00106	--	1
Cl3-BZ#28	0.00290		ug/l	0.00106	--	1
Cl4-BZ#52	0.00368		ug/l	0.00106	--	1
Cl6-BZ#153	ND		ug/l	0.00106	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	39		30-150
BZ 198	48		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-41	Date Collected:	06/15/10 13:15
Client ID:	WQ-TPC-004-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 12:18	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.10654		ug/l	0.00103	--	1
Cl3-BZ#18	0.19267		ug/l	0.00103	--	1
Cl4-BZ#66	ND		ug/l	0.00103	--	1
Cl5-BZ#118	0.01080		ug/l	0.00103	--	1
Cl7-BZ#187	0.00249		ug/l	0.00103	--	1
Cl7-BZ#180	0.00192		ug/l	0.00103	--	1
Cl7-BZ#170	0.00132		ug/l	0.00103	--	1
Cl8-BZ#195	ND		ug/l	0.00103	--	1
Cl9-BZ#206	ND		ug/l	0.00103	--	1
Cl10-BZ#209	ND		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	51		30-150
BZ 198	55		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-41	Date Collected:	06/15/10 13:15
Client ID:	WQ-TPC-004-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 12:18	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.14248		ug/l	0.00103	--	1
Cl4-BZ#52	0.16307		ug/l	0.00103	--	1
Cl4-BZ#44	0.04601		ug/l	0.00103	--	1
Cl5-BZ#101	0.01831		ug/l	0.00103	--	1
Cl6-BZ#153	0.01135		ug/l	0.00103	--	1
Cl5-BZ#105	0.00253		ug/l	0.00103	--	1
Cl6-BZ#138	0.00469		ug/l	0.00103	--	1
Cl6-BZ#128	0.00124		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	51		30-150
BZ 198	55		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-42	Date Collected:	06/15/10 13:15
Client ID:	WQ-DPC-004-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 12:59	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.02416		ug/l	0.00103	--	1
Cl3-BZ#18	0.04701		ug/l	0.00103	--	1
Cl4-BZ#44	0.00152		ug/l	0.00103	--	1
Cl4-BZ#66	ND		ug/l	0.00103	--	1
Cl5-BZ#101	ND		ug/l	0.00103	--	1
Cl5-BZ#118	ND		ug/l	0.00103	--	1
Cl5-BZ#105	ND		ug/l	0.00103	--	1
Cl6-BZ#138	ND		ug/l	0.00103	--	1
Cl7-BZ#187	ND		ug/l	0.00103	--	1
Cl6-BZ#128	ND		ug/l	0.00103	--	1
Cl7-BZ#180	ND		ug/l	0.00103	--	1
Cl7-BZ#170	ND		ug/l	0.00103	--	1
Cl8-BZ#195	ND		ug/l	0.00103	--	1
Cl9-BZ#206	ND		ug/l	0.00103	--	1
Cl10-BZ#209	ND		ug/l	0.00103	--	1

DBOB	74	30-150
BZ 198	76	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-42	Date Collected:	06/15/10 13:15
Client ID:	WQ-DPC-004-061510	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 12:59	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	0.00486		ug/l	0.00103	--	1
Cl4-BZ#52	0.00656		ug/l	0.00103	--	1
Cl6-BZ#153	ND		ug/l	0.00103	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	76		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-46	Date Collected:	06/15/10 15:10
Client ID:	WQ-TPC-001-061510-EB	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 13:40	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	0.00230		ug/l	0.00118	--	1
Cl4-BZ#44	ND		ug/l	0.00118	--	1
Cl4-BZ#66	ND		ug/l	0.00118	--	1
Cl5-BZ#101	ND		ug/l	0.00118	--	1
Cl5-BZ#118	ND		ug/l	0.00118	--	1
Cl5-BZ#105	ND		ug/l	0.00118	--	1
Cl6-BZ#138	ND		ug/l	0.00118	--	1
Cl7-BZ#187	ND		ug/l	0.00118	--	1
Cl6-BZ#128	ND		ug/l	0.00118	--	1
Cl7-BZ#180	ND		ug/l	0.00118	--	1
Cl7-BZ#170	ND		ug/l	0.00118	--	1
Cl8-BZ#195	ND		ug/l	0.00118	--	1
Cl9-BZ#206	ND		ug/l	0.00118	--	1
Cl10-BZ#209	ND		ug/l	0.00118	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	58		30-150
BZ 198	76		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-46	Date Collected:	06/15/10 15:10
Client ID:	WQ-TPC-001-061510-EB	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 13:40	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.00366		ug/l	0.00118	--	1
Cl3-BZ#28	0.00205		ug/l	0.00118	--	1
Cl4-BZ#52	0.00287		ug/l	0.00118	--	1
Cl6-BZ#153	ND		ug/l	0.00118	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	58		30-150
BZ 198	76		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-47	Date Collected:	06/15/10 15:10
Client ID:	WQ-DPC-001-061510-EB	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 14:20	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/l	0.00114	--	1
Cl4-BZ#52	0.00158		ug/l	0.00114	--	1
Cl4-BZ#44	ND		ug/l	0.00114	--	1
Cl4-BZ#66	ND		ug/l	0.00114	--	1
Cl5-BZ#101	ND		ug/l	0.00114	--	1
Cl5-BZ#118	ND		ug/l	0.00114	--	1
Cl5-BZ#105	ND		ug/l	0.00114	--	1
Cl6-BZ#138	ND		ug/l	0.00114	--	1
Cl7-BZ#187	ND		ug/l	0.00114	--	1
Cl6-BZ#128	ND		ug/l	0.00114	--	1
Cl7-BZ#180	ND		ug/l	0.00114	--	1
Cl7-BZ#170	ND		ug/l	0.00114	--	1
Cl8-BZ#195	ND		ug/l	0.00114	--	1
Cl9-BZ#206	ND		ug/l	0.00114	--	1
Cl10-BZ#209	ND		ug/l	0.00114	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	64		30-150
BZ 198	80		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

SAMPLE RESULTS

Lab ID:	L1008903-47	Date Collected:	06/15/10 15:10
Client ID:	WQ-DPC-001-061510-EB	Date Received:	06/15/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	06/17/10 16:32
Analytical Date:	06/24/10 14:20	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/21/10
		Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	0.00315		ug/l	0.00114	--	1
Cl3-BZ#18	0.00291		ug/l	0.00114	--	1
Cl6-BZ#153	ND		ug/l	0.00114	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	64		30-150
BZ 198	80		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 06/23/10 17:53
Analyst: NS

Extraction Method: EPA 3510C
Extraction Date: 06/17/10 16:28
Cleanup Method1: EPA 3630
Cleanup Date1: 06/21/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-02,06-07,11-14,21-22,26-27,31-32,36-3 Batch: WG418400-1					
Cl2-BZ#8	ND		ug/l	0.00100	--
Cl3-BZ#18	ND		ug/l	0.00100	--
Cl3-BZ#28	ND		ug/l	0.00100	--
Cl4-BZ#52	ND		ug/l	0.00100	--
Cl4-BZ#44	ND		ug/l	0.00100	--
Cl4-BZ#66	ND		ug/l	0.00100	--
Cl5-BZ#101	ND		ug/l	0.00100	--
Cl5-BZ#118	ND		ug/l	0.00100	--
Cl5-BZ#105	ND		ug/l	0.00100	--
Cl6-BZ#138	ND		ug/l	0.00100	--
Cl7-BZ#187	ND		ug/l	0.00100	--
Cl6-BZ#128	ND		ug/l	0.00100	--
Cl7-BZ#180	ND		ug/l	0.00100	--
Cl7-BZ#170	ND		ug/l	0.00100	--
Cl8-BZ#195	ND		ug/l	0.00100	--
Cl9-BZ#206	ND		ug/l	0.00100	--
Cl10-BZ#209	ND		ug/l	0.00100	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	97		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 06/23/10 17:53
Analyst: NS

Extraction Method: EPA 3510C
Extraction Date: 06/17/10 16:28
Cleanup Method1: EPA 3630
Cleanup Date1: 06/21/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-02,06-07,11-14,21-22,26-27,31-32,36-3 Batch: WG418400-1					
Cl6-BZ#153	ND		ug/l	0.00100	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	97		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1008903
Report Date: 06/25/10

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): 01-02,06-07,11-14,21-22,26-27,31-32,36-3 QC Batch ID: WG418400-4 WG418400-5 QC Sample: L1008903-11 Client ID: WQ-TPC-003-061410												
Cl2-BZ#8	0.21174	0.104	0.23398	**21**	Q	0.17014	**0**	Q	40-140	NC	Q	30
Cl3-BZ#18	0.23110	0.104	0.29815	64		0.24560	**14**	Q	40-140	**128**	Q	30
Cl4-BZ#52	0.28295	0.104	0.29680	**13**	Q	0.24546	**0**	Q	40-140	NC	Q	30
Cl4-BZ#44	ND	0.104	0.17874	54		0.15140	**27**	Q	40-140	**67**	Q	30
Cl4-BZ#66	ND	0.104	0.18233	**175**	Q	0.15096	**143**	Q	40-140	20		30
Cl5-BZ#118	0.03657	0.104	0.10556	66		0.09533	56		40-140	16		30
Cl5-BZ#105	ND	0.104	0.09091	74		0.08001	62		40-140	18		30
Cl6-BZ#138	ND	0.104	0.10447	61		0.08884	46		40-140	28		30
Cl7-BZ#187	0.01135	0.104	0.07980	66		0.06866	54		40-140	20		30
Cl6-BZ#128	0.00825	0.104	0.08345	72		0.07069	59		40-140	20		30
Cl7-BZ#180	ND	0.104	0.07836	68		0.07199	61		40-140	11		30
Cl7-BZ#170	0.00640	0.104	0.07784	68		0.06717	58		40-140	16		30
Cl8-BZ#195	ND	0.104	0.07497	72		0.06562	62		40-140	15		30
Cl9-BZ#206	0.00167	0.104	0.08279	78		0.07323	68		40-140	14		30
Cl10-BZ#209	ND	0.104	0.07395	71		0.06645	63		40-140	12		30
Cl3-BZ#28	0.16268	0.104	0.19986	**36**	Q	0.17038	**7**	Q	40-140	**133**	Q	30
Cl5-BZ#101	0.05965	0.104	0.11858	56		0.11148	49		40-140	13		30
Cl6-BZ#153	0.04510	0.104	0.09924	52		0.08397	**37**	Q	40-140	**34**	Q	30

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

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): 01-02,06-07,11-14,21-22,26-27,31-32,36-3 QC Batch ID: WG418400-4 WG418400-5 QC Sample: L1008903-11 Client ID: WQ-TPC-003-061410												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
DBOB	87		77		30-150
BZ 198	76		65		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

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): 01-02,06-07,11-14,21-22,26-27,31-32,36-3 QC Batch ID: WG418400-6 WG418400-7 QC Sample: L1008903-13 Client ID: WQ-DPC-003-061410												
CI2-BZ#8	0.03155	0.106	0.10145	66		0.08476	50		40-140	28		30
CI3-BZ#18	0.04565	0.106	0.12358	73		0.09960	51		40-140	**35**	Q	30
CI3-BZ#28	ND	0.106	0.07478	56		0.08060	61		40-140	9		30
CI4-BZ#52	0.01655	0.106	0.07644	56		0.07883	58		40-140	4		30
CI4-BZ#44	ND	0.106	0.07107	63		0.07982	71		40-140	12		30
CI4-BZ#66	ND	0.106	0.07200	68		0.07797	73		40-140	7		30
CI5-BZ#101	ND	0.106	0.07234	64		0.07867	70		40-140	9		30
CI5-BZ#118	0.00148	0.106	0.07720	71		0.08235	76		40-140	7		30
CI5-BZ#105	ND	0.106	0.07675	72		0.08412	79		40-140	9		30
CI6-BZ#138	0.00205	0.106	0.07559	69		0.07972	73		40-140	6		30
CI7-BZ#187	ND	0.106	0.07116	67		0.07446	70		40-140	4		30
CI6-BZ#128	ND	0.106	0.07686	72		0.08184	77		40-140	7		30
CI7-BZ#180	ND	0.106	0.07516	71		0.07952	75		40-140	5		30
CI7-BZ#170	ND	0.106	0.07480	70		0.07664	72		40-140	3		30
CI8-BZ#195	ND	0.106	0.07702	72		0.08010	75		40-140	4		30
CI9-BZ#206	ND	0.106	0.08433	79		0.08753	82		40-140	4		30
CI10-BZ#209	ND	0.106	0.07628	72		0.07903	74		40-140	3		30
CI6-BZ#153	0.0020	0.106	0.06927	63		0.07246	66		40-140	5		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

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): 01-02,06-07,11-14,21-22,26-27,31-32,36-3 QC Batch ID: WG418400-6 WG418400-7 QC Sample: L1008903-13 Client ID: WQ-DPC-003-061410												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
DBOB	75		78		30-150
BZ 198	83		81		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-02,06-07,11-14,21-22,26-27,31-32,36-3		Batch: WG418400-2 WG418400-3					
Cl2-BZ#8	53		55		40-140	4		30
Cl3-BZ#18	58		56		40-140	2		30
Cl3-BZ#28	61		60		40-140	3		30
Cl4-BZ#52	63		60		40-140	5		30
Cl4-BZ#44	65		62		40-140	5		30
Cl4-BZ#66	67		65		40-140	3		30
Cl5-BZ#101	67		64		40-140	4		30
Cl5-BZ#118	71		70		40-140	2		30
Cl6-BZ#153	132		130		40-140	2		30
Cl5-BZ#105	73		72		40-140	2		30
Cl6-BZ#138	72		70		40-140	3		30
Cl7-BZ#187	66		66		40-140	1		30
Cl6-BZ#128	72		71		40-140	1		30
Cl7-BZ#180	70		71		40-140	0		30
Cl7-BZ#170	70		71		40-140	1		30
Cl8-BZ#195	72		73		40-140	2		30
Cl9-BZ#206	78		80		40-140	2		30
Cl10-BZ#209	72		73		40-140	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-02,06-07,11-14,21-22,26-27,31-32,36-3				Batch: WG418400-2	WG418400-3		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	70		63		30-150
BZ 198	81		85		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-03
Client ID: WQ-TSS-001-061410
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 09:20
Date Received: 06/14/10
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 Suspended	39.3		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-04
Client ID: WQ-TUR-001-061410
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 09:20
Date Received: 06/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	7.7		NTU	0.40	--	1	-	06/14/10 18:00	8,180.1	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-08
Client ID: WQ-TSS-002-061410
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 09:50
Date Received: 06/14/10
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 Suspended	8.80		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-09
Client ID: WQ-TUR-002-061410
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 09:50
Date Received: 06/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	6.1		NTU	0.40	--	1	-	06/14/10 18:00	8,180.1	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-15
Client ID: WQ-TSS-003-061410
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 12:15
Date Received: 06/14/10
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 Suspended	58.0		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-16
Client ID: WQ-TSS-003-061410 REP
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 12:15
Date Received: 06/14/10
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 Suspended	64.7		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-17
Client ID: WQ-TUR-003-061410
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 12:15
Date Received: 06/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	19		NTU	0.40	--	1	-	06/14/10 18:00	8,180.1	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-18
Client ID: WQ-TUR-003-061410 REP
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 12:15
Date Received: 06/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	19		NTU	0.40	--	1	-	06/14/10 18:00	8,180.1	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-23
Client ID: WQ-TSS-004-061410
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 13:10
Date Received: 06/14/10
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 Suspended	26.0		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-24
Client ID: WQ-TUR-004-061410
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 13:10
Date Received: 06/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	5.8		NTU	0.40	--	1	-	06/14/10 18:00	8,180.1	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-28
Client ID: WQ-TSS-001-061510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 09:15
Date Received: 06/15/10
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 Suspended	67.3		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-29
Client ID: WQ-TUR-001-061510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/14/10 09:15
Date Received: 06/15/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	20		NTU	0.40	--	1	-	06/16/10 10:00	8,180.1	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-33
Client ID: WQ-TSS-002-061510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/15/10 10:00
Date Received: 06/15/10
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 Suspended	27.0		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-34
Client ID: WQ-TUR-002-061510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/15/10 10:00
Date Received: 06/15/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	6.2		NTU	0.40	--	1	-	06/16/10 10:00	8,180.1	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-38
Client ID: WQ-TSS-003-061510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/15/10 14:45
Date Received: 06/15/10
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 Suspended	64.7		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-39
Client ID: WQ-TUR-003-061510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/15/10 14:45
Date Received: 06/15/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	30		NTU	0.40	--	1	-	06/16/10 10:00	8,180.1	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-43
Client ID: WQ-TSS-004-061510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/15/10 13:15
Date Received: 06/15/10
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 Suspended	46.0		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1008903
Report Date: 06/25/10

SAMPLE RESULTS

Lab ID: L1008903-44
Client ID: WQ-TUR-004-061510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 06/15/10 13:15
Date Received: 06/15/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Turbidity	9.7		NTU	0.40	--	1	-	06/16/10 10:00	8,180.1	NR

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1008903

Project Number: TO-0010-03 **Report Date:** 06/25/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab for sample(s): 03,08,15-16,23,28,33,38,43 Batch: WG418791-1										
Solids, Total Suspended	ND		mg/l	1.00	NA	1	-	06/18/10 18:00	4,160.2	ES
General Chemistry - Mansfield Lab for sample(s): 04,09,17-18,24 Batch: WG418795-1										
Turbidity	ND		NTU	0.40	--	1	-	06/14/10 18:00	8,180.1	ES
General Chemistry - Mansfield Lab for sample(s): 29,34,39,44 Batch: WG419187-1										
Turbidity	ND		NTU	0.40	--	1	-	06/16/10 10:00	8,180.1	NR

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1008903
Report Date: 06/25/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 03,08,15-16,23,28,33,38,43 Batch: WG418791-2								
Solids, Total Suspended	98		-		80-120	-		20
General Chemistry - Mansfield Lab Associated sample(s): 04,09,17-18,24 Batch: WG418795-2								
Turbidity	102		-		90-110	-		10
General Chemistry - Mansfield Lab Associated sample(s): 29,34,39,44 Batch: WG419187-2								
Turbidity	104		-		90-110	-		10

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1008903
Report Date: 06/25/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 03,08,15-16,23,28,33,38,43 QC Batch ID: WG418791-3 QC Sample: L1008903-03 Client ID: WQ-TSS-001-061410						
Solids, Total Suspended	39.3	40.0	mg/l	2		20
General Chemistry - Mansfield Lab Associated sample(s): 04,09,17-18,24 QC Batch ID: WG418795-3 QC Sample: L1008903-04 Client ID: WQ-TUR-001-061410						
Turbidity	7.7	7.7	NTU	0		10

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1008903
Report Date: 06/25/10

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
E	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1008903-01A	Amber 1000ml unpreserved	C	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-01B	Amber 1000ml unpreserved	C	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-02A	Amber 1000ml unpreserved	C	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-02B	Amber 1000ml unpreserved	C	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-02C	Glass 60mL unpreserved	C	N/A	3	Y	Absent	FILTER()
L1008903-02D	Glass 60mL unpreserved	C	N/A	3	Y	Absent	FILTER()
L1008903-03A	Plastic 1000ml unpreserved	C	N/A	3	Y	Absent	A2-TSS-160(7)
L1008903-04A	Plastic 1000ml unpreserved	C	N/A	3	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-05A	Plastic 500ml unpreserved	C	N/A	3	Y	Absent	HOLD(14)
L1008903-06A	Amber 1000ml unpreserved	C	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-06B	Amber 1000ml unpreserved	C	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-07A	Amber 1000ml unpreserved	C	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-07B	Amber 1000ml unpreserved	C	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-07C	Glass 60mL unpreserved	C	N/A	3	Y	Absent	FILTER()
L1008903-07D	Glass 60mL unpreserved	C	N/A	3	Y	Absent	FILTER()
L1008903-08A	Plastic 1000ml unpreserved	C	N/A	3	Y	Absent	A2-TSS-160(7)
L1008903-09A	Plastic 1000ml unpreserved	C	N/A	3	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-10A	Plastic 500ml unpreserved	C	N/A	3	Y	Absent	HOLD(14)
L1008903-11A	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-11B	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-11C	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-11D	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1008903
Report Date: 06/25/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1008903-12A	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-12B	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-13A	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-13B	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-13C	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-13D	Amber 1000ml unpreserved	A	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-13E	Glass 60mL unpreserved	A	N/A	4	Y	Absent	FILTER()
L1008903-13F	Glass 60mL unpreserved	A	N/A	4	Y	Absent	FILTER()
L1008903-13G	Glass 60mL unpreserved	A	N/A	4	Y	Absent	FILTER()
L1008903-13H	Glass 60mL unpreserved	A	N/A	4	Y	Absent	FILTER()
L1008903-14A	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-14B	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-14C	Glass 60mL unpreserved	B	N/A	4	Y	Absent	FILTER()
L1008903-14D	Glass 60mL unpreserved	B	N/A	4	Y	Absent	FILTER()
L1008903-15A	Plastic 1000ml unpreserved	A	N/A	4	Y	Absent	A2-TSS-160(7)
L1008903-16A	Plastic 1000ml unpreserved	A	N/A	4	Y	Absent	A2-TSS-160(7)
L1008903-17A	Plastic 1000ml unpreserved	A	N/A	4	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-18A	Plastic 1000ml unpreserved	A	N/A	4	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-19A	Plastic 500ml unpreserved	A	N/A	4	Y	Absent	HOLD(14)
L1008903-20A	Plastic 500ml unpreserved	B	N/A	4	Y	Absent	HOLD(14)
L1008903-21A	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-21B	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-22A	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-22B	Amber 1000ml unpreserved	B	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-22C	Glass 60mL unpreserved	B	N/A	4	Y	Absent	FILTER()
L1008903-22D	Glass 60mL unpreserved	B	N/A	4	Y	Absent	FILTER()
L1008903-23A	Plastic 1000ml unpreserved	B	N/A	4	Y	Absent	A2-TSS-160(7)
L1008903-24A	Plastic 1000ml unpreserved	B	N/A	4	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-25A	Plastic 500ml unpreserved	B	N/A	4	Y	Absent	HOLD(14)
L1008903-26A	Amber 1000ml unpreserved	D	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-26B	Amber 1000ml unpreserved	D	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-27A	Amber 1000ml unpreserved	D	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-27B	Amber 1000ml unpreserved	D	7	4	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-27C	Glass 60mL unpreserved	D	N/A	4	Y	Absent	FILTER()
L1008903-27D	Glass 60mL unpreserved	D	N/A	4	Y	Absent	FILTER()
L1008903-28A	Plastic 1000ml unpreserved	D	N/A	4	Y	Absent	A2-TSS-160(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1008903
Report Date: 06/25/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1008903-29A	Plastic 1000ml unpreserved	D	N/A	4	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-30A	Plastic 500ml unpreserved	E	N/A	5	Y	Absent	HOLD(14)
L1008903-31A	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-31B	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-32A	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-32B	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-32C	Glass 60mL unpreserved	E	N/A	5	Y	Absent	FILTER()
L1008903-32D	Glass 60mL unpreserved	E	N/A	5	Y	Absent	FILTER()
L1008903-33A	Plastic 1000ml unpreserved	D	N/A	4	Y	Absent	A2-TSS-160(7)
L1008903-34A	Plastic 1000ml unpreserved	D	N/A	4	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-35A	Plastic 500ml unpreserved	E	N/A	5	Y	Absent	HOLD(14)
L1008903-36A	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-36B	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-37A	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-37B	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-37C	Glass 60mL unpreserved	E	N/A	5	Y	Absent	FILTER()
L1008903-37D	Glass 60mL unpreserved	E	N/A	5	Y	Absent	FILTER()
L1008903-38A	Plastic 1000ml unpreserved	E	N/A	5	Y	Absent	A2-TSS-160(7)
L1008903-39A	Plastic 1000ml unpreserved	E	N/A	5	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-40A	Plastic 500ml unpreserved	E	N/A	5	Y	Absent	HOLD(14)
L1008903-41A	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-41B	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-42A	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-42B	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-42C	Glass 60mL unpreserved	E	N/A	5	Y	Absent	FILTER()
L1008903-42D	Glass 60mL unpreserved	E	N/A	5	Y	Absent	FILTER()
L1008903-43A	Plastic 1000ml unpreserved	D	N/A	4	Y	Absent	A2-TSS-160(7)
L1008903-44A	Plastic 1000ml unpreserved	D	N/A	4	Y	Absent	A2-TURBIDITY-180.1(2)
L1008903-45A	Plastic 500ml unpreserved	D	N/A	4	Y	Absent	HOLD(14)
L1008903-46A	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-47A	Amber 1000ml unpreserved	E	7	5	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1008903-47B	Glass 60mL unpreserved	E	N/A	5	Y	Absent	FILTER()
L1008903-48A	Plastic 500ml unpreserved	D	N/A	4	Y	Absent	HOLD(14)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1008903
Project Number:	TO-0010-03	**Report Date:**	06/25/10

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.

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.

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.

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.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1008903
Project Number:	TO-0010-03	**Report Date:**	06/25/10

Data Qualifiers

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	**Lab Number:**	L1008903
Project Number:	TO-0010-03	**Report Date:**	06/25/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

8 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. 19th Edition. 1995.

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 June 1, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 3005A,3020, 6020, 245.1, 245.7, 1631E, 7470A, 7474, 9014, 120.1, 9050A, 180.1, SM4500H-B, 2320B, 2510B, 2540D,9040. Organic Parameters: EPA 3510C, 5030B, 9010B, 624, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Certificate/Approval Program Summary

Last revised June 17, 2010 - Westboro 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-0574. ***NELAP Accredited Solid Waste/Soil.***

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)
Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH.)
Solid Waste/Soil (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B,4500NO3-F, EPA 200.7, EPA 200.8, 245.1. Organic Parameters: 504.1, 524.2, SM 6251B.)
Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
Drinking Water
Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)
(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)
353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.
Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)
(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.
Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D
Non-Potable Water
Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)
(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)
245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)
(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)
Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)
Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)
Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)
Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)
Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)
Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)
Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NY-DOH.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 $S2^{-}$D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 314, 120.1, 9050A , 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

Serial_No:06251014:36

CHAIN OF CUSTODY

PAGE 1 OF 3

Date Rec'd in Lab:

ALPHA Job #: L1668903

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

Client Information

Client: WOODS HOLE GROUP, INC
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NEW BEDFORD HARBOR
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVE WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

* Project specific EDD, Level III Data Report
* Please include with other samples (Level I) submitted on 6/15, same SDG.

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total PCB Cong-NOAA 18	Dissolved PCB Cong-NOAA 18	TSS	Turbidity	Metals (Archive)	Sample Specific Comments	TOTAL # BOTTLES
1	WQ-TPC-001-061410	6/14/10	0920	SW	DRW	X						2
2	WQ-DPC-001-061410	6/14/10	0920	SW	DRW		X					2
3	WQ-TSS-001-061410	6/14/10	0920	SW	DRW			X				1
4	WQ-TUR-001-061410	6/14/10	0920	SW	DRW				X			1
5	WQ-MET-001-061410	6/14/10	0920	SW	DRW					X	ARCHIVE	1
6	WQ-TPC-002-061410	↓	0950	↓	↓	X						2
7	WQ-DPC-002-061410	↓	0950	↓	↓		X					2
8	WQ-TSS-002-061410	↓	0950	↓	↓			X				1
9	WQ-TUR-002-061410	↓	0950	↓	↓				X			1
10	WQ-MET-002-061410	↓	0950	↓	↓					X	ARCHIVE	1
					Container Type	A	A	P	P	P		
					Preservative	A	A	A	A	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	6/14/10 1450	[signature]	6/14/10 1450

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

FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE 2 OF 3

ALPHA Job #: L1008903

Date Rec'd in Lab:

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

Client Information

Client: WOODS HOLE GROUP, INC
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWARSH@WHGRP.COM
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NEW BEDFORD HARBOR
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVE WARSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

* Project Specific EDD and LEVEL III DATA REPORT
* LEVEL I Samples: PLEASE INCLUDE W/OTHER LEVEL I SAMPLES

ALPHA Lab ID (Lab Use Only)	Sample ID (Submitted on 6/15 into one SDG.)	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total PCB Cong. (NOAA 18)	Dissolved PCB Cong. (NOAA 18)	TSS	Turbidity	Metals (Arsenic)	SAMPLE HANDLING	Sample Specific Comments	TOTAL # BOTTLES
11	WQ-TPC-003-061410	6/14/10	1215	SW	DRW	X							2
12	WQ-TPC-003-061410 REP		1215			X							2
-11 13	WQ-TPC-003-061410 MS		1215			X							1
-11 14	WQ-TPC-003-061410 MSD		1215			X							1
-13 15	WQ-DPC-003-061410		1215				X						2
-14 16	WQ-DPC-003-061410 REP		1215				X						2
-13 17	WQ-DPC-003-061410 MS		1215				X						1
-13 18	WQ-DPC-003-061410 MSD		1215				X						1
-15 19	WQ-TSS-003-061410		1215					X					1
-16 20	WQ-TSS-003-061410REP							X					1

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

Container Type	A	A	P	P	P	
Preservative	A	A	A	A	A	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature] 6/14/10	1650	[signature]	6/14/10 1650

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

FORM NO: 01-01 (rev. 18-Jan-2010)

Serial No:06251014:36
Delivery Order: 0010-03 December 2010
C-100
Water Quality Monitoring Summary Report W912WJ-09-D-0001

CHAIN OF CUSTODY

PAGE 3 OF 3

Date Rec'd in Lab:

ALPHA Job #: L1008903

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

Client Information

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Phone: 508-540-8080
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Project Location: NEW BEDFORD, MA
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Project Manager: DAVE WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

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If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

* Project Specific EDD and Level III DATA Report
* PLEASE INCLUDE W/OTHER LEVEL I samples submitted on 6/15 into one SDG.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total PCB Cong (NWHR-18)	Dissolved PCB Cong (NWHR-18)	TSS	Turbidity	METALS (ARCHIVE)	SAMPLE HANDLING	Sample Specific Comments	TOTAL # BOTTLES
-17	WQ-TUR-003-061410	6/14/10	1215	SW	DRW				X				1
-18	WQ-TUR-003-061410 REP	6/14/10	1215	SW	DRW				X				1
-19	WQ-MET-003-061410		1215							X		ARCHIVE	1
-20	WQ-MET-003-061410 REP		1215							X		ARCHIVE	1
-21	WQ-TPC-004-061410		1310			X							2
-22	WQ-DPC-004-061410		1310				X						2
-23	WQ-TSS-004-061410		1310					X					1
-24	WQ-TUR-004-061410		1310						X				1
-25	WQ-MET-004-061410		1310							X		ARCHIVE	1

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

Container Type	A	A	P	P	P														
Preservative	A	A	A	A	A														

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature] 6/14/10	1650	[signature]	6/14/10 1650

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

FORM NO: 01-01 (rev. 18-Jan-2010)

Serial No:06251014:36

Water Quality Monitoring Summary Report
W912WJ-09-D-0001
C-101
Delivery Order: 0010-03
December 2010

CHAIN OF CUSTODY

PAGE 1 OF 3

Date Rec'd in Lab:

ALPHA Job #: L1008903

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

Serial No:06251014:36

Client Information

Client: Woods Hole Group, INC
Address: 81 Technology Park DR.
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.Com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

*Project Specific EDD, Level III Data Report
*Please include with other samples (Level I) submitted on 6/14, same SDG

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total PCB Cong-NOAA 13	Dissolved PCB Cong-NOAA 16	TSS	Turbidity	Metals (Archive)	Sample Specific Comments	TOTAL # BOTTLES
L1008903-26	WQ-TPC-001-061510	6/15/10	0915	SW	DRW	X						2
27	WQ-DPC-001-061510	↓	0915	↓	↓		X					2
28	WQ-TSS-001-061510	↓	0915	↓	↓			X				1
29	WQ-TUR-001-061510	↓	0915	↓	↓				X			1
30	WQ-MET-001-061510	↓	0915	↓	↓					X	Archive	1
31	WQ-TPC-002-061510	↓	1000	↓	↓	X						2
32	WQ-DPC-002-061510	↓	1000	↓	↓		X					2
33	WQ-TSS-002-061510	↓	1000	↓	↓			X				1
34	WQ-TUR-002-061510	↓	1000	↓	↓				X			1
35	WQ-MET-002-061510	↓	1000	↓	↓					X	Archive	1
					Container Type	A	A	P	P	P		
					Preservative	A	A	A	A	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Dave Walsh	6/15/10 1716	William J Jede	6/15/10 1716
William J Jede	6/15/10 1817	Alicia Sullivan	6/15/10 18:17

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

FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE 2 OF 3

Date Rec'd in Lab:

ALPHA Job #: L1008903

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

Serial No:06251014:36

Client Information

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Fax: 508-540-1001
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Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

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(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

* Project Specific EDD, Level III Data Report
* Please include with other samples (Level I) submitted on 6/14, same SDG

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total PCB Cons NOAA 1B	Dissolved PCB Cons-NOAA 1B	TSS	Turbidity	Metals (Archive)	Sample Specific Comments	TOTAL # BOTTLES
L1008903-36	WQ-TPC-003-061510		1445			X						2
-37	WQ-DPC-003-061510		1445				X					2
-38	WQ-TSS-003-061510		1445					X				1
-39	WQ-TUR-003-061510		1445						X			1
-40	WQ-MET-003-061510		1445							X		1
-41	WQ-TPC-004-061510		1315			X						2
-42	WQ-DPC-004-061510		1315				X					2
-43	WQ-TSS-004-061510		1315					X				1
-44	WQ-TUR-004-061510		1315						X			1
-45	WQ-MET-004-061510		1315							X		1
					Container Type	A	A	P	P	P		
					Preservative	A	A	A	A	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	6/15/10 1716	[signature]	6/15/10 1715
[signature]	6/15/10 1817	Eileen Sullivan	6/15/10 1817

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

FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE 3 OF 3

Date Rec'd in Lab:

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Project Manager: Dave Walsh

ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required , indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

* Project specific EDD, Level II Data report
* Please include with other samples (level I) submitted on 6/14

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: Dissolved PCB Cong-NOAA list	Total PCB Cong-NOAA list	Metals	SAMPLE HANDLING	TOTAL # BOTTLES
L1008903-46	EB-061510-01	6/15/10	1510	SW	DRW	X	X	X		3

SAMPLE HANDLING

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

Sample Specific Comments

Container Type	A	A	P
Preservative	A	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	6/15/10 1716		6/15/10 1716
	6/15/10 1817		6/15/10 18:17

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

FORM NO: 01-01 (rev. 18-Jan-2010)

Serial_No:06251014:36

Water Quality Monitoring Summary Report W912WJ-09-D-0001 C-104 Delivery Order: 0010-03 December 2010

APPENDIX D. ENVIROSYSTEMS, INC. REPORTS AND ANALYTICAL DATA (ON CD)

APPENDIX D ENVIROSYSTEMS, INC. REPORTS AND ANALYTICAL DATA

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Biomonitoring of Surface Water Samples
New Bedford Harbor
New Bedford, Massachusetts

June 14 and 15, 2010 Level I Sampling Event

NED ACOE Job Number: TO-0010-03

Task Order No.: ESI0002

Prepared for

Woods Hole Group, Inc.
81 Technology Park Drive
Falmouth, Massachusetts 02536

Prepared by

EnviroSystems, Incorporated
1 Lafayette Road
Hampton, New Hampshire 03843

June 2010
Reference Number: Woods Hole Group, Inc. 19798-10-06

Biomonitoring of Surface Water Samples
New Bedford Harbor, New Bedford, Massachusetts

June 14 and 15, 2010 Level I Sampling Event
NED ACOE Job Number: TO-0010-03

1.0 INTRODUCTION

This report provides a summary of data generated from chronic exposure screening assays evaluating surface water samples collected from New Bedford Harbor in New Bedford, Massachusetts. Toxicity tests were conducted on eight grab surface water samples collected over a period of two days from specified areas in the harbor. Samples were collected in the vicinity of dredging operations under the supervision of Woods Hole Group, Inc. personnel from the Falmouth, Massachusetts office and were evaluated "As Received" without additional dilutions. Testing was based on programs and protocols developed by the US EPA (2002) and included the following assays; 7 day chronic assays conducted with the mysid shrimp, *Americamysis bahia*, and 60 minute chronic fertilization assays conducted with the purple sea urchin, *Arbacia punctulata*. Assay design included a laboratory control treatment. All assays were conducted by ESI at its Hampton, New Hampshire facility.

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program followed procedures primarily designed by the EPA to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples.

2.2 Test Species

A. bahia were obtained from cultures maintained by Aquatic Research Organisms (ARO), Hampton, New Hampshire. Juvenile shrimp were collected daily, isolated, and placed in a rearing tank for up to 6 days. Holding tanks were maintained in a flow-through culture mode at a temperature of 25±2°C. At the start of the assays the mysids were 7 days old. Juveniles were fed ≤24 hour old brine shrimp on a daily basis. Water temperature, salinity, and pH were monitored on a daily basis. Prior to testing, organisms were siphoned from the rearing tanks to a holding vessel, and then transferred to test chambers using a large bore pipet, minimizing the amount of water added to test solutions.

A. punctulata adults were from cultures maintained by ESI. Original stock was obtained from commercial supply. Male and female urchins are maintained in separate chambers as recommended by protocol (EPA 2002) and ESI. Adult urchins were induced to spawn by the injection of a potassium chloride solution. The viability of gametes obtained was determined prior to their addition to the test solutions. Eggs and/or sperm that would not result in a fertilized egg were rejected from the pool of gametes used in the assay.

2.3 Surface Water Samples and Laboratory Control Water

Eight grab surface water samples were collected by Woods Hole Group, Inc. staff over a period of two days (June 14 & 15, 2010) in New Bedford Harbor. Samples were placed in polyethylene cubitainers for shipment to the laboratory. One 20 L cubitainer was collected for each sample. Sample receipt information is shown in Table 1.

Prior to testing, samples were evaluated to document salinity, conductivity, and total residual chlorine. Total residual chlorine was measured by amperometric titration (MDL 0.02 mg/L). When necessary, the salinity of samples for the *A. bahia* chronic exposure assays were adjusted to 25±2‰ while samples used for the *A. punctulata* assays were adjusted to 30±2‰ using commercial sea salts. Samples with "as received" salinity above these levels were not adjusted. A summary of "As Received" data are presented in Table 2.

Laboratory control water used for the mysid and sea urchin assays was collected from the Hampton/Seabrook Estuary. This water is classified as SA-1 and has been used to culture marine test organisms since 1981.

2.4 Bioassays

2.4.1 *Americamysis bahia* Chronic Exposure Bioassays

Endpoints for the *A. bahia* bioassays were survival and growth. Chronic exposure screening assays were conducted in a static renewal test mode with renewals made at 24-hour intervals. The 7 day assays were conducted at a temperature of 26±1°C with a photoperiod of 16:8 hours light:dark. Mysids were maintained in 250 mL beakers containing 150 mL of test solution. Approximately 100 mL of the test solution were replaced each day. The assay incorporated 8 replicates with 5 organisms/replicate. Survival and dissolved oxygen were measured daily in each replicate prior to test solution renewal. Salinity, temperature and pH were recorded in a composite sample of the "old" test solution and in the "new" test solution prior to being added to the test chamber. Incubator temperatures were also recorded on a daily basis.

During the test, mysids were fed ≤24 hour old *Artemia* nauplii. On Day 7 of the assay, surviving mysids were removed from test solutions, rinsed to remove any surface detritus and salts, and transferred to tared foils and dried for 24 hours at 104°C. Foils were weighed to the nearest 0.01 mg. Mean dry weights per individual were obtained by dividing the net dry weight of all surviving organisms by the number of organisms added at the start of the assay.

2.4.2 *Arbacia punctulata* Chronic Exposure Fertilization Assays

The endpoint for the *A. punctulata* bioassay was fertilization. Gametes were obtained by potassium chloride injection to induce spawning. Sperm were collected dry, diluted to achieve a concentration of approximately 5.0×10^7 sperm/mL in the surface water treatments. Actual sperm concentrations are provided on laboratory bench sheets in Appendix A. Sperm solutions were added to 5 mL aliquots of each sample being evaluated and allowed to remain in the test solutions for 60 minutes before the addition of unfertilized eggs. Each treatment incorporated a total of four (4) replicates. After 20 minutes exposure, the assay was terminated by the addition of 0.2 mL of preservative. Aliquots of preserved solution were counted to determine numbers of fertilized and unfertilized eggs. Fertilization was accepted based on the presence or absence of a fertilization membrane around the egg.

2.5 Data Analysis

Statistical analysis of acute and chronic exposure data was completed using CETIS, Comprehensive Environmental Toxicity Testing System, software. The program computes acute and chronic exposure endpoints based on EPA decision tree guidelines specified in individual test methods. For chronic exposure endpoints statistical significance was accepted at $\propto$ <0.05. The laboratory control was used for both assays to determine whether there were significant reductions in survival or fertilization as compared to the site samples.

2.6 Quality Control

As part of the laboratory quality control program, standard reference toxicant assays are completed on a regular basis for each test species. These results, summarized in Table 3, provide relative health and response data while allowing for comparison with historic data sets.

3.0 RESULTS SUMMARY

Tables 4 and 5 provide summaries of survival, growth and fertilization endpoints and associated statistical analyses for *A. bahia* and *A. punctulata* for the June 14 and 15, 2010 (respectively) sampling events. Support data, including copies of laboratory bench sheets, are provided in Appendix A.

3.1 *Americamysis bahia* Chronic Exposure Bioassay

Minimum test acceptability criteria for the chronic exposure bioassay require ≥80% survival and a minimum weight of 0.2 mg per individual in the control concentrations. Achievement of these results indicate that healthy test organisms were used. See Tables 4 and 5 for test acceptability and data summary.

3.2 *Arbacia punctulata* Chronic Fertilization Bioassay

Protocol specifies a 70% to 90% fertilization rate for *Arbacia punculata* (EPA 2002). Achievement of these results indicate that healthy test organisms were used. See Tables 4 and 5 for test acceptability and data summary.

4.0 REFERENCES

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th edition. Washington D.C.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms.* Fourth Edition. EPA-821-R-02-012.

US EPA. 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.* Fourth Edition. EPA-821-R-02-013.

Table 1. Sample Receipt Summary. New Bedford Harbor Level I Surface Water Quality Monitoring June 14 and 15, 2010 Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Field ID	ESI Code	Type of Sample	Matrix	Collection		Receipt	
				Date	Time	Date	Time
WQ-TOX-001-061410	19798-001	Grab	Water	06/14/10	0920	06/14/10	1845
WQ-TOX-002-061410	19798-002	Grab	Water	06/14/10	0950	06/14/10	1845
WQ-TOX-003-061410	19798-003	Grab	Water	06/14/10	1215	06/14/10	1845
WQ-TOX-004-061410	19798-004	Grab	Water	06/14/10	1310	06/14/10	1845
WQ-TOX-001-061510	19798-009	Grab	Water	06/15/10	0915	06/15/10	1853
WQ-TOX-002-061510	19798-010	Grab	Water	06/15/10	1000	06/15/10	1853
WQ-TOX-003-061510	19798-011	Grab	Water	06/15/10	1445	06/15/10	1853
WQ-TOX-004-061510	19798-012	Grab	Water	06/15/10	1315	06/15/10	1853

Table 2 Summary of "As Received" Sample Physical and Chemical Characteristics. New Bedford Harbor Level I Surface Water Quality Monitoring June 14 and 15, 2010 Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Field ID	ESI Code	Ammonia* (mg/L)	pH (SU)	Salinity (‰)	Total Residual Chlorine (mg/L)
WQ-TOX-001-061410	19798-001	<0.1	7.34	21	<0.02
WQ-TOX-002-061410	19798-002	<0.1	7.64	28	<0.02
WQ-TOX-003-061410	19798-003	<0.1	7.46	25	<0.02
WQ-TOX-004-061410	19798-004	<0.1	7.26	23	<0.02
WQ-TOX-001-061510	19798-009	<0.1	7.35	26	<0.02
WQ-TOX-002-061510	19798-010	<0.1	7.61	28	<0.02
WQ-TOX-003-061510	19798-011	<0.1	7.68	25	<0.02
WQ-TOX-004-061510	19798-012	<0.1	7.27	26	<0.02

COMMENTS:
* Ammonia samples were subsampled at ESI on June 15 and 16, 2010.

Table 3 Reference Toxicant Summary. New Bedford Harbor Level I Surface Water Quality Monitoring June 14 and 15, 2010 Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Date	Endpoint		Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
A. bahia						
06/23/10	Survival	C-NOEC	15.0	15.0	10.0 - 25.0	SDS (mg/L)
06/23/10	Growth	C-NOEC	15.0	10.0	5.0 - 15.0	SDS (mg/L)
A. punctulata						
06/10/10	Fertilization	C-NOEC	1.0	10.0	5.0 - 20.0	Copper (µg/L)
06/10/10	Fertilization	IC-25	8.9	17.6	0.0 - 50.4	Copper (µg/L)

Mean and Acceptable Ranges based on most recent 20 reference toxicant assays (NELAP standard)

Table 4. Endpoint Summary Table - New Bedford Harbor Level I Surface Water Quality Monitoring June 14, 2010 Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Sample ID	Reps	Mean	Min	Max	CV	Significant Difference vs	
						p Value	Lab
Americamysis bahia			Survival				
Lab Control		82.5%	60.0%	100.0%	15.5%	-	-
WQ-TOX-001	8	85.0%	60.0%	100.0%	16.6%	0.6454	NO
WQ-TOX-002		90.0%	60.0%	100.0%	16.8%	0.8551	NO
WQ-TOX-003		90.0%	60.0%	100.0%	16.8%	0.8551	NO
WQ-TOX-004		90.0%	80.0%	100.0%	11.9%	0.8861	NO
Americamysis bahia			Growth - Biomass				
Lab Control		0.340	0.230	0.416	17.7%	-	-
WQ-TOX-001	8	0.478	0.230	0.646	27.9%	0.9909	NO
WQ-TOX-002		0.445	0.278	0.618	23.4%	0.9868	NO
WQ-TOX-003		0.485	0.334	0.648	23.5%	0.9967	NO
WQ-TOX-004		0.456	0.404	0.512	9.0%	0.9998	NO
Americamysis bahia			Growth - Dry Weight				
Lab Control	8	0.411	0.365	0.458	7.2%	-	-
Arbacia punctulata			Portion Fertilized				
Lab Control		98.3%	98.0%	99.0%	0.49%	-	-
WQ-TOX-001	4	97.6%	95.2%	100.0%	2.34%	0.3937	NO
WQ-TOX-002		97.4%	95.2%	99.0%	1.68%	0.1940	NO
WQ-TOX-003		97.7%	96.2%	99.0%	1.35%	0.2547	NO
WQ-TOX-004		97.3%	95.2%	98.0%	1.44%	0.1118	NO

Table 5. Endpoint Summary Table - New Bedford Harbor Level I Surface Water Quality Monitoring June 15, 2010 Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Sample ID	Reps	Mean	Min	Max	CV	Significant Difference vs	
						p Value	Lab
Americamysis bahia			Survival				
Lab Control		75.0%*	40.0%	100.0%	27.6%	-	-
WQ-TOX-001	8	90.0%	80.0%	100.0%	11.9%	0.9535	NO
WQ-TOX-002		87.5%	60.0%	100.0%	17.0%	0.9048	NO
WQ-TOX-003		85.0%	20.0%	100.0%	32.7%	0.7983	NO
WQ-TOX-004		82.5%	60.0%	100.0%	20.2%	0.7755	NO
Americamysis bahia			Growth - Biomass				
Lab Control		0.233	0.152	0.360	27.3%	-	-
WQ-TOX-001	8	0.341	0.282	0.410	13.6%	0.9992	NO
WQ-TOX-002		0.320	0.258	0.394	15.0%	0.9961	NO
WQ-TOX-003		0.335	0.092	0.438	32.1%	0.9821	NO
WQ-TOX-004		0.332	0.246	0.452	22.6%	0.9937	NO
Americamysis bahia			Growth - Dry Weight				
Lab Control	8	0.320	0.253	0.505	25.4%	-	-
Arbacia punctulata			Portion Fertilized				
Lab Control		93.8%	92.6%	96.2%	1.75%	-	-
WQ-TOX-001	4	94.7%	92.0%	97.1%	2.48%	0.7385	NO
WQ-TOX-002		45.1%	27.7%	68.6%	39.86%	0.0004	YES
WQ-TOX-003		95.2%	91.7%	99.0%	4.16%	0.7907	NO
WQ-TOX-004		87.8%	83.3%	93.5%	4.84%	0.0199	YES

COMMENTS:

* The laboratory control failed to meet acceptability criteria for *A. bahia* survival in the second assay for samples collected on June 15, 2010, however all site samples met acceptability criteria. These data are considered provisionally valid. The laboratory control for the first assay for samples collected on June 14, 2010 met acceptability criteria and achieved 82.5% survival. If compared to the test samples from the June 15, 2010 samples the findings of non-significance would have been comparable as the site samples all achieved the same or higher survival rates.

APPENDIX A

SUPPORT DATA

Contents	# Pages
Methods Summary	1
Study 19798: Sample Date June 14 & 15, 2010	
A. bahia Bench Sheets & Statistical Analysis Report	28
A. punctulata Bench Sheets and Statistical Analysis Report	14
Water Quality Bench Sheets, Dilution Prep Sheets and Meter Use Records	8
Analytical Chemistry Report	3
Sample Receipt Records	2
Chain of Custody and Organism Shipping Information	2
Total Appendix Pages	58

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
Ceriodaphnia dubia, Daphnia pulex	EPA-821-R-02-012
Pimephales promelas	EPA-821-R-02-012
Americamysis bahia	EPA-821-R-02-012
Menidia beryllina, Cyprinodon variegatus	EPA-821-R-02-012
Chronic Exposure Bioassays:	
Ceriodaphnia dubia	EPA-821-R-02-013 1002.0
Pimephales promelas	EPA-821-R-02-013 1000.0
Cyprinodon variegatus	EPA-821-R-02-014 1004.0
Menidia beryllina	EPA-821-R-02-014 1006.0
Arbacia punctulata	EPA-821-R-02-014 1008.0
Champia parvula	EPA-821-R-02-014 1009.0
Trace Metals:	
Trace Metals	EPA 200.7/SW 6010 and EPA 200.8/SW 6020
Hardness	Standard Methods 20th Edition - Method 2340 B
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 20th Edition - Method 4500CLD
Total Organic Carbon	Standard Methods 20th Edition - Method 5310C
Specific Conductance	Standard Methods 20th Edition - Method 2510B
Nitrogen - Ammonia	Standard Methods 20th Edition - Method 4500NH3G
pH	Standard Methods 20th Edition - Method 4500H+B
Solids, Total (TS)	Standard Methods 20th Edition - Method 2540 B
Solids, Total Suspended (TSS)	Standard Methods 20th Edition - Method 2540 D
Solids, Total Dissolved (TDS)	Standard Methods 20th Edition - Method 2540 C
Dissolved Oxygen	Standard Methods 20th Edition - Method 4500-O G

Americamysis bahia 7 DAY CHRONIC ASSAY
SURVIVAL & OLD WATER QUALITIES

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: NEW BEDFORD	LAB CONTROL: HAMPTON ESTUARY	ORGANISM BATCH/LOT#

		NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)						
SAMPLE	Rep	0	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Lab Control	A	5	5	5	4	4	4	4	3	7.4	5.3	6.2	6.3	6.5	5.6	6.0
	B	5	5	5	5	5	5	5	5	7.9	5.5	6.3	6.3	6.5	6.2	6.0
	C	5	5	5	5	5	5	5	5	8.0	8.	6.2	6.2	6.5	6.0	6.0
	D	5	5	4	4	4	4	4	4	8.0	4.9	6.2	6.1	6.4	6.1	6.1
	E	5	5	5	5	5	4	4	4	7.8	5.3	6.2	6.1	6.5	6.5	6.2
	F	5	5	5	5	5	5	5	4	7.8	5.5	6.2	6.2	6.5	6.4	6.1
	G	5	4	4	4	4	4	4	4	7.3	5.0	6.2	6.2	6.5	6.3	6.2
	H	5	5	4	4	4	4	4	4	7.9	5.2	6.1	6.1	6.5	6.2	6.3
-001	A	5	5	5	5	4	4	4	4	7.1	4.6	6.0	6.2	6.0	5.8	5.9
	B	5	5	5	4	4	4	4	4	7.2	4.5	5.7	5.9	6.0	5.7	5.2
	C	5	5	5	5	5	5	5	5	4.9	4.5	5.6	5.2	5.4	5.8	5.3
	D	5	5	5	5	5	5	5	5	5.5	4.5	5.4	5.2	5.6	5.2	5.4
	E	5	5	5	4	4	4	4	4	6.6	4.4	5.2	5.3	5.8	5.5	5.8
	F	5	5	5	4	4	4	4	4	6.7	4.8	5.3	5.3	5.8	5.7	5.6
	G	5	5	5	5	5	5	5	5	6.5	4.6	5.1	5.3	5.7	5.7	5.4
	H	5	5	4	4	4	3	3	3	6.6	4.9	5.1	5.2	5.6	5.7	5.4
-002	A	5	5	5	5	5	5	5	5	6.5	5.1	5.6	5.3	6.4	6.4	6.3
	B	5	5	5	5	5	5	5	5	6.1	5.1	5.9	5.7	6.4	6.6	6.3
	C	5	5	5	5	5	5	5	5	7.2	5.9	6.0	5.9	6.5	6.6	6.3
	D	5	5	4	4	4	4	4	4	6.7	5.6	6.1	6.1	6.5	6.6	6.4
	E	5	5	4	4	4	4	4	4	7.5	5.3	6.2	6.2	6.3	6.6	6.5
	F	5	5	5	5	5	5	5	5	7.3	5.6	6.2	6.1	6.4	6.6	6.5
	G	5	5	5	5	5	5	5	5	7.5	5.7	6.2	6.1	6.5	6.6	6.5
	H	5	4	4	3	3	3	3	3	7.5	5.8	6.1	6.0	6.6	6.7	6.5
INC TEMP:		25	25	25	25	25	25	25	25							
DATE:		6/15/10	6/16/10	6/17/10	6/18	6/19	6/20	6/21/10	6/22							
TIME:		1500	1120	1145	1535	1225	1350	0955	1215							
INITIALS:		DM	ME	JQ	SJ	LB	JQ	ME	LB							

Americamysis bahia 7 DAY CHRONIC ASSAY
SURVIVAL & OLD WATER QUALITIES

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: NEW BEDFORD	LAB CONTROL: HAMPTON ESTUARY	ORGANISM BATCH/LOT#

		NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)						
SAMPLE	Rep	0	1	2	3	4	5	6	7	1	2	3	4	5	6	7
-003	A	5	5	5	5	5	5	5	5	7.4	4.3	6.0	6.0	6.0	6.0	6.5
	B	5	5	5	5	5	5	5	5	7.6	5.2	5.8	5.9	6.0	6.1	6.4
	C	5	5	5	4	4	4	3*	3	7.6	5.1	5.7	5.7	6.2	6.2	6.4
	D	5	5	5	5	5	5	5	5	7.7	5.3	5.7	5.5	6.3	6.1	6.4
	E	5	5	5	5	5	5	5	5	7.3	4.9	5.8	5.5	6.1	5.9	6.4
	F	5	5	5	5	5	5	5	5	7.4	5.8	5.8	5.3	5.7	5.8	6.2
	G	5	5	5	5	5	4*	4	4	7.1	5.9	5.7	5.3	6.3	5.9	6.2
	H	5	5	5	5	5	5	5	4	7.4	5.8	5.8	5.5	6.3	6.1	6.3
-004	A	5	5	5	5	5	5	5	5	7.6	4.8	5.7	5.7	6.1	5.6	6.3
	B	5	5	5	5	5	5	5	5	7.5	5.5	5.8	5.7	6.1	6.0	6.3
	C	5	5	5	5	5	5	5	5	7.6	5.7	6.0	5.7	6.3	6.2	6.1
	D	5	5	5	5	5	5	5	4	7.8	5.5	6.0	5.6	6.3	6.2	6.3
	E	5	5	5	5	4	4	4	4	7.4	5.6	6.0	5.6	6.1	6.1	6.7
	F	5	5	5	5	5	5	5	5	7.6	5.8	6.1	5.6	6.1	5.7	6.4
	G	5	5	5	5	5	5	5	4	7.6	5.3	6.1	5.6	6.2	6.1	6.3
	H	5	5	4	4	4	4	4	4	7.7	5.7	6.1	5.6	6.3	6.3	6.3
INC TEMP:		25	25	25	25	25	25	25	25							
DATE:		6/15/10	6/16/10	6/17/10	6/18	6/19	6/20	6/21/10	6/22							
TIME:		1500	1120	1430	1335	1225	1350	0955	1215							
INITIALS:		DM	MC	JQ	ST	UD	JQ	MC	UD							

*Misc. notes #8
#Misc notes #9 MC 6/21

Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Sample Code	Sample ID	Sample Date	Receive Date	Sample Age	Client Name	Project
19798-000	17-0812-3739	14 Jun-10 11:00	15 Jun-10 11:00	28h	Woods Hole Group	Ecological Risk Assessme
19798-001	02-8950-1966	14 Jun-10 09:20	14 Jun-10 18:45	30h		
19798-002	15-5773-3828	14 Jun-10 09:50	14 Jun-10 18:45	29h		
19798-003	11-7486-5003	14 Jun-10 12:12	14 Jun-10 18:45	27h		
19798-004	13-7764-6453	14 Jun-10 13:10	14 Jun-10 18:45	26h		

Sample Code	Material Type	Sample Source	Station Location	Latitude	Longitude
19798-000	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-Lab Control		
19798-001	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-001		
19798-002	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-002		
19798-003	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-003		
19798-004	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-004		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
07-1633-7891	7d Proportion Survived	Control Resp	0.825	0.8 - NL	Yes	Result Within Limits
10-1483-8429	7d Proportion Survived	Control Resp	0.825	0.8 - NL	Yes	Result Within Limits
18-1208-8396	7d Proportion Survived	Control Resp	0.825	0.8 - NL	Yes	Result Within Limits
21-1429-3148	7d Proportion Survived	Control Resp	0.825	0.8 - NL	Yes	Result Within Limits
06-0909-1160	Mean Dry Biomass-mg	Control Resp	0.34	0.2 - NL	Yes	Result Within Limits
08-6442-2960	Mean Dry Biomass-mg	Control Resp	0.34	0.2 - NL	Yes	Result Within Limits
09-1295-3086	Mean Dry Biomass-mg	Control Resp	0.34	0.2 - NL	Yes	Result Within Limits
19-9996-5116	Mean Dry Biomass-mg	Control Resp	0.34	0.2 - NL	Yes	Result Within Limits
06-0909-1160	Mean Dry Biomass-mg	PMSD	0.268	0.11 - 0.37	Yes	Result Within Limits
08-6442-2960	Mean Dry Biomass-mg	PMSD	0.236	0.11 - 0.37	Yes	Result Within Limits
09-1295-3086	Mean Dry Biomass-mg	PMSD	0.221	0.11 - 0.37	Yes	Result Within Limits
19-9996-5116	Mean Dry Biomass-mg	PMSD	0.134	0.11 - 0.37	Yes	Result Within Limits

7d Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.825	0.777	0.873	0.6	1	0.0234	0.128	15.5%	0.0%
19798-001	8	0.85	0.797	0.903	0.6	1	0.0258	0.141	16.6%	-3.03%
19798-002	8	0.9	0.844	0.956	0.6	1	0.0276	0.151	16.8%	-9.09%
19798-003	8	0.9	0.844	0.956	0.6	1	0.0276	0.151	16.8%	-9.09%
19798-004	8	0.9	0.86	0.94	0.8	1	0.0195	0.107	11.9%	-9.09%

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.34	0.317	0.362	0.23	0.416	0.011	0.0603	17.7%	0.0%
19798-001	8	0.478	0.428	0.528	0.23	0.646	0.0244	0.133	27.9%	-40.7%
19798-002	8	0.445	0.407	0.484	0.278	0.618	0.019	0.104	23.4%	-31.1%
19798-003	8	0.485	0.442	0.527	0.334	0.648	0.0208	0.114	23.5%	-42.7%
19798-004	8	0.456	0.441	0.471	0.404	0.512	0.00753	0.0412	9.04%	-34.2%

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.411	0.4	0.422	0.365	0.458	0.00539	0.0295	7.19%	0.0%
19798-001	8	0.557	0.511	0.604	0.383	0.807	0.0225	0.123	22.1%	-35.6%
19798-002	8	0.497	0.462	0.533	0.37	0.642	0.0174	0.0954	19.2%	-21.0%
19798-003	8	0.553	0.494	0.611	0.334	0.783	0.0288	0.158	28.5%	-34.4%
19798-004	8	0.51	0.493	0.526	0.44	0.585	0.00794	0.0435	8.53%	-24.0%

Americamysis 7-d Survival, Growth and Fecundity Test — EnviroSystems, Inc.

7d Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
19798-000	0.6	1	1	0.8	0.8	0.8	0.8	0.8
19798-001	0.8	0.8	1	1	0.8	0.8	1	0.6
19798-002	1	1	1	0.8	0.8	1	1	0.6
19798-003	1	1	0.6	1	1	1	0.8	0.8
19798-004	1	1	1	0.8	0.8	1	0.8	0.8

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
19798-000	0.23	0.404	0.416	0.328	0.366	0.354	0.292	0.328
19798-001	0.41	0.48	0.564	0.498	0.646	0.394	0.602	0.23
19798-002	0.426	0.428	0.522	0.514	0.408	0.37	0.618	0.278
19798-003	0.334	0.574	0.47	0.496	0.648	0.44	0.336	0.58
19798-004	0.508	0.512	0.472	0.408	0.468	0.44	0.404	0.436

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
19798-000	0.383	0.404	0.416	0.41	0.458	0.443	0.365	0.41
19798-001	0.513	0.6	0.564	0.498	0.807	0.493	0.602	0.383
19798-002	0.426	0.428	0.522	0.642	0.51	0.37	0.618	0.463
19798-003	0.334	0.574	0.783	0.496	0.648	0.44	0.42	0.725
19798-004	0.508	0.512	0.472	0.51	0.585	0.44	0.505	0.545

Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	18-1208-8396	**Endpoint:**	7d Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					14.0%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-001	-0.381	1.76	0.138	0.6454	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.003544244	0.003544244	1	0.145	0.7093	Non-Significant Effect
Error	0.3427222	0.02448016	14			
Total	0.3462664	0.0280244	15			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.22	8.89	0.7971	Equal Variances
Distribution	Shapiro-Wilk Normality	0.857		0.0175	Normal Distribution

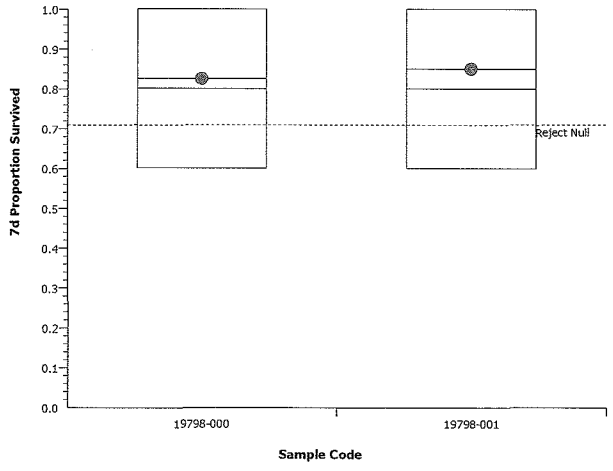
7d Proportion Survived Summary

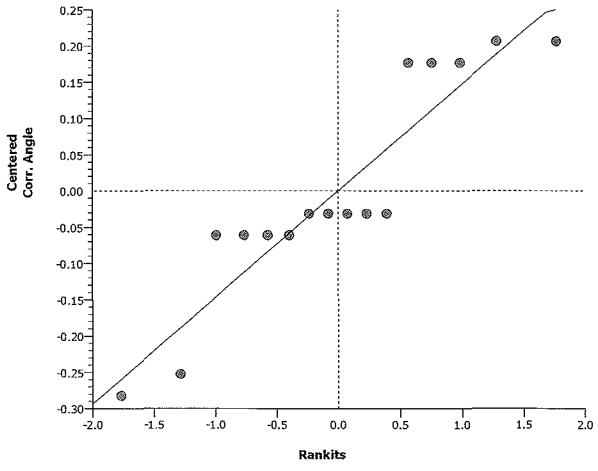
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.825	0.776	0.874	0.6	1	0.0238	0.128	15.5%	0.0%
19798-001	8	0.85	0.796	0.904	0.6	1	0.0263	0.141	16.6%	-3.03%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	1.14	1.08	1.2	0.886	1.35	0.0276	0.148	13.0%	0.0%
19798-001	8	1.17	1.11	1.23	0.886	1.35	0.0305	0.164	14.0%	-2.61%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	21-1429-3148	**Endpoint:**	7d Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					14.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-002	-1.1	1.76	0.143	0.8551	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03189819	0.03189819	1	1.21	0.2899	Non-Significant Effect
Error	0.3690445	0.02636032	14			
Total	0.4009427	0.05825852	15			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.39	8.89	0.6721	Equal Variances
Distribution	Shapiro-Wilk Normality	0.912		0.1237	Normal Distribution

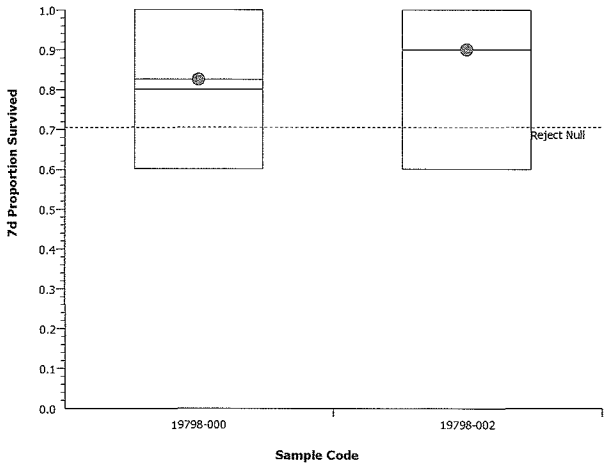
7d Proportion Survived Summary

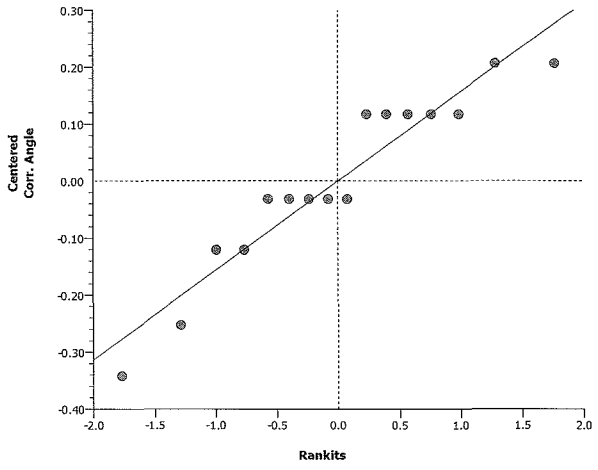
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.825	0.776	0.874	0.6	1	0.0238	0.128	15.5%	0.0%
19798-002	8	0.9	0.842	0.958	0.6	1	0.0281	0.151	16.8%	-9.09%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	1.14	1.08	1.2	0.886	1.35	0.0276	0.148	13.0%	0.0%
19798-002	8	1.23	1.16	1.29	0.886	1.35	0.0325	0.175	14.3%	-7.84%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	07-1633-7891	**Endpoint:**	7d Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					14.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-003	-1.1	1.76	0.143	0.8551	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03189819	0.03189819	1	1.21	0.2899	Non-Significant Effect
Error	0.3690445	0.02636032	14			
Total	0.4009427	0.05825852	15			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.39	8.89	0.6721	Equal Variances
Distribution	Shapiro-Wilk Normality	0.912		0.1237	Normal Distribution

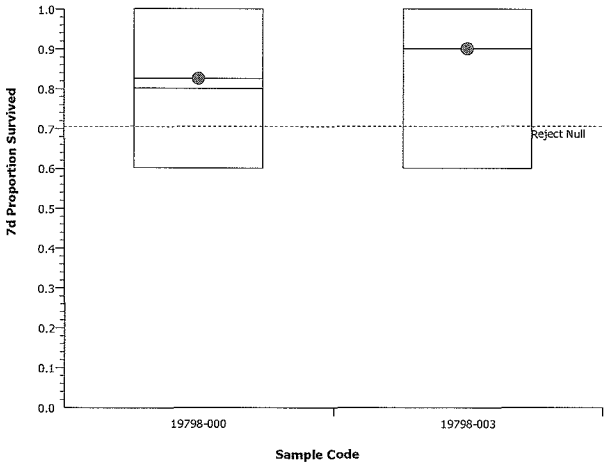
7d Proportion Survived Summary

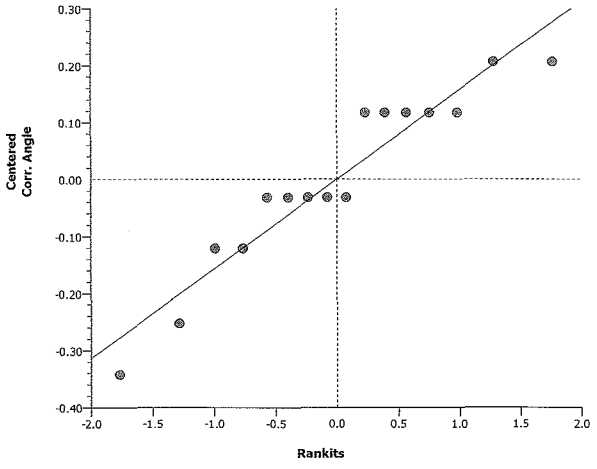
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.825	0.776	0.874	0.6	1	0.0238	0.128	15.5%	0.0%
19798-003	8	0.9	0.842	0.958	0.6	1	0.0281	0.151	16.8%	-9.09%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	1.14	1.08	1.2	0.886	1.35	0.0276	0.148	13.0%	0.0%
19798-003	8	1.23	1.16	1.29	0.886	1.35	0.0325	0.175	14.3%	-7.84%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	10-1483-8429	**Endpoint:**	7d Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:16	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					12.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-004	-1.26	1.76	0.122	0.8861	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03039269	0.03039269	1	1.59	0.2279	Non-Significant Effect
Error	0.2675636	0.01911168	14			
Total	0.2979563	0.04950438	15			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.36	8.89	0.6958	Equal Variances
Distribution	Shapiro-Wilk Normality	0.916		0.1457	Normal Distribution

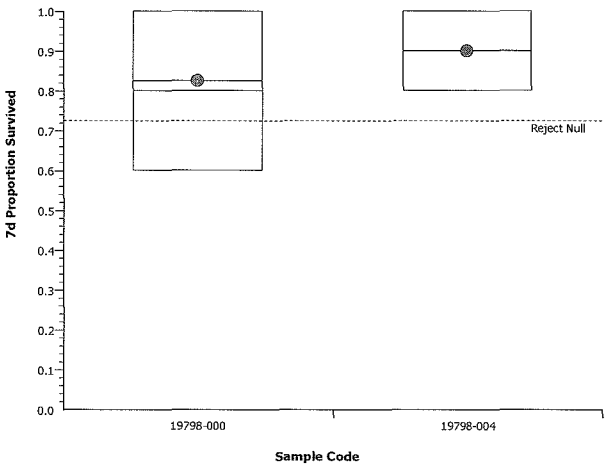
7d Proportion Survived Summary

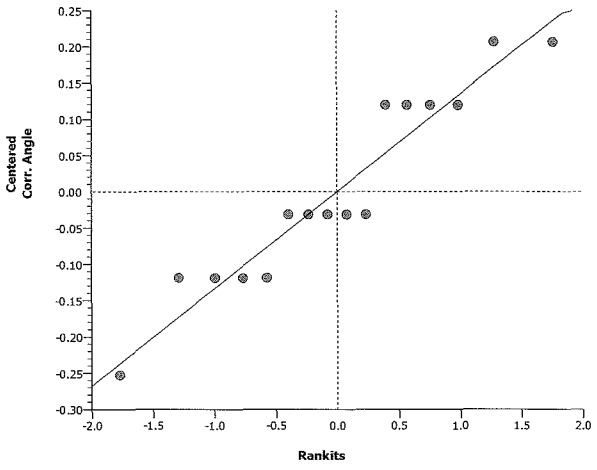
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.825	0.776	0.874	0.6	1	0.0238	0.128	15.5%	0.0%
19798-004	8	0.9	0.859	0.941	0.8	1	0.0199	0.107	11.9%	-9.09%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	1.14	1.08	1.2	0.886	1.35	0.0276	0.148	13.0%	0.0%
19798-004	8	1.23	1.18	1.27	1.11	1.35	0.0236	0.127	10.4%	-7.65%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	06-0909-1160	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.8%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-001	-2.67	1.76	0.0912	0.9909	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07645179	0.07645179	1	7.13	0.0183	Significant Effect
Error	0.1500194	0.01071567	14			
Total	0.2264712	0.08716746	15			

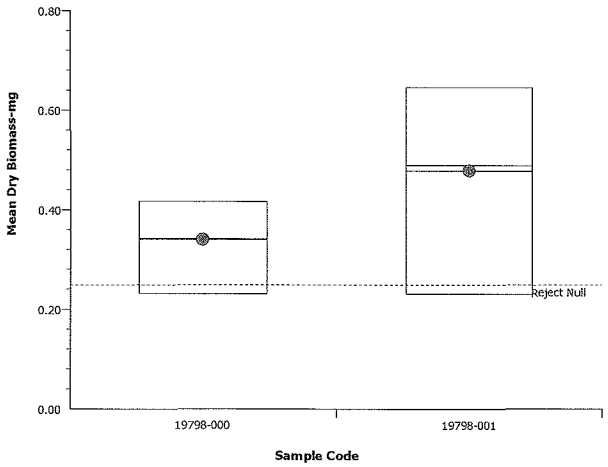
ANOVA Assumptions

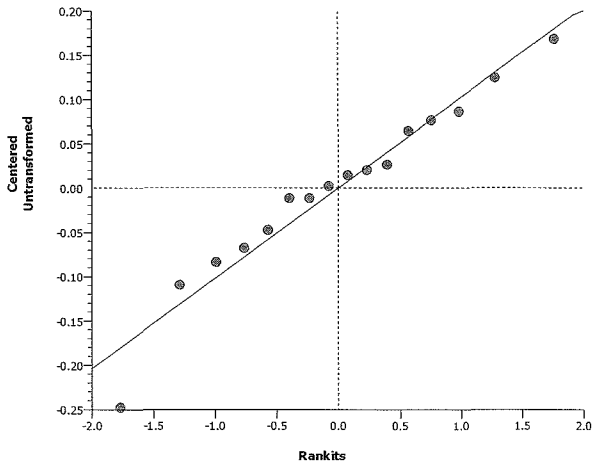
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.9	8.89	0.0526	Equal Variances
Distribution	Shapiro-Wilk Normality	0.964		0.7283	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.34	0.317	0.363	0.23	0.416	0.0112	0.0603	17.7%	0.0%
19798-001	8	0.478	0.427	0.529	0.23	0.646	0.0248	0.133	27.9%	-40.7%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	09-1295-3086	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					22.1%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-002	-2.48	1.76	0.075	0.9868	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04473118	0.04473118	1	6.16	0.0263	Significant Effect
Error	0.101585	0.007256072	14			
Total	0.1463162	0.05198726	15			

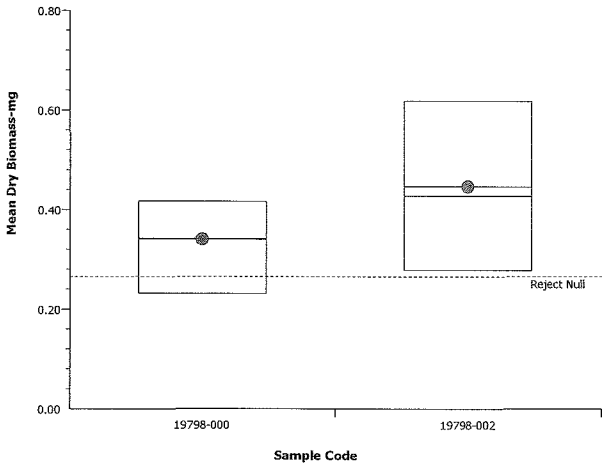
ANOVA Assumptions

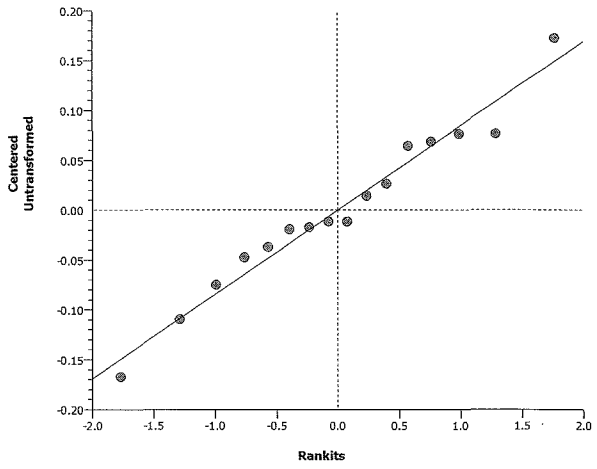
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.99	8.89	0.1712	Equal Variances
Distribution	Shapiro-Wilk Normality	0.978		0.9448	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.34	0.317	0.363	0.23	0.416	0.0112	0.0603	17.7%	0.0%
19798-002	8	0.445	0.406	0.485	0.278	0.618	0.0194	0.104	23.4%	-31.1%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test					EnviroSystems, Inc.
Analysis ID:	08-6442-2960	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					23.6%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-003	-3.18	1.76	0.0803	0.9967	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.08409876	0.08409876	1	10.1	0.0067	Significant Effect
Error	0.1163219	0.008308708	14			
Total	0.2004207	0.09240747	15			

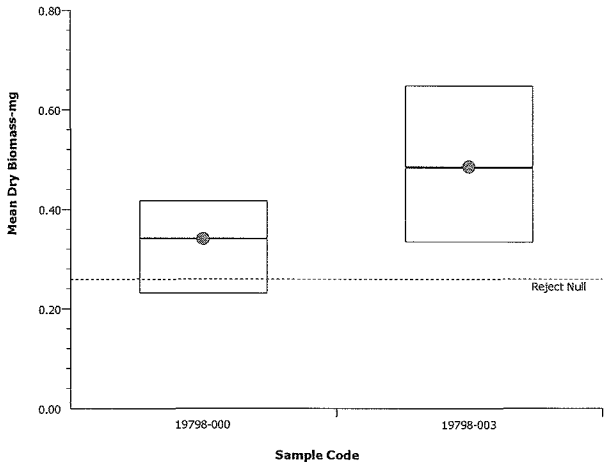
ANOVA Assumptions

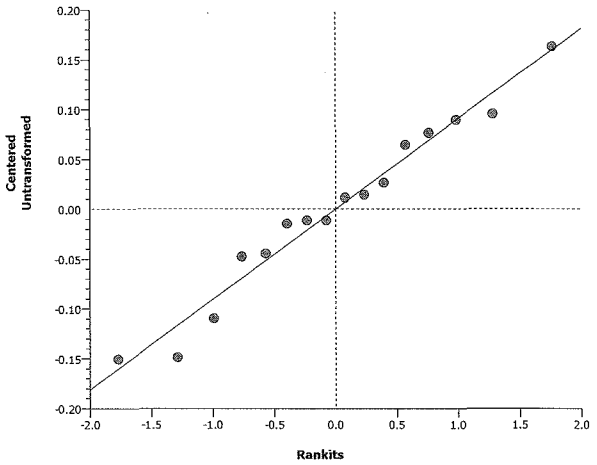
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.57	8.89	0.1147	Equal Variances
Distribution	Shapiro-Wilk Normality	0.966		0.7619	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.34	0.317	0.363	0.23	0.416	0.0112	0.0603	17.7%	0.0%
19798-003	8	0.485	0.441	0.528	0.334	0.648	0.0212	0.114	23.5%	-42.7%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	19-9996-5116	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:17	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	02-9038-2180	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	15 Jun-10 15:00	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	22 Jun-10 12:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 21h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					13.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-004	-4.5	1.76	0.0455	0.9998	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.05405575	0.05405575	1	20.3	0.0005	Significant Effect
Error	0.0373395	0.002667107	14			
Total	0.09139524	0.05672285	15			

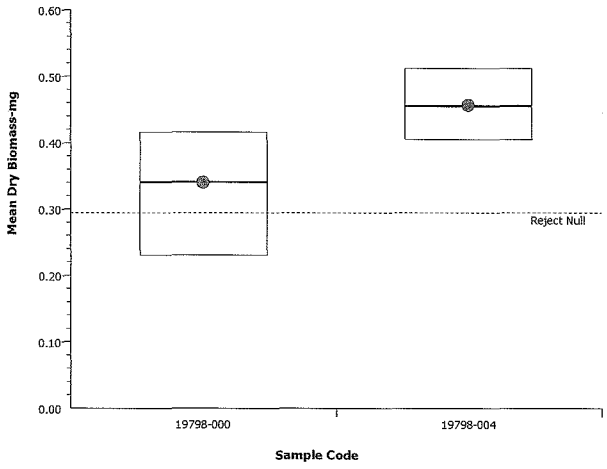
ANOVA Assumptions

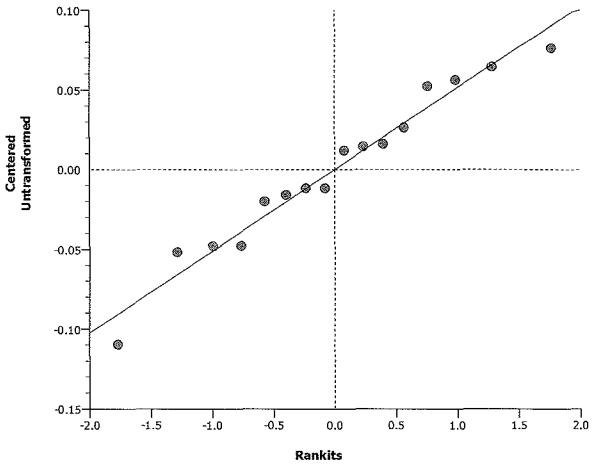
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.14	8.89	0.3379	Equal Variances
Distribution	Shapiro-Wilk Normality	0.964		0.7409	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	8	0.34	0.317	0.363	0.23	0.416	0.0112	0.0603	17.7%	0.0%
19798-004	8	0.456	0.44	0.472	0.404	0.512	0.00766	0.0412	9.04%	-34.2%

Graphics





Larval Fish Dry Weight Summary Sheet

Study:	19798 S1	
Client:	WHG AB7DCR	
Date/Time/Init:	06/24/10 1050 JQ	06/22/10 1005 JQ
Conc	Fish and Foil (mg)	Tare Wt (mg)
Lab A	206.94	205.79
Lab B	211.41	209.39
Lab C	208.64	206.56
Lab D	210.35	208.71
Lab E	207.75	205.92
Lab F	210.3	208.53
Lab G	208.25	206.79
Lab H	209.13	207.49
001A	209.22	207.17
001B	211.52	209.12
001C	211.07	208.25
001D	210.11	207.62
001E	212.44	209.21
001F	211.53	209.56
001G	209.78	206.77
001H	209.68	208.53
002A	210.2	208.07
002B	211.15	209.01
002C	210.12	207.51
002D	211.14	208.57
002E	210.21	208.17
002F	210.2	208.35
002G	211.36	208.27
002H	207.95	206.56
003A	209.69	208.02
003B	211.26	208.39
003C	208.27	205.92
003D	210.54	208.06
003E	211.48	208.24
003F	211.24	209.04
003G	208.65	206.97
003H	208.76	205.86
004A	210.19	207.65
004B	209.72	207.16
004C	211.32	208.96
004D	210.98	208.94
004E	211.55	209.21
004F	210.46	208.26
004G	211.48	209.46
004H	207.63	205.45



Aquatic Research Organisms

DATA SHEET

Rec 6/15/10

I. Organism History

Species Americamysis bahia

Source: Lab reared ✓ Hatchery reared ____ Field collected ____

Hatch date 6-8-10 Receipt date ____

Lot number 060810MS Strain ____

Brood origination Florida

II. Water Quality

Temperature 25 °C Salinity ≈30 ppt D.O. — ppm

pH 7.8 su Hardness — ppm Alkalinity — ppm

III. Culture Conditions

Freshwater ____ Saltwater ✓ Other ____

Recirculating ✓ Flow through ____ Static ____

DIET: Flake food ✓ Phytoplankton ____ Trout chow ✓

Artemia ✓ Rotifers ____ YCT ____ Other Encap. Shrimp Diet

Prophylactic treatments: ____

Comments: ____

IV. Shipping Information

Client: EST # of Organisms 240+

Carrier: ____ Date shipped 6-15-10

Biologist: Mark Dosenger

PO BOX 1271 HAMPTON NH 03843-1271 (603) 926-1650 AROFISH@AOL.COM

Americamysis bahia 7 DAY CHRONIC ASSAY
SURVIVAL & OLD WATER QUALITIES

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: NEW BEDFORD	LAB CONTROL: ~~HAMPTON~~ ESTUARY	ORGANISM BATCH/LOT#

		NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)						
SAMPLE	Rep	0	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Lab Control	A	5	5	5	5	5	5	5	5	5.0	6.3	5.7	7.4	7.5	7.3	7.3
	B	5	5	5	5	4	4	4	4	4.6	6.2	5.7	7.3	7.5	7.2	7.1
	C	5	5	5	5	5	5	5	5	4.6	6.2	5.7	7.3	7.5	7.2	7.2
	D	5	5	5	5	4	4	4	4	4.9	6.3	4.9 6.7	6.7	7.5	7.2	7.1
	E	5	5	5	4	4	3	3	3	4.9	6.2	6.0	7.1	7.5	7.3	7.1
	F	5	5	5	5	5	4	4	4	4.8	6.1	6.0	7.2	7.5	7.3	7.2
	G	5	5	5	5	3	3	3	3	5.0	6.2	6.0	7.3	7.5	7.3	7.1
	H	5	4	4	4	4	4	2	2	5.0	6.4	6.0	7.2	7.5	7.3	7.2
009 ~~001~~	A	5	5	5	5	5	5	5	5	4.6	4.0	4.3	7.3	7.5	7.3	7.1
	B	5	5	5	5	5	5	5	5	4.7	4.7	4.4	7.2	7.5	7.2	7.1
	C	5	5	5	5	5	5	5	5	4.8	4.7	4.3	7.3	7.5	7.3	7.1
	D	5	5	5	5	5	5	5	4	4.9	4.8	4.2	7.3	7.5	7.3	7.1
	E	5	5	5	5	5	5	5	5	4.6	4.7	4.6	7.3	7.4	7.3	7.1
	F	5	5	5	5	4	4	4	4	5.0	4.4	3.7*	7.2	7.5	5.3	7.1
	G	5	5	5	5	5	5	4	4	5.0	4.6	3.6	7.2	7.5	7.1	7.2
	H	5	5	5	5	5	5	5	4	4.7	4.8	3.9	7.2	7.5	7.2	7.1
010 ~~002~~	A	5	5	4	4	4	3	3	3	5.0	6.1	5.3	7.2	7.4	7.2	7.1
	B	5	5	5	5	5	4	4	4	5.3	5.9	5.2	7.2	7.4	7.2	7.0
	C	5	5	5	5	5	5	4	4	5.2	6.1	5.8	7.2	7.4	7.2	7.0
	D	5	5	5	5	5	5	5	5	5.3	6.2	5.4	7.2	7.4	7.2	7.0
	E	5	5	5	5	5	5	5	5	5.6	6.3	5.6	7.2	7.4	7.2	7.1
	F	5	4	4	4	4	4	4	4	5.4	6.2	5.7	7.2	7.4	7.2	7.1
	G	5	5	5	5	5	5	5	5	5.2	6.0	5.8	7.2	7.4	7.2	7.0
	H	5	5	5	5	5	5	5	5	5.4	6.6	5.8	7.2	7.3	7.2	7.1
INC TEMP:		25	25	25	25	25	25	25	25							
DATE:		6/16/10	6/17	6/18	6/19	6/20	6/21	6/22	6/23							
TIME:		1545	1120	1430	1335	1225	1145	1010	0945							
INITIALS:		JT	JT	UB	UB	JB	JB	UB	DM							

*on air day 3

Americamysis bahia 7 DAY CHRONIC ASSAY
SURVIVAL & OLD WATER QUALITIES

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: NEW BEDFORD	LAB CONTROL: HAMPTON ESTUARY	ORGANISM BATCH/LOT#

		NUMBER OF SURVIVORS								OLD DISSOLVED OXYGEN (mg/L)						
SAMPLE	Rep	0	1	2	3	4	5	6	7	1	2	3	4	5	6	7
011 ~~003~~	A	5	5	5	5	~~4~~ recount 10	4	2	1	4.7	5.2	4.6	7.2	7.3	7.2	7.1
	B	5	5	5	5	5	5	6	5	4.6	5.0	4.8	7.2	7.4	7.2	7.0
	C	5	5	5	5	5	5	5	5	4.5	5.1	4.9	7.2	7.4	7.2	7.1
	D	5	5	5	5	4	4	4	4	4.6	5.0	4.7	7.2	7.4	7.2	7.2
	E	5	5	5	5	5	5	5	5	4.8	4.9	4.4	7.2	7.4	7.2	7.1
	F	5	5	5	5	5	5	5	5	4.8	4.9	4.4	7.2	7.4	7.2	7.2
	G	5	5	5	5	5	4	~~5~~ 4	4	4.5	4.9	4.9	7.1	7.5	7.2	7.2
	H	5	5	5	5	5	5	~~5~~ 5	5	4.5	4.4	4.9	7.1	7.4	7.3	7.1
012 ~~004~~	A	5	5	5	5	4	4	4	4	5.1	4.8	5.5	7.2	7.4	7.3	7.1
	B	5	5	5	5	5	5	5	5	5.2	5.3	5.5	7.3	7.4	7.3	7.1
	C	5	5	5	3	3	3	3	3	4.8	5.4	5.6	7.3	7.4	7.3	7.1
	D	5	5	5	4	4	4	4	4	4.8	5.5	5.5	7.2	7.4	7.3	7.1
	E	5	5	5	5	5	5	5	5	5.2	5.4	5.4	7.2	7.4	7.3	7.1
	F	5	5	5	5	4	4	4	4	5.3	5.6	5.4	7.2	7.4	7.2	7.0
	G	5	5	5	5	4	3	3	3	5.1	5.6	5.5	7.2	7.4	7.3	7.0
	H	5	5	5	5	5	5	5	5	5.1	5.6	5.4	7.2	7.4	7.2	7.0
INC TEMP:		25	25	25	25	25	25	25	25							
DATE:		6/16/10	6/17	6/18	6/19	6/20	6/21	6/22	6-23							
TIME:		1545	1120	1430	1335	1225	1145	1010	0945							
INITIALS:		SJ	SJ	LB	LB	JQ	JQ	LB	DM							

(13) SS 6/16/10

Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Sample Code	Sample ID	Sample Date	Receive Date	Sample Age	Client Name	Project
19798-000 R2	16-4709-6567	16 Jun-10 11:00	16 Jun-10 11:00	5h	Woods Hole Group	Ecological Risk Assessme
19798-009	10-5403-7534	15 Jun-10 09:15	15 Jun-10 18:53	31h		
19798-010	01-7208-1383	15 Jun-10 10:00	15 Jun-10 18:53	30h		
19798-011	13-9066-0337	15 Jun-10 14:45	15 Jun-10 18:53	25h		
19798-012	11-7416-3137	15 Jun-10 13:15	15 Jun-10 18:53	26h		

Sample Code	Material Type	Sample Source	Station Location	Latitude	Longitude
19798-000 R2	Surface Water	New Bedford Harbor Dredge Moni	Lab Control		
19798-009	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-001		
19798-010	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-002		
19798-011	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-003		
19798-012	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-004		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
05-9507-1706	7d Proportion Survived	Control Resp	0.75	0.8 - NL	Yes	Result Below Limit
11-7958-9081	7d Proportion Survived	Control Resp	0.75	0.8 - NL	Yes	Result Below Limit
13-3867-8813	7d Proportion Survived	Control Resp	0.75	0.8 - NL	Yes	Result Below Limit
16-3761-3670	7d Proportion Survived	Control Resp	0.75	0.8 - NL	Yes	Result Below Limit
00-1180-0754	Mean Dry Biomass-mg	Control Resp	0.233	0.2 - NL	Yes	Result Within Limits
12-6977-9898	Mean Dry Biomass-mg	Control Resp	0.233	0.2 - NL	Yes	Result Within Limits
12-8393-5998	Mean Dry Biomass-mg	Control Resp	0.233	0.2 - NL	Yes	Result Within Limits
15-7056-2833	Mean Dry Biomass-mg	Control Resp	0.233	0.2 - NL	Yes	Result Within Limits
00-1180-0754	Mean Dry Biomass-mg	PMSD	0.213	0.11 - 0.37	Yes	Result Within Limits
12-6977-9898	Mean Dry Biomass-mg	PMSD	0.211	0.11 - 0.37	Yes	Result Within Limits
12-8393-5998	Mean Dry Biomass-mg	PMSD	0.334	0.11 - 0.37	Yes	Result Within Limits
15-7056-2833	Mean Dry Biomass-mg	PMSD	0.264	0.11 - 0.37	Yes	Result Within Limits

7d Proportion Survived Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.75	0.673	0.827	0.4	1	0.0378	0.207	27.6%	0.0%
19798-009	8	0.9	0.86	0.94	0.8	1	0.0195	0.107	11.9%	-20.0%
19798-010	8	0.875	0.819	0.931	0.6	1	0.0272	0.149	17.0%	-16.7%
19798-011	8	0.85	0.746	0.954	0.2	1	0.0507	0.278	32.7%	-13.3%
19798-012	8	0.825	0.763	0.887	0.6	1	0.0305	0.167	20.2%	-10.0%

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.233	0.209	0.256	0.152	0.36	0.0116	0.0636	27.3%	0.0%
19798-009	8	0.341	0.324	0.358	0.282	0.41	0.00848	0.0465	13.6%	-46.5%
19798-010	8	0.32	0.302	0.338	0.258	0.394	0.00877	0.048	15.0%	-37.6%
19798-011	8	0.335	0.295	0.375	0.092	0.438	0.0196	0.107	32.1%	-44.0%
19798-012	8	0.332	0.304	0.361	0.246	0.452	0.0137	0.0753	22.6%	-42.9%

Mean Dry Weight-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.32	0.29	0.35	0.253	0.505	0.0149	0.0814	25.4%	0.0%
19798-009	8	0.381	0.361	0.402	0.338	0.502	0.01	0.055	14.4%	-19.2%
19798-010	8	0.369	0.356	0.382	0.31	0.43	0.00645	0.0354	9.58%	-15.3%
19798-011	8	0.404	0.38	0.428	0.298	0.475	0.0118	0.0645	16.0%	-26.4%
19798-012	8	0.412	0.377	0.447	0.254	0.512	0.017	0.0928	22.5%	-28.8%

Americamysis 7-d Survival, Growth and Fecundity Test — EnviroSystems, Inc.

7d Proportion Survived Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
19798-000 R2	1	0.8	1	0.8	0.6	0.8	0.6	0.4
19798-009	1	1	1	0.8	1	0.8	0.8	0.8
19798-010	0.6	0.8	0.8	1	1	0.8	1	1
19798-011	0.2	1	1	0.8	1	1	0.8	1
19798-012	0.8	1	0.6	0.8	1	0.8	0.6	1

Mean Dry Biomass-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
19798-000 R2	0.266	0.24	0.36	0.222	0.176	0.244	0.152	0.202
19798-009	0.35	0.41	0.34	0.312	0.338	0.294	0.402	0.282
19798-010	0.258	0.306	0.29	0.31	0.372	0.278	0.394	0.354
19798-011	0.092	0.366	0.438	0.38	0.334	0.298	0.36	0.414
19798-012	0.246	0.254	0.282	0.41	0.38	0.334	0.302	0.452

Mean Dry Weight-mg Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
19798-000 R2	0.266	0.3	0.36	0.278	0.293	0.305	0.253	0.505
19798-009	0.35	0.41	0.34	0.39	0.338	0.368	0.502	0.352
19798-010	0.43	0.382	0.362	0.31	0.372	0.347	0.394	0.354
19798-011	0.46	0.366	0.438	0.475	0.334	0.298	0.45	0.414
19798-012	0.307	0.254	0.47	0.512	0.38	0.417	0.503	0.452

Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	13-3867-8813	**Endpoint:**	7d Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					18.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-009	-1.8	1.76	0.164	0.9535	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.1123659	0.1123659	1	3.25	0.0930	Non-Significant Effect
Error	0.4841761	0.034584	14			
Total	0.596542	0.1469499	15			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.27	8.89	0.1408	Equal Variances
Distribution	Shapiro-Wilk Normality	0.936		0.3023	Normal Distribution

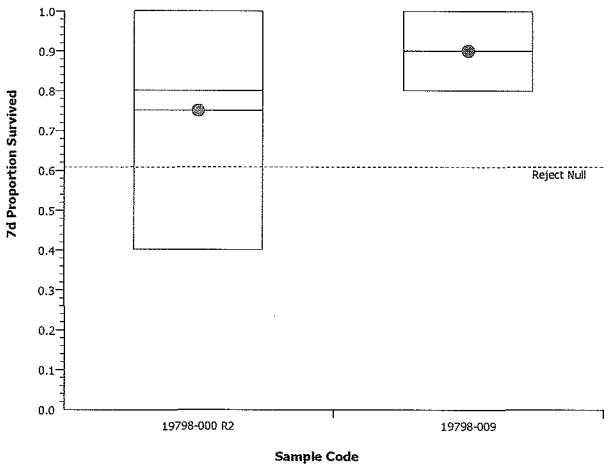
7d Proportion Survived Summary

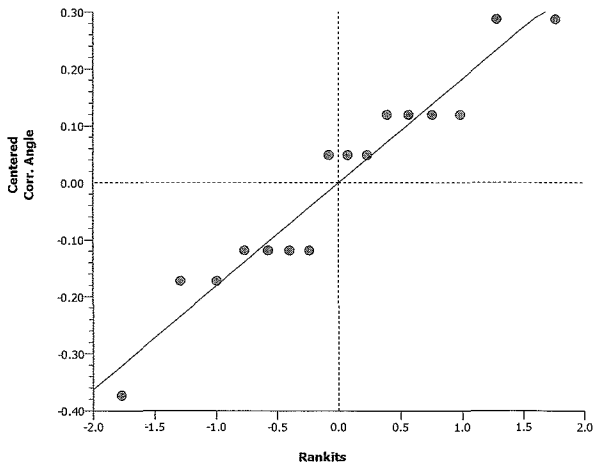
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.75	0.671	0.829	0.4	1	0.0384	0.207	27.6%	0.0%
19798-009	8	0.9	0.859	0.941	0.8	1	0.0199	0.107	11.9%	-20.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	1.06	0.971	1.15	0.685	1.35	0.0427	0.23	21.7%	0.0%
19798-009	8	1.23	1.18	1.27	1.11	1.35	0.0236	0.127	10.4%	-15.8%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	16-3761-3670	**Endpoint:**	7d Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					20.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-010	-1.38	1.76	0.179	0.9048	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.07836773	0.07836773	1	1.89	0.1905	Non-Significant Effect
Error	0.5795844	0.04139888	14			
Total	0.6579521	0.1197666	15			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.78	8.89	0.4665	Equal Variances
Distribution	Shapiro-Wilk Normality	0.946		0.4238	Normal Distribution

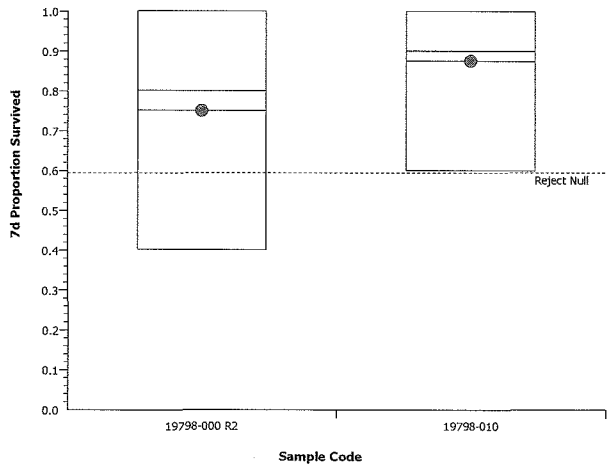
7d Proportion Survived Summary

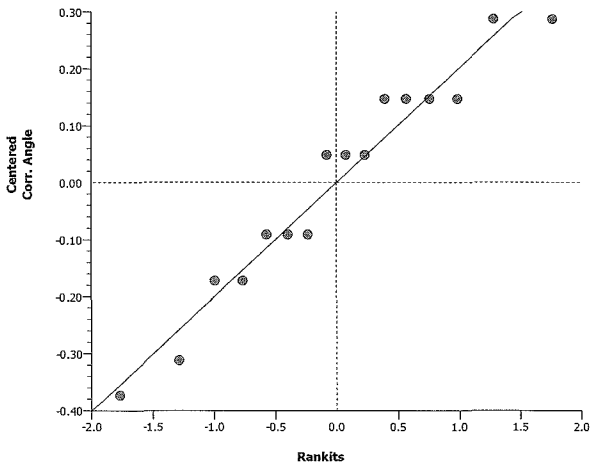
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.75	0.671	0.829	0.4	1	0.0384	0.207	27.6%	0.0%
19798-010	8	0.875	0.818	0.932	0.6	1	0.0276	0.149	17.0%	-16.7%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	1.06	0.971	1.15	0.685	1.35	0.0427	0.23	21.7%	0.0%
19798-010	8	1.2	1.13	1.26	0.886	1.35	0.0321	0.173	14.4%	-13.2%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	11-7958-9081	**Endpoint:**	7d Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					28.8%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-011	-0.862	1.76	0.239	0.7983	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0546945	0.0546945	1	0.743	0.4033	Non-Significant Effect
Error	1.030969	0.07364064	14			
Total	1.085664	0.1283351	15			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.78	8.89	0.4643	Equal Variances
Distribution	Shapiro-Wilk Normality	0.858		0.0180	Normal Distribution

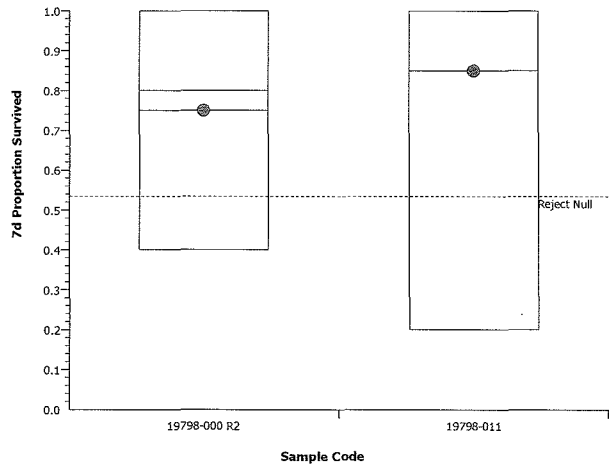
7d Proportion Survived Summary

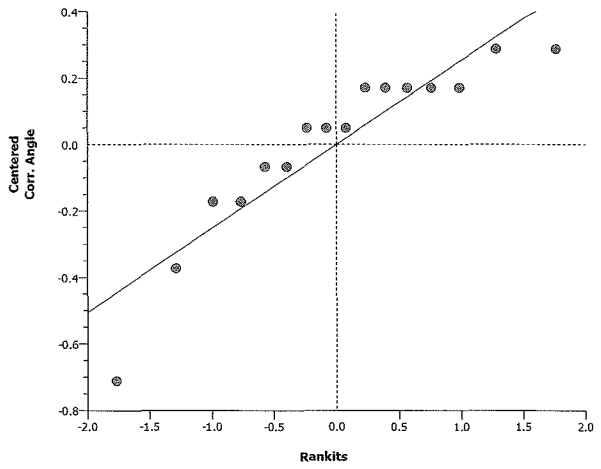
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.75	0.671	0.829	0.4	1	0.0384	0.207	27.6%	0.0%
19798-011	8	0.85	0.744	0.956	0.2	1	0.0516	0.278	32.7%	-13.3%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	1.06	0.971	1.15	0.685	1.35	0.0427	0.23	21.7%	0.0%
19798-011	8	1.18	1.06	1.29	0.464	1.35	0.057	0.307	26.1%	-11.0%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	05-9507-1706	**Endpoint:**	7d Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					21.9%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-012	-0.779	1.76	0.187	0.7755	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02727153	0.02727153	1	0.607	0.4490	Non-Significant Effect
Error	0.6293636	0.04495454	14			
Total	0.6566351	0.07222607	15			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.43	8.89	0.6464	Equal Variances
Distribution	Shapiro-Wilk Normality	0.943		0.3859	Normal Distribution

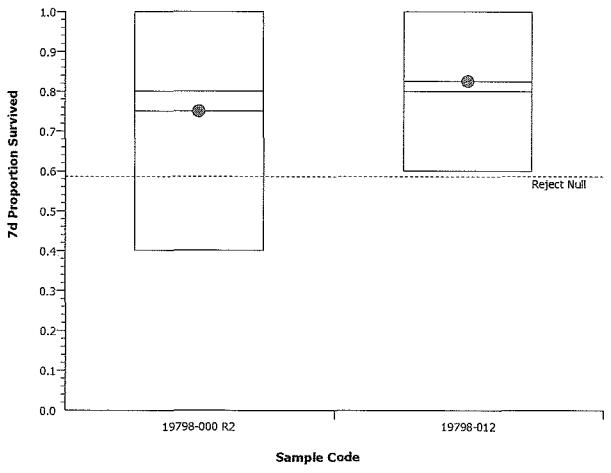
7d Proportion Survived Summary

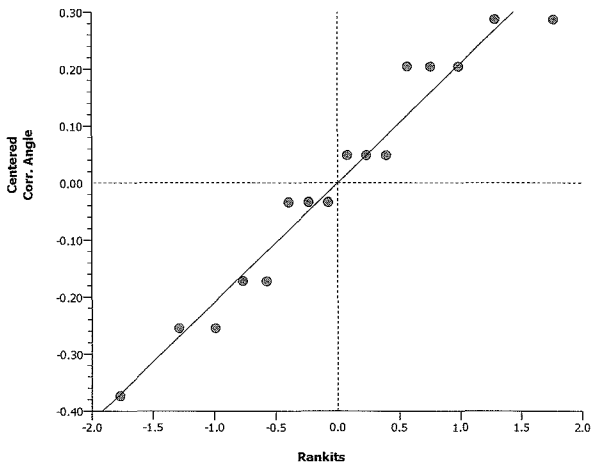
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.75	0.671	0.829	0.4	1	0.0384	0.207	27.6%	0.0%
19798-012	8	0.825	0.762	0.888	0.6	1	0.031	0.167	20.2%	-10.0%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	1.06	0.971	1.15	0.685	1.35	0.0427	0.23	21.7%	0.0%
19798-012	8	1.14	1.07	1.21	0.886	1.35	0.0357	0.192	16.8%	-7.8%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	12-6977-9898	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					21.1%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-009	-3.89	1.76	0.049	0.9992	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04687229	0.04687229	1	15.1	0.0016	Significant Effect
Error	0.04338395	0.003098854	14			
Total	0.09025624	0.04997114	15			

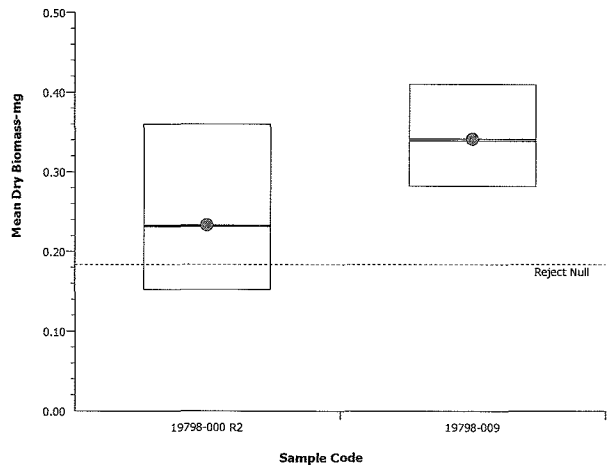
ANOVA Assumptions

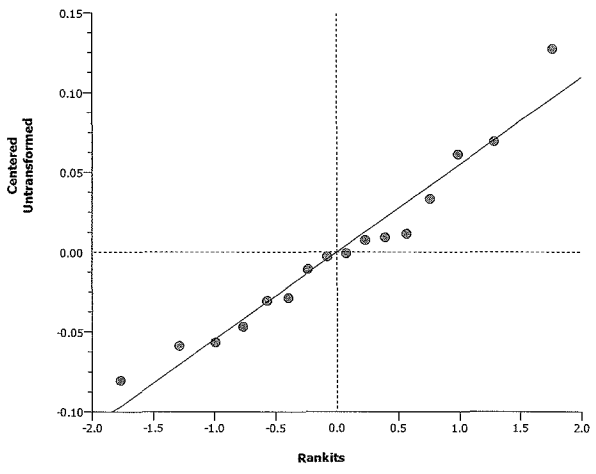
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.87	8.89	0.4269	Equal Variances
Distribution	Shapiro-Wilk Normality	0.955		0.5678	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.233	0.209	0.257	0.152	0.36	0.0118	0.0636	27.3%	0.0%
19798-009	8	0.341	0.323	0.359	0.282	0.41	0.00863	0.0465	13.6%	-46.5%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	00-1180-0754	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					21.3%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-010	-3.11	1.76	0.0496	0.9961	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03062527	0.03062527	1	9.65	0.0077	Significant Effect
Error	0.04441938	0.003172813	14			
Total	0.07504465	0.03379808	15			

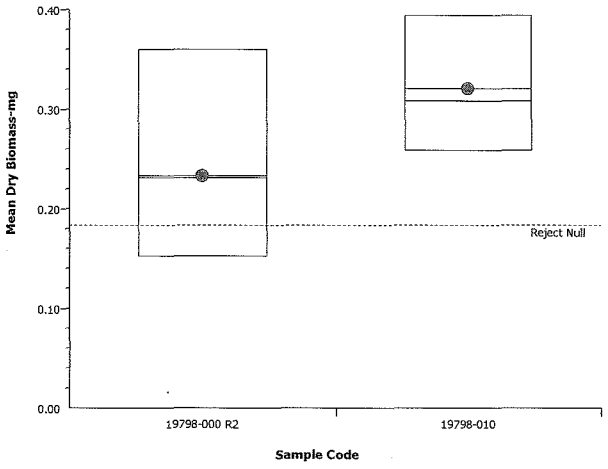
ANOVA Assumptions

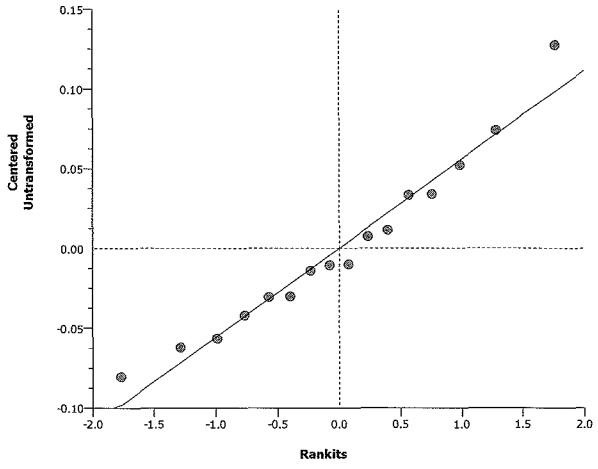
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.75	8.89	0.4767	Equal Variances
Distribution	Shapiro-Wilk Normality	0.962		0.6989	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.233	0.209	0.257	0.152	0.36	0.0118	0.0636	27.3%	0.0%
19798-010	8	0.32	0.302	0.339	0.258	0.394	0.00892	0.048	15.0%	-37.6%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	12-8393-5998	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					33.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-011	-2.32	1.76	0.0778	0.9821	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.04202544	0.04202544	1	5.39	0.0358	Significant Effect
Error	0.1091605	0.007797176	14			
Total	0.1511859	0.04982262	15			

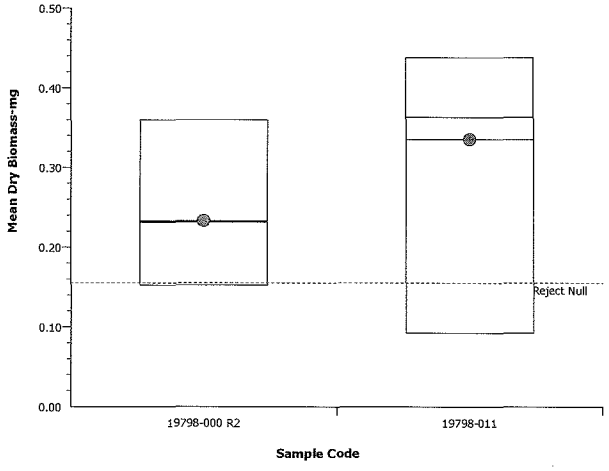
ANOVA Assumptions

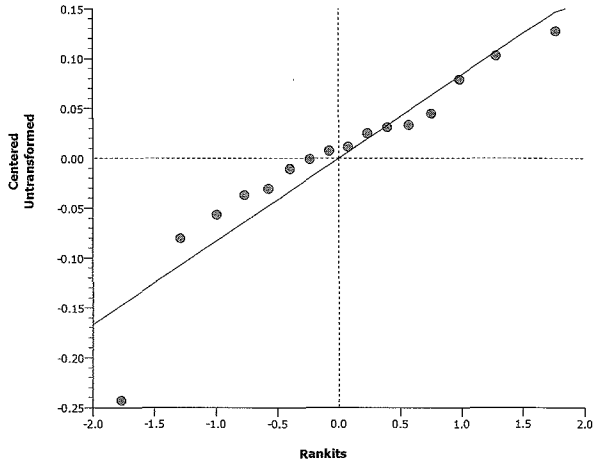
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.86	8.89	0.1890	Equal Variances
Distribution	Shapiro-Wilk Normality	0.896		0.0705	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.233	0.209	0.257	0.152	0.36	0.0118	0.0636	27.3%	0.0%
19798-011	8	0.335	0.294	0.376	0.092	0.438	0.02	0.107	32.1%	-44.0%

Graphics





Americamysis 7-d Survival, Growth and Fecundity Test — **EnviroSystems, Inc.**

Analysis ID:	15-7056-2833	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jul-10 12:38	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	16-8086-3440	**Test Type:**	Growth-Survival-Fec (7d)	**Analyst:**	
Start Date:	16 Jun-10 15:45	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	23 Jun-10 09:45	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	6d 18h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	7 d

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	0	C > T	Not Run					26.4%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-012	-2.86	1.76	0.0614	0.9937	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.03980035	0.03980035	1	8.2	0.0125	Significant Effect
Error	0.06794921	0.004853515	14			
Total	0.1077496	0.04465387	15			

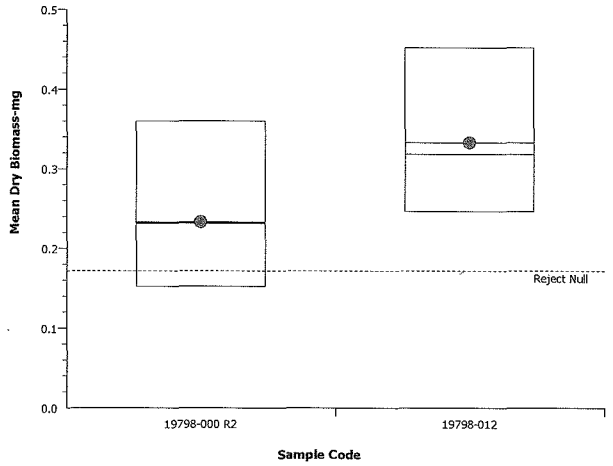
ANOVA Assumptions

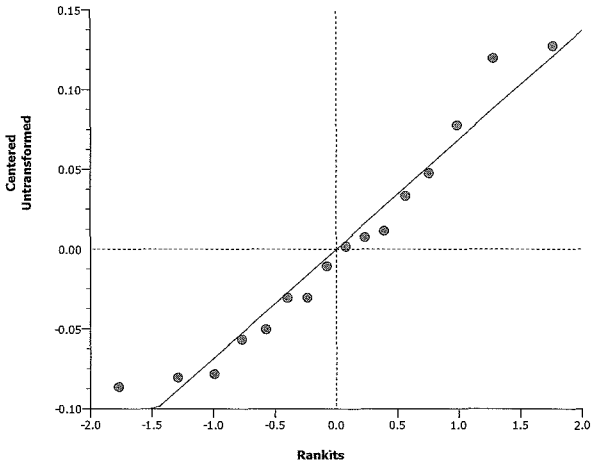
Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	1.4	8.89	0.6664	Equal Variances
Distribution	Shapiro-Wilk Normality	0.937		0.3135	Normal Distribution

Mean Dry Biomass-mg Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	8	0.233	0.209	0.257	0.152	0.36	0.0118	0.0636	27.3%	0.0%
19798-012	8	0.332	0.304	0.361	0.246	0.452	0.014	0.0753	22.6%	-42.9%

Graphics





Larval Fish Dry Weight Summary Sheet

Study:	19798 S2	
Client:	WHG AB7DCR	
Date/Time/Init:	06/24/10 1125 JQ	06/22/10 1030 JQ
Conc	Fish and Foil (mg)	Tare Wt (mg)
Lab A	206.69	205.36
Lab B	209.7	208.5
Lab C	209.63	207.83
Lab D	206.94	205.83
Lab E	207.18	206.3
Lab F	210.05	208.83
Lab G	207.42	206.66
Lab H	210.89	209.88
009A	210.89	209.14
009B	210.37	208.32
009C	209.6	207.9
009D	211.05	209.49
009E	209.95	208.26
009F	210.05	208.58
009G	210.23	208.22
009H	209.87	208.46
010A	208.69	207.4
010B	209.19	207.66
010C	208.59	207.14
010D	211.59	210.04
010E	209.8	207.94
010F	208.39	207
010G	210.37	208.4
010H	209.59	207.82
011A	209.2	208.74
011B	209.73	207.9
011C	211.84	209.65
011D	208.74	206.84
011E	209.76	208.09
011F	209.67	208.18
011G	208.88	207.08
011H	210.01	207.94
012A	209.25	208.02
012B	209.72	208.45
012C	207.17	205.76
012D	211.15	209.1
012E	210	208.1
012F	210.25	208.58
012G	207.44	205.93
012H	208.89	206.63



Aquatic Research Organisms

DATA SHEET

Rec 6/16/10

I. Organism History

Species AMERICAMYSIS bahia

Source: Lab reared ✓ Hatchery reared _____ Field collected _____

Hatch date 6-9-10 Receipt date _____

Lot number 060910MS Strain _____

Brood origination FLORIDA

II. Water Quality

Temperature 25 °C Salinity ≈30 ppt D.O. — ppm

pH 7.8 su Hardness — ppm Alkalinity — ppm

III. Culture Conditions

Freshwater _____ Saltwater ✓ Other _____

Recirculating ✓ Flow through _____ Static _____

DIET: Flake food ✓ Phytoplankton _____ Trout chow ✓

Artemia ✓ Rotifers _____ YCT _____ Other Ewos Shrimp Diet

Prophylactic treatments: _____

Comments: _____

_____

IV. Shipping Information

Client: ESI # of Organisms 240+

Carrier: _____ Date shipped 6-16-10

Biologist: Mark Dominguez

PO BOX 1271 HAMPTON NH 03843-1271 (603) 926-1650 AROFISH@AOL.COM

Arbacia punctulata Chronic Fertilization Assay
Water Quality and Gamete Preparation Data

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: New Bedford	DATE: 6/15/10 INITIALS: SJ

SALINITY ADJUSTMENT RECORD: 500 mL -001 + 10 g SALT (A-2606)

SALINITY ADJUSTMENT RECORD: 500 mL -002 + 0 g SALT (A-2606)

SALINITY ADJUSTMENT RECORD: 500 mL -003 + 6 g SALT (A-2606)

SALINITY ADJUSTMENT RECORD: 500 mL -004 + 8 g SALT (A-2606)

SALINITY ADJUSTED SAMPLE	D.O. (mg/L)	pH (SU)	SPEC COND (µmhos)	TEMP (°C)	SALINITY (ppt)
Lab Control	7.8	8.06	44660	20	29
-001	8.6	7.58	44900	20	29.1
-002	9.2	7.71	43640	20	29
-003	9.4	7.57	44780	20	29
-004	8.1	7.59	45710	20	30

METERS USED

DO meter # 24 DO probe # 89 pH meter # 1097 pH probe # 90 S/C meter # YSI30D S/C probe # YSI30D

SALINITY meter # YSI30D

DATE & INITIALS FOR GAMETE PREPARATION: 6/15/10 LB

SPERM DILUTIONS:

HEMACYTOMETER COUNT, E: 118 X 10^4 = SPM SOLUTION E = 1.18×10^6

SPERM CONCENTRATIONS:
SOLUTION E X 40 = SOLUTION A = 4.72×10^7 SPM
SOLUTION E X 20 = SOLUTION B = 2.36×10^7 SPM
SOLUTION E X 5 = SOLUTION C = 5.90×10^6 SPM

FINAL COUNTS:

FINAL SPERM COUNT: 4.72×10^7
FINAL EGG COUNT: 2500

TEST TIMES:

SPERM COLLECTED: 1105
EGGS COLLECTED: 1105
SPERM ADDED: 1140
EGGS ADDED: 1240
FIXATIVE ADDED: 1300

See ESI SOP #1412 for additional information

S1

Arbacia punctulata Chronic Fertilization Assay

SAMPLE USE RECORD

STUDY: 19798	CLIENT: Woods Hole Group New Bedford	
SPECIES: *A. punctulata*		
	Day: 0	
SAMPLE	Volume Used (mL)	ESI Cube ID
Lab Control	500	~~0~~
-001	↓	001
-002	↓	002
-003	↓	003
-004	↓	004
INITIALS:	JJ	
TIME:	1000	
DATE:	6/15/10	

FERTILIZATION COUNTS

STUDY	CLIENT: Woods Hole Group	LOCATION: New Bedford	DATE 6/15/10 INITIALS UB

	REPLICATE VIAL			
	1	2	3	4
SAMPLE	FERT/TOTAL	FERT/TOTAL	FERT/TOTAL	FERT/TOTAL
Lab Control	99/101	100/101	100/102	101/103
-001	100/101	100/100	100/104	99/104
-002	111/113	100/101	100/103	100/105
-003	100/101	100/104	135/137	99/102
-004	100/102	100/102	99/101	100/105

CETIS Summary Report

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Batch ID:	21-0824-6027	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	15 Jun-10 11:40	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	15 Jun-10 13:00	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Sample Code	Sample ID	Sample Date	Receive Date	Sample Age	Client Name	Project
19798-000	17-0812-3739	15 Jun-10 11:00	15 Jun-10 11:00	40m	Woods Hole Group	Ecological Risk Assessme
19798-001	02-8950-1966	14 Jun-10 09:20	14 Jun-10 18:45	26h		
19798-002	15-5773-3828	14 Jun-10 09:50	14 Jun-10 18:45	26h		
19798-003	11-7486-5003	14 Jun-10 12:12	14 Jun-10 18:45	23h		
19798-004	13-7764-6453	14 Jun-10 13:10	14 Jun-10 18:45	22h		

Sample Code	Material Type	Sample Source	Station Location	Latitude	Longitude
19798-000	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-Lab Control		
19798-001	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-001		
19798-002	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-002		
19798-003	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-003		
19798-004	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-004		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
09-5382-1410	Proportion Fertilized	Control Resp	0.9828	0.7 - 1	Yes	Result Within Limits
11-3009-1247	Proportion Fertilized	Control Resp	0.9828	0.7 - 1	Yes	Result Within Limits
15-6758-5484	Proportion Fertilized	Control Resp	0.9828	0.7 - 1	Yes	Result Within Limits
20-6604-5460	Proportion Fertilized	Control Resp	0.9828	0.7 - 1	Yes	Result Within Limits
09-5382-1410	Proportion Fertilized	PMSD	0.01288	NL - 0.25	No	Result Within Limits
11-3009-1247	Proportion Fertilized	PMSD	0.01454	NL - 0.25	No	Result Within Limits
15-6758-5484	Proportion Fertilized	PMSD	0.01668	NL - 0.25	No	Result Within Limits
20-6604-5460	Proportion Fertilized	PMSD	0.02725	NL - 0.25	No	Result Within Limits

Proportion Fertilized Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	0.9828	0.981	0.9846	0.9802	0.9901	0.000887	0.004858	0.49%	0.0%
19798-001	4	0.9759	0.9674	0.9844	0.9519	1	0.004168	0.02283	2.34%	0.7%
19798-002	4	0.9739	0.9678	0.98	0.9524	0.9901	0.002991	0.01638	1.68%	0.91%
19798-003	4	0.9769	0.972	0.9818	0.9615	0.9901	0.002409	0.01319	1.35%	0.6%
19798-004	4	0.9733	0.9681	0.9786	0.9524	0.9804	0.002551	0.01397	1.44%	0.96%

Proportion Fertilized Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4
19798-000	0.9802	0.9901	0.9804	0.9806
19798-001	0.9901	1	0.9615	0.9519
19798-002	0.9823	0.9901	0.9709	0.9524
19798-003	0.9901	0.9615	0.9854	0.9706
19798-004	0.9804	0.9804	0.9802	0.9524

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	20-6604-5460	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jun-10 15:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	21-0824-6027	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	15 Jun-10 11:40	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	15 Jun-10 13:00	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					2.73%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-001	0.2821	1.943	0.08094	0.3937	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.687	2.127	0.5008	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0002760987	0.0002760987	1	0.07956	0.7874	Non-Significant Effect
Error	0.02082229	0.003470382	6			
Total	0.02109839	0.003746481	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	15.65	47.47	0.0491	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9644		0.8511	Normal Distribution

Proportion Fertilized Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	0.9828	0.981	0.9847	0.9802	0.9901	0.0009021	0.004858	0.49%	0.0%
19798-001	4	0.9759	0.9672	0.9846	0.9519	1	0.004239	0.02283	2.34%	0.7%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	1.441	1.433	1.448	1.43	1.471	0.003792	0.02042	1.42%	0.0%
19798-001	4	1.429	1.398	1.459	1.35	1.521	0.015	0.08077	5.65%	0.82%

Proportion Fertilized Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4
19798-000	0.9802	0.9901	0.9804	0.9806
19798-001	0.9901	1	0.9615	0.9519

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	15-6758-5484	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jun-10 15:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	21-0824-6027	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	15 Jun-10 11:40	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	15 Jun-10 13:00	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					1.67%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-002	0.9306	1.943	0.054	0.1940	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.754	2.127	0.3919	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.001337632	0.001337632	1	0.866	0.3880	Non-Significant Effect
Error	0.009268135	0.001544689	6			
Total	0.01060577	0.002882321	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	6.409	47.47	0.1614	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9386		0.5971	Normal Distribution

Proportion Fertilized Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	0.9828	0.981	0.9847	0.9802	0.9901	0.0009021	0.004858	0.49%	0.0%
19798-002	4	0.9739	0.9677	0.9801	0.9524	0.9901	0.003042	0.01638	1.68%	0.91%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	1.441	1.433	1.448	1.43	1.471	0.003792	0.02042	1.42%	0.0%
19798-002	4	1.415	1.395	1.434	1.351	1.471	0.0096	0.0517	3.65%	1.8%

Proportion Fertilized Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4
19798-000	0.9802	0.9901	0.9804	0.9806
19798-002	0.9823	0.9901	0.9709	0.9524

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	11-3009-1247	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jun-10 15:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	21-0824-6027	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	15 Jun-10 11:40	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	15 Jun-10 13:00	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					1.45%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-003	0.7013	1.943	0.04806	0.2547	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.537	2.127	0.8036	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0006018261	0.0006018261	1	0.4918	0.5094	Non-Significant Effect
Error	0.007341721	0.00122362	6			
Total	0.007943547	0.001825446	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	4.869	47.47	0.2262	Equal Variances
Distribution	Shapiro-Wilk Normality	0.9434		0.6449	Normal Distribution

Proportion Fertilized Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	0.9828	0.981	0.9847	0.9802	0.9901	0.0009021	0.004858	0.49%	0.0%
19798-003	4	0.9769	0.9719	0.9819	0.9615	0.9901	0.00245	0.01319	1.35%	0.6%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	1.441	1.433	1.448	1.43	1.471	0.003792	0.02042	1.42%	0.0%
19798-003	4	1.423	1.406	1.44	1.373	1.471	0.008367	0.04506	3.17%	1.2%

Proportion Fertilized Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4
19798-000	0.9802	0.9901	0.9804	0.9806
19798-003	0.9901	0.9615	0.9854	0.9706

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	09-5382-1410	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	15 Jun-10 15:46	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	21-0824-6027	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	15 Jun-10 11:40	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	15 Jun-10 13:00	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					1.29%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000		19798-004	1.357	1.943	0.04332	0.1118	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	2.037	2.127	0.0967	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.001830352	0.001830352	1	1.842	0.2236	Non-Significant Effect
Error	0.005963526	0.000993921	6			
Total	0.007793878	0.002824273	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.767	47.47	0.3048	Equal Variances
Distribution	Shapiro-Wilk Normality	0.8504		0.0962	Normal Distribution

Proportion Fertilized Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	0.9828	0.981	0.9847	0.9802	0.9901	0.0009021	0.004858	0.49%	0.0%
19798-004	4	0.9733	0.968	0.9787	0.9524	0.9804	0.002595	0.01397	1.44%	0.96%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000	4	1.441	1.433	1.448	1.43	1.471	0.003792	0.02042	1.42%	0.0%
19798-004	4	1.41	1.395	1.425	1.351	1.43	0.00736	0.03963	2.81%	2.1%

Proportion Fertilized Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4
19798-000	0.9802	0.9901	0.9804	0.9806
19798-004	0.9804	0.9804	0.9802	0.9524

S2

Arbacia punctulata Chronic Fertilization Assay
Water Quality and Gamete Preparation Data

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: New Bedford	DATE: 6/16/10 INITIALS: LB

SALINITY ADJUSTMENT RECORD: 200 mL -001 + 1 g SALT A-2606

SALINITY ADJUSTMENT RECORD: 200 mL -002 + 0 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -003 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -004 + 1 g SALT

SALINITY ADJUSTED SAMPLE	D.O. (mg/L)	pH (SU)	SPEC COND (µmhos)	TEMP (°C)	SALINITY (ppt)
Lab Control	7.2	7.67	43830	21	28
-001	@LB 7.4	@LB 7.58 ~~7.35~~	45770	21	~~25.8~~ 30 @LB
-002	7.5	7.73	43760	21	28
-003	7.7	7.89	45770	21	30
-004	6.0	7.47	45040	21	30

METERS USED

DO meter # 23 DO probe # 90 pH meter # 470 pH probe # 92 S/C meter # 15130D S/C probe # 15130D

SALINITY meter # 15130D

DATE & INITIALS FOR GAMETE PREPARATION: 6/16/10 LB

SPERM DILUTIONS:

HEMACYTOMETER COUNT, E: 120 X 10^4 = SPM SOLUTION E = 1.20×10^6

SPERM CONCENTRATIONS:
SOLUTION E X 40 = SOLUTION A = 4.80×10^7 SPM
SOLUTION E X 20 = SOLUTION B = 2.40×10^7 SPM
SOLUTION E X 5 = SOLUTION C = 6.00×10^6 SPM

FINAL COUNTS:

FINAL SPERM COUNT: 4.80×10^7
FINAL EGG COUNT: 2400

TEST TIMES:

SPERM COLLECTED: 1135
EGGS COLLECTED: 1135
SPERM ADDED: 1214
EGGS ADDED: 1214
FIXATIVE ADDED: 1334

See ESI SOP #1412 for additional information

Arbacia punctulata Chronic Fertilization Assay

SAMPLE USE RECORD

STUDY: 19798	CLIENT: Woods Hole Group New Bedford	
SPECIES: *A. punctulata*		
	Day: 0	
SAMPLE	Volume Used (mL)	ESI Cube ID
Lab Control	200	Lab
-001	↓	009
-002	↓	010
-003	↓	011
-004	↓	012
INITIALS:	UB	
TIME:	0930	
DATE:	6/16/10	

FERTILIZATION COUNTS

STUDY S2	CLIENT Woods Hole Group	LOCATION New Bedford	DATE 6/14/10 INITIALS UB
	REPLICATE VIAL		
SAMPLE	1 FERT/TOTAL	2 FERT/TOTAL	3 FERT/TOTAL	4 FERT/TOTAL
Lab Control	100/108	103/111	100/104	101/108
009 ~~-001~~	99/102	100/104	92/100	100/107
010 ~~-002~~	31/112	44/125	81/118	49/100
011 ~~-003~~	100/109	101/110	110/112	100/101
012 ~~-004~~	95/110	100/120	97/110	100/107

UB 6/16/10

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Batch ID:	03-1328-2550	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:14	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:34	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Sample Code	Sample ID	Sample Date	Receive Date	Sample Age	Client Name	Project
19798-000 R2	16-4709-6567	16 Jun-10 11:00	16 Jun-10 11:00	74m	Woods Hole Group	Ecological Risk Assessme
19798-009	10-5403-7534	15 Jun-10 09:15	15 Jun-10 18:53	27h		
19798-010	01-7208-1383	15 Jun-10 10:00	15 Jun-10 18:53	26h		
19798-011	13-9066-0337	15 Jun-10 14:45	15 Jun-10 18:53	21h		
19798-012	11-7416-3137	15 Jun-10 13:15	15 Jun-10 18:53	23h		

Sample Code	Material Type	Sample Source	Station Location	Latitude	Longitude
19798-000 R2	Surface Water	New Bedford Harbor Dredge Moni	Lab Control		
19798-009	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-001		
19798-010	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-002		
19798-011	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-003		
19798-012	Surface Water	New Bedford Harbor Dredge Moni	WQ-TOX-004		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
01-8053-7000	Proportion Fertilized	Control Resp	0.9376	0.7 - 1	Yes	Result Within Limits
03-3699-3338	Proportion Fertilized	Control Resp	0.9376	0.7 - 1	Yes	Result Within Limits
11-6145-3590	Proportion Fertilized	Control Resp	0.9376	0.7 - 1	Yes	Result Within Limits
16-1043-9752	Proportion Fertilized	Control Resp	0.9376	0.7 - 1	Yes	Result Within Limits
01-8053-7000	Proportion Fertilized	PMSD	0.06249	NL - 0.25	No	Result Within Limits
03-3699-3338	Proportion Fertilized	PMSD	0.04284	NL - 0.25	No	Result Within Limits
11-6145-3590	Proportion Fertilized	PMSD	0.03459	NL - 0.25	No	Result Within Limits
16-1043-9752	Proportion Fertilized	PMSD	0.1219	NL - 0.25	No	Result Within Limits

Proportion Fertilized Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	0.9376	0.9315	0.9438	0.9259	0.9615	0.002997	0.01642	1.75%	0.0%
19798-009	4	0.9467	0.9379	0.9554	0.92	0.9706	0.004282	0.02346	2.48%	-0.96%
19798-010	4	0.4513	0.3841	0.5185	0.2768	0.6864	0.03285	0.1799	39.86%	51.87%
19798-011	4	0.952	0.9372	0.9667	0.9174	0.9901	0.007226	0.03958	4.16%	-1.53%
19798-012	4	0.8783	0.8625	0.8942	0.8333	0.9346	0.007758	0.04249	4.84%	6.33%

Proportion Fertilized Detail

Sample Code	Rep 1	Rep 2	Rep 3	Rep 4
19798-000 R2	0.9259	0.9279	0.9615	0.9352
19798-009	0.9706	0.9615	0.92	0.9346
19798-010	0.2768	0.352	0.6864	0.49
19798-011	0.9174	0.9182	0.9821	0.9901
19798-012	0.8636	0.8333	0.8818	0.9346

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	11-6145-3590	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	16 Jun-10 14:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	03-1328-2550	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:14	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:34	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					3.46%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-009	-0.678	1.94	0.0624	0.7385	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.38	2.13	1.0000	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.0009484015	0.0009484015	1	0.46	0.5230	Non-Significant Effect
Error	0.01237633	0.002062721	6			
Total	0.01332473	0.003011123	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	2.13	47.5	0.5504	Equal Variances
Distribution	Shapiro-Wilk Normality	0.911		0.3615	Normal Distribution

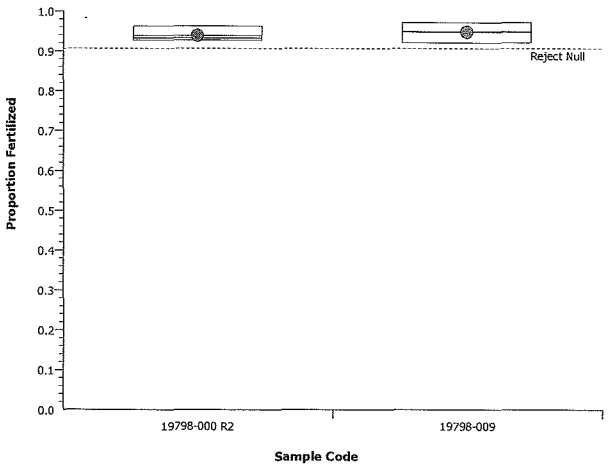
Proportion Fertilized Summary

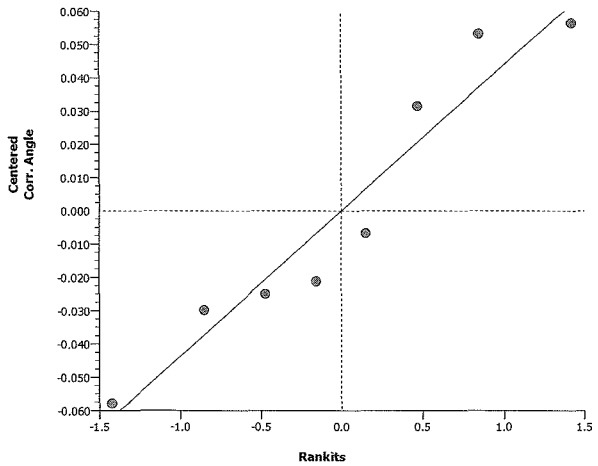
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	0.938	0.931	0.944	0.926	0.962	0.00305	0.0164	1.75%	0.0%
19798-009	4	0.947	0.938	0.956	0.92	0.971	0.00436	0.0235	2.48%	-0.96%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	1.32	1.31	1.33	1.3	1.37	0.00674	0.0363	2.75%	0.0%
19798-009	4	1.34	1.32	1.36	1.28	1.4	0.00984	0.053	3.95%	-1.65%

Graphics





Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	16-1043-9752	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	16 Jun-10 14:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	03-1328-2550	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:14	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:34	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					12.2%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-010	6.21	1.94	0.183	0.0004	Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.95	2.13	0.1579	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.6844015	0.6844015	1	38.5	0.0008	Significant Effect
Error	0.1066125	0.01776874	6			
Total	0.791014	0.7021703	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	26	47.5	0.0240	Equal Variances
Distribution	Shapiro-Wilk Normality	0.939		0.5964	Normal Distribution

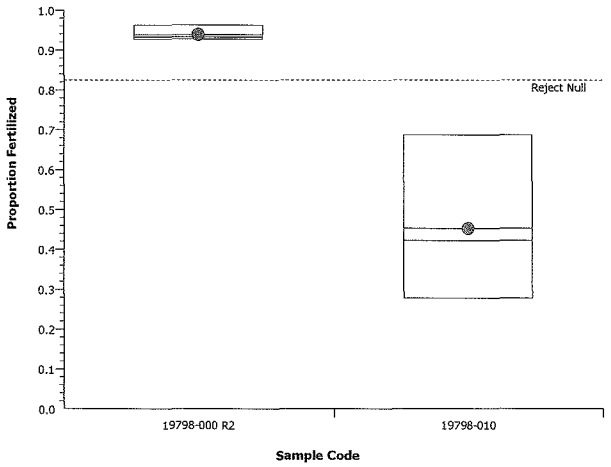
Proportion Fertilized Summary

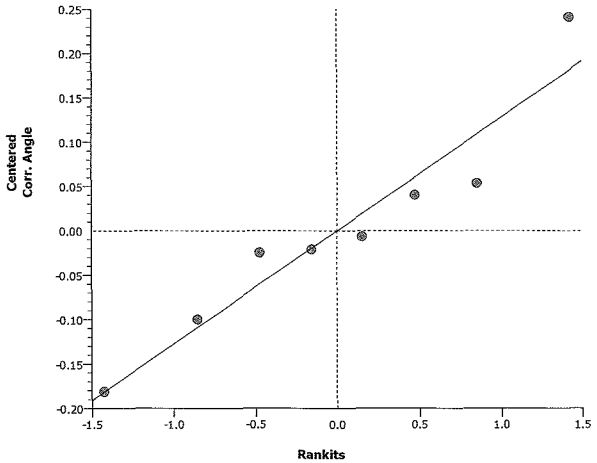
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	0.938	0.931	0.944	0.926	0.962	0.00305	0.0164	1.75%	0.0%
19798-010	4	0.451	0.383	0.52	0.277	0.686	0.0334	0.18	39.9%	51.9%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	1.32	1.31	1.33	1.3	1.37	0.00674	0.0363	2.75%	0.0%
19798-010	4	0.735	0.665	0.806	0.554	0.976	0.0344	0.185	25.2%	44.3%

Graphics





Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	01-8053-7000	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	16 Jun-10 14:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	03-1328-2550	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:14	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:34	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					6.25%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-011	-0.868	1.94	0.105	0.7907	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.48	2.13	0.9461	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.004371539	0.004371539	1	0.754	0.4186	Non-Significant Effect
Error	0.03479438	0.005799063	6			
Total	0.03916591	0.0101706	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	7.8	47.5	0.1255	Equal Variances
Distribution	Shapiro-Wilk Normality	0.93		0.5193	Normal Distribution

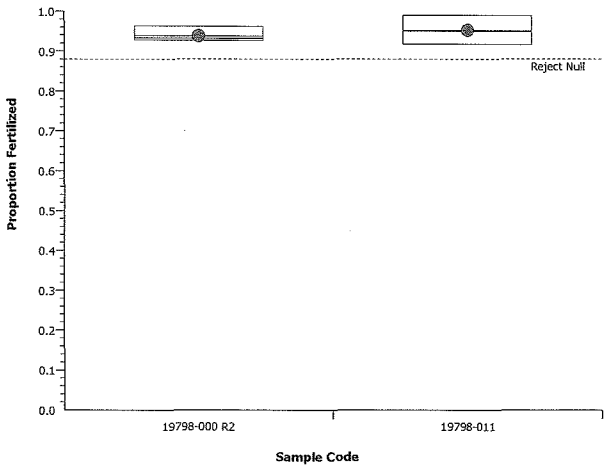
Proportion Fertilized Summary

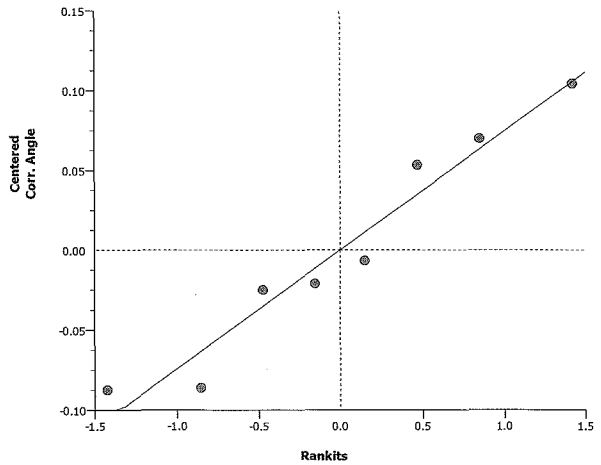
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	0.938	0.931	0.944	0.926	0.962	0.00305	0.0164	1.75%	0.0%
19798-011	4	0.952	0.937	0.967	0.917	0.99	0.00735	0.0396	4.16%	-1.53%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	1.32	1.31	1.33	1.3	1.37	0.00674	0.0363	2.75%	0.0%
19798-011	4	1.37	1.33	1.41	1.28	1.47	0.0188	0.101	7.42%	-3.54%

Graphics





Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	03-3699-3338	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	16 Jun-10 14:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Batch ID:	03-1328-2550	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:14	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:34	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run					4.28%

Equal Variance t Two-Sample Test

Sample Code	vs	Sample Code	Test Stat	Critical	MSD	P-Value	Decision(5%)
19798-000 R2		19798-012	2.62	1.94	0.0754	0.0199	Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.84	2.13	0.2762	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02061363	0.02061363	1	6.85	0.0397	Significant Effect
Error	0.01805411	0.003009018	6			
Total	0.03866774	0.02362265	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Variance Ratio F	3.57	47.5	0.3241	Equal Variances
Distribution	Shapiro-Wilk Normality	0.914		0.3814	Normal Distribution

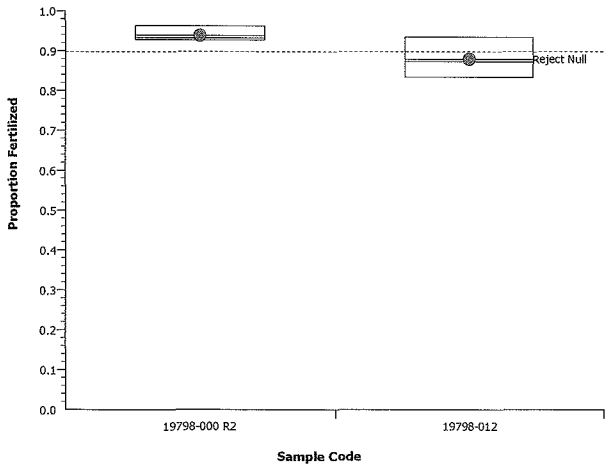
Proportion Fertilized Summary

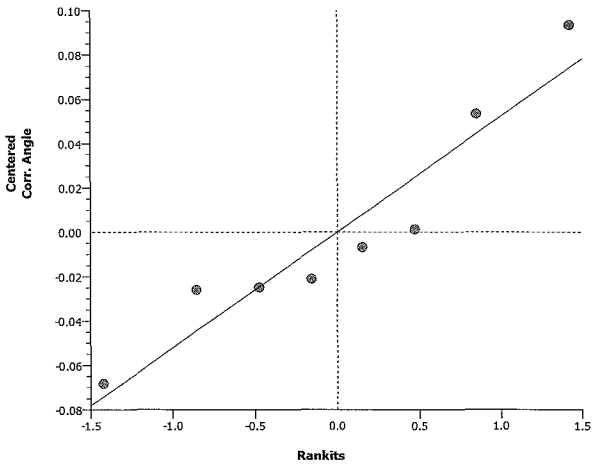
Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	0.938	0.931	0.944	0.926	0.962	0.00305	0.0164	1.75%	0.0%
19798-012	4	0.878	0.862	0.895	0.833	0.935	0.00789	0.0425	4.84%	6.32%

Angular (Corrected) Transformed Summary

Sample Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
19798-000 R2	4	1.32	1.31	1.33	1.3	1.37	0.00674	0.0363	2.75%	0.0%
19798-012	4	1.22	1.19	1.24	1.15	1.31	0.0127	0.0686	5.63%	7.69%

Graphics





SALTWATER ASSAYS

A. bahia, A. punctulata

STUDY: 19798 S1	LOCATION: New Bedford Harbor				
CHEMISTRY	Lab Salt Control	-001	-002	-003	-004
AMMONIA	19797-006	005	006	007	008
AS RECEIVED WATER QUALITIES	Lab Salt Control	-001	-002	-003	-004
SALINITY (ppt)	24	21.4	27.8	25.2	22.6
pH (SU)	7.72	7.34	7.64	7.46	7.26
TRC (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02
DO (mg/L)	8.2	7.1	8.1	6.4	5.8
S/C (µmhos/cm)	38740	34180	43160	39500	35800
WQ STATION USED	2	2	2	2	2
INITIALS	SJ	SJ	SJ	SJ	SJ
A. bahia SALINITY ADJUSTMENT RECORD	Lab Salt Control	-001	-002	-003	-004
SAMPLE (mLs)	1600	19,500	19,500	19,500	19,500
SEA SALT (g) (A-2000)	0	81	3500 mL DI	0	0
DATE:	6/15/10	6/15/10	6/15/10	6/15/10	6/15/10
TIME:	1130	0920	0900	0910	0855
INITIALS:	SJ	SJ	SJ	SJ	SJ

Sample ID	ESI Cube ID
-001	-001
-002	-002
-003	-003
-004	-004

SALTWATER ASSAYS

S2

A. bahia, A. punctulata

STUDY: 19798	LOCATION: New Bedford Harbor				
CHEMISTRY	Lab Salt Control	009 ~~-001~~ @ 5 6/16/10	010 ~~-002~~	011 ~~-003~~	012 ~~-004~~
AMMONIA	19797-008	-013	-014	-015	-016
AS RECEIVED WATER QUALITIES	Lab Salt Control	009 ~~-001~~	010 ~~-002~~	011 ~~-003~~	012 ~~-004~~
SALINITY (ppt)	25	25.8	28.0	25.1	26.4
pH (SU)	7.90	7.35	7.61	7.68	7.27
TRC (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02
DO (mg/L)	7.5	8.7	9.0	@ LB 6/16/10 ~~8.4~~ 9.0	7.1
S/C (µmhos/cm)	39640	40490	43540	39660	41280
WQ STATION USED	1	1	1	1	1
INITIALS	SJ	LB	LB	LB	LB
A. bahia SALINITY ADJUSTMENT RECORD	Lab Salt Control	009 ~~-001~~	010 ~~-002~~	011 ~~-003~~	012 ~~-004~~
SAMPLE (mLs)	@ 5 6/16/10	19,500	19,500	19,500	19,500
SEA SALT (g)		~~0~~	4000 mL DI	~~0~~	~~0~~
DATE:		6/16	6/16/10	6/16	6/16
TIME:		0910	0930	0940	0945
INITIALS:		SJ	SJ	SJ	SJ

Sample ID	ESI Cube ID
-001	~~-001~~ 009
-002	~~-002~~ 010
-003	~~-003~~ 011
-004	~~-004~~ 012

Americamysis bahia 7 DAY CHRONIC ASSAY
NEW WATER QUALITIES

STUDY:	CLIENT:	LOCATION:	LAB CONTROL:
19798	Woods Hole Group	NEW BEDFORD	HAMPTON ESTUARY

		NEW DISSOLVED OXYGEN (mg/L)							NEW SALINITY (ppt)						
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6
LAB	A	8.2	7.4	9.3	6.8	7.0	7.1	6.8	25	25	24	25	24	25	~~24~~ 25
-001	A	8.1	6.1	9.8	6.3	6.2	6.4	6.5	24	24	24	24	24	24	~~25~~ 24
-002	A	8.1	7.2	9.6	7.2	~~8.1~~	~~6.8~~ 6.9	7.5	24	24	24	25	24	24	25
-003	A	7.5	6.5	9.2	6.7	6.6	7.0	7.16	25	26	26	25	26	~~26~~	26
-004	A	6.7	6.8	8.2	6.7	6.9	6.9	6.9	23	23	23	23	23	23	23

		NEW pH (SU)							NEW TEMPERATURE (°C)						
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6
LAB	A	7.72	7.91	7.92	8.00	8.03	8.03	7.99	~~24~~ 25	25	25	26	25	25	25
-001	A	7.53	7.30	7.40	7.39	7.32	7.27	7.27	~~24~~ 25	26	25	24	25	25	25
-002	A	7.57	7.58	7.61	7.54	7.58	7.55	7.61	~~24~~ 25	25	25	24	25	25	25
-003	A	7.21	7.22	7.44	7.33	7.38	7.24	7.33	~~24~~ 25	25	25	24	25	25	25
-004	A	7.29	7.25	7.28	7.26	7.33	7.30	7.28	~~24~~ 25	25	25	26	25	25	25
INC TEMP:		25	25	25	25	25	25	25	ST 6/15/10						
DATE:		6/15/10	6/16/10	6/17	6/18	6/19	6/20	6/21							
TIME:		1135	1205	1245	1410	1245	1415	1050							
INIT:		ST	kc	JQ	ST	YB	JQ	kc							

WATER QUALITY METERS USED NEW WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #		1	1	1	2	2	2	
Initials		kc	JQ	ST	YB	JQ	kc	
Date	6/15/10	6/16/10	6/17/10	6/18	6/19	6/20/10	6/21/10	

S2

Americamysis bahia 7 DAY CHRONIC ASSAY
NEW WATER QUALITIES

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: NEW BEDFORD	LAB CONTROL: HAMPTON ESTUARY

		NEW DISSOLVED OXYGEN (mg/L)							NEW SALINITY (ppt)						
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6
LAB	A	7.5	7.1	7.4	7.0	7.2	7.2	7.5	25	24	24	25	24	24	24
~~001~~ 009	A	7.3	6.1	5.3	5.0	5.7	6.4	5.4	26	26	26	26	26	26	26
~~002~~ 010	A	7.4	7.0	7.6	7.1	7.6	7.8	8.0	25	25	25	24	24	24	24
~~003~~ 011	A	7.6	6.8	6.3	6.7	7.1	7.0	6.7	25	25	25	25	25	25	25
~~004~~ 012	A	7.3	7.1	6.1	6.2	7.1	6.9	6.6	26	26	26	26	26	26	26

(15) SJ 6/16/10

		NEW pH (SU)							NEW TEMPERATURE (°C)						
CONC	REP	0	1	2	3	4	5	6	0	1	2	3	4	5	6
LAB	A	7.90	7.83	7.96	8.00	8.05	7.97	7.98	25	25	25	25	25	25	25
~~001~~ 009	A	7.39	7.35	7.23	7.16	7.27	7.11	7.15	25	25	25	25	25	25	25
~~002~~ 010	A	7.57	7.67	7.67	7.62	7.60	7.57	7.62	25	25	25	25	25	25	25
~~003~~ 011	A	7.62	7.60	7.54	7.42	7.40	7.37	7.35	25	25	25	25	25	25	26
~~004~~ 012	A	7.34	7.33	7.28	7.30	7.34	7.20	7.21	25	25	25	25	25	25	25
INC TEMP:		25	25	25	25	25	25	25							
DATE:		6/16/10	6/17	6/18	6/19	6/20	6/21	6/22							
TIME:		1150	1155	1500	1405	1310	1220	1040							
INIT:		SJ	SJ	WM	UB	JQ	JQ	UB							

WATER QUALITY METERS USED NEW WATER QUALITIES								
	0	1	2	3	4	5	6	7
Water Quality Station #		2	1	2	2	1	2	
Initials		SJ	WM	UB	JQ	JQ	UB	
Date	6/16/10	6/17	6/18	6/19	6/20	6/21	6/22	

Americamysis bahia 7 DAY CHRONIC ASSAY
OLD WATER QUALITIES

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: NEW BEDFORD	LAB CONTROL: HAMPTON ESTUARY

OLD SALINITY (ppt)

Conc	Rep	1	2	3	4	5	6	7
Control	A	25	24	24	24	24	25	24
-001	A	25	24	24	24	25	25	25
-002	A	25	25	25	25	25	25	26
-003	A	26	26	26	26	26	26	26
-004	A	24	24	23	23	23	23	24

OLD pH (SU)

Conc	Rep	1	2	3	4	5	6	7
Control	A	7.73	7.67	7.79	7.86	7.85	7.69	7.68
-001	A	7.57	7.52	7.69	7.67	7.72	7.66	7.58
-002	A	7.48	7.60	7.77	7.72	7.77	7.77	7.68
-003	A	7.61	7.49	7.67	7.66	7.72	7.66	7.66
-004	A	7.64	7.53	7.69	7.65	7.70	7.62	7.65

OLD TEMPERATURE (°C)

Conc	Rep	1	2	3	4	5	6	7
Control	A	26	25	25	25	25	25	25
-001	A	26	25	25	25	25	25	25
-002	A	26	25	25	25	25	25	25
-003	A	26	25	25	25	25	25	25
-004	A	26	25	25	25	25	25	25
Out 11/2/10		~~26~~	~~25~~	~~25~~	~~25~~	~~25~~	~~25~~	~~25~~
INC TEMP:		25	25	25		25	25	25
DATE:		6/16/10	6/17/10	6/18	6/19	6/20	6/21	6/22
TIME:		1100	1145	1315	1210	1335	0925	1200
INITIALS:		KE	JQ	SJ	LB	JQ	KE	LB

GENERAL NOTES - for additional information refer to SOP #1411 or EPA manual 600/4-91/003

- Test vessels will be 250 mL glass beakers containing a minimum of 150 mL of solution
- 8 replicates per site with 5 organisms each

- Test Temperature: 26±1°C
- Salinity: 25 ±2ppt
- Dissolved Oxygen: >4.3 mg/L

- Photoperiod will be 16 hours light and 8 hours dark.
- Passing criteria require ≥80% survival and average dry weight of ≥0.20 mg/organism in the control vessels.

WATER QUALITY METERS USED
OLD WATER QUALITIES

	0	1	2	3	4	5	6	7
Water Quality Station #		1	2	1	2	2	2	2
Initials		KE	JQ	LB	JQ	JQ	KE	LB
Date	6/15/10	6/16/10	6/17/10	6/18	6/20	6/20/10	6/21/10	6/22

(23) JQ 6/20/10

Americamysis bahia 7 DAY CHRONIC ASSAY
OLD WATER QUALITIES

STUDY: 19798	CLIENT: Woods Hole Group	LOCATION: NEW BEDFORD	LAB CONTROL: HAMPTON ESTUARY

OLD SALINITY (ppt)

Conc	Rep	1	2	3	4	5	6	7
Control	A	25	25	25	24	25	25	25
~~001~~ 009	A	26	26	26	26	27	27	27
~~002~~ 010	A	25	25	25	25	25	25	26
~~003~~ 011	A	26	25	25	26	25	26	26
~~004~~ 012	A	27	26	26	27	26	27	27

OLD pH (SU)

Conc	Rep	1	2	3	4	5	6	7
Control	A	7.59	7.91	7.75	8.05	7.91	7.99	7.90
~~001~~ 009	A	7.49	7.51	7.49	8.03	7.98	7.99	7.98
~~002~~ 010	A	7.64	7.78	7.64	8.03	7.96	7.99	8.00
~~003~~ 011	A	7.48	7.68	7.55	8.02	7.94	7.99	7.96
~~004~~ 012	A	7.57	7.63	7.64	8.07	7.93	8.02	8.01

OLD TEMPERATURE (°C)

Conc	Rep	1	2	3	4	5	6	7
Control	A	25	24 25	25	25	25	25	25
~~001~~ 009	A	25	24 25	25	25	25	25	25
~~002~~ 010	A	25	24 25	25	25	25	25	25
~~003~~ 011	A	25	24 25	25	25	25	25	25
~~004~~ 012	A	25	24 25	25	25	25	25	25
								25 25
INC TEMP:		25	25	25	25	25	25	25
DATE:		6/17/10	6/18	6/19	6/20	6/21	6/22	6/23
TIME:		1100	1440	1250	1200	1130	0945	0945
INITIALS:		SJ	UB	UB	SQ	JQ	UB	DM

GENERAL NOTES - for additional information refer to SOP #1411 or EPA manual 600/4-91/003

- Test vessels will be 250 mL glass beakers containing a minimum of 150 mL of solution
- 8 replicates per site with 5 organisms each

- Test Temperature: 26±1°C
- Salinity: 25 ±2ppt
- Dissolved Oxygen: >4.3 mg/L

- Photoperiod will be 16 hours light and 8 hours dark.
- Passing criteria require ≥80% survival and average dry weight of ≥0.20 mg/organism in the control vessels.

WATER QUALITY METERS USED
OLD WATER QUALITIES

	0	1	2	3	4	5	6	7
Water Quality Station #		2	2	2	2	2	1	1
Initials		SJ	UB	UB	JQ	JQ	UB	DM
Date	6/16/10 SJ	6/17/10	6/18	6/19	6/20	6/21/10	6/22	6/23

Americamysis bahia 7 DAY CHRONIC ASSAY
SAMPLE USE RECORD

STUDY: 19798 | CLIENT: Woods HoleGroup

SPECIES: *A. bahia* | TEST: chronic renewal

Sample	Day: 0		Day: 1		Day: 2		Day	Date	Time	Init
	Volume Used (mL)	ESI Cube ID	Volume Used (mL)	ESI Cube ID	Volume Used (mL)	ESI Cube ID				
Lab Control	1600	n/a	1200	n/a	1200	n/a	0	6/15/10	1130	SJ
-001	↓	-001	↓	-001	↓	-001	1	6/16/10	1140	ne
-002	↓	-002	↓	-002	↓	-002	2	6/17/10	1246	JQ
-003	↓	-003	↓	-003	↓	-003	3	6/18	1355	SJ
-004	↓	-004	↓	-004	↓	-002	4	6/19	~~1405~~ 1330	~~SJ~~
							5	6/20	1410	JQ
							6	6/21/10	1035	ne

Sample	Day: 3		Day: 4		Day: 5	
	Volume Used (mL)	ESI Cube ID	Volume Used (mL)	ESI Cube ID	Volume Used (mL)	ESI Cube ID
Lab Control	1200	n/a	1200	n/a	1200	n/a
-001	↓	-001	↓	001	↓	001
-002	↓	-002	↓	002	↓	002
-003	↓	-003	↓	003	↓	003
-004	↓	-004	↓	004	↓	004

Sample	Day: 6	
	Volume Used (mL)	ESI Cube ID
Lab Control	1200	n/a
-001	↓	001
-002	↓	002
-003	↓	003
-004	↓	004

S2

Americamysis bahia 7 DAY CHRONIC ASSAY
SAMPLE USE RECORD

STUDY: 19798 | CLIENT: Woods HoleGroup

SPECIES: *A. bahia* | TEST: chronic renewal

Sample	Day: 0 Volume Used (mL)	Day: 0 ESI Cube ID	Day: 1 Volume Used (mL)	Day: 1 ESI Cube ID	Day: 2 Volume Used (mL)	Day: 2 ESI Cube ID	Day	Date	Time	Init
Lab Control	1600	n/a	1200	n/a	1200	n/a	0	6/16/10	1130	SJ
~~001~~ 009	↓	-009	↓	009	↓	009	1	6/17	1140	SJ
~~002~~ 010	↓	-010	↓	010	↓	010	2	6/18	1450	LB
~~003~~ 011	↓	-011	↓	011	↓	011	3	6/19	1355	LB
~~004~~ 012	↓	-012	↓	012	↓	012	4	6/20	1305	JQ
							5	6/21	1210	JQ
							6	6/22	1030	LB

(LB) SJ 6/16/10

Sample	Day: 3 Volume Used (mL)	Day: 3 ESI Cube ID	Day: 4 Volume Used (mL)	Day: 4 ESI Cube ID	Day: 5 Volume Used (mL)	Day: 5 ESI Cube ID
Lab Control	1200	n/a	1200	n/a	1200	n/a
~~001~~ 009	↓	009	↓	009	↓	009
~~002~~ 010	↓	010	↓	010	↓	010
~~003~~ 011	↓	011	↓	011	↓	011
~~004~~ 012	↓	012	↓	012	↓	012

Sample	Day: 6 Volume Used (mL)	Day: 6 ESI Cube ID
Lab Control	1200	n/a
~~001~~ 009	↓	009
~~002~~ 010	↓	010
~~003~~ 011	↓	011
~~004~~ 012	↓	012

Report No: 19798 SDG:
Project: New Bedford Harbor - Level I Study

Parameter: Ammonia-N
Matrix: Water
Sampled: 06/15/10 0800

Sample ID:		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
WQ-TOX-001-061410	19798-005	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
WQ-TOX-002-061410	19798-006	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
WQ-TOX-003-061410	19798-007	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
WQ-TOX-004-061410	19798-008	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G

Notes:

ND = Not Detected

Report No: 19798 SDG:
Project: New Bedford Harbor - Level I Study

Parameter: Ammonia-N
Matrix: Water
Sampled: 06/15/10 0815

Sample ID:		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
WQ-TOX-001-061510	19798-013	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
WQ-TOX-002-061510	19798-014	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
WQ-TOX-003-061510	19798-015	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
WQ-TOX-004-061510	19798-016	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G

Notes:

ND = Not Detected

Report No: 19797 SDG:
Project: Laboratory Seawater

Sample ID: ESIN1 LAB SALT 06/15/10
Matrix: Water
Sampled: 06/15/10 1000

Parameter		Result		Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19797-006	ND	Se	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G

Notes:

ND = Not Detected

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19798		
SDG No:			
Project:	Woods Hole Group - NB Env. Monitoring Level I Samples		
Delivered via:	Client		
Date and Time Received:	06/14/10 1845	Date and TIme Logged into Lab:	06/15/10 0755
Recieved By:	RAM	Logged into Lab by:	SJ
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	4	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	3764		
COC Complete:	Yes	Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
WQ-TOX-001-061410	19798-001	W	AB7DCR, AB48AD, AP01CR;	20L	4C	
WQ-TOX-002-061410	19798-002	W	AB7DCR, AB48AD, AP01CR;	20L	4C	
WQ-TOX-003-061410	19798-003	W	AB7DCR, AB48AD, AP01CR;	20L	4C	
WQ-TOX-004-061410	19798-004	W	AB7DCR, AB48AD, AP01CR;	20L	4C	
WQ-TOX-001-061410	19798-005	W	NH3;	60mL P	H2SO4	
WQ-TOX-002-061410	19798-006	W	NH3;	60mL P	H2SO4	
WQ-TOX-003-061410	19798-007	W	NH3;	60mL P	H2SO4	
WQ-TOX-004-061410	19798-008	W	NH3;	60mL P	H2SO4	

Notes and qualifications:

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19798		
SDG No:			
Project:	WHG-NB Env. Monitoring		
Delivered via:	Client		
Date and Time Received:	06/15/10 1853	Date and TIme Logged into Lab:	06/16/10 0800
Recieved By:	DM	Logged into Lab by:	SJ
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	4	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	3766		
COC Complete:	Yes	Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
WQ-TOX-001-061510	19798-009	W	AB7DCR, AB48AD, AP01CR;	20L	4C	
WQ-TOX-002-061510	19798-010	W	AB7DCR, AB48AD, AP01CR;	20L	4C	
WQ-TOX-003-061510	19798-011	W	AB7DCR, AB48AD, AP01CR;	20L	4C	
WQ-TOX-004-061510	19798-012	W	AB7DCR, AB48AD, AP01CR;	20L	4C	
WQ-TOX-001-061510	19798-013	W	NH3;	60mL P	H2SO4	
WQ-TOX-002-061510	19798-014	W	NH3;	60mL P	H2SO4	
WQ-TOX-003-061510	19798-015	W	NH3;	60mL P	H2SO4	
WQ-TOX-004-061510	19798-016	W	NH3;	60mL P	H2SO4	

Notes and qualifications:

Subsampled NH_3 bottles from corresponding cubitainers upon receipt at the laboratory.

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 19798

S1

CHAIN OF CUSTODY DOCUMENTATION

Client: WOODS HOLE GROUP	Contact: DAVE WALSH	Project Name: NB ENV. Monitoring	Page ~~of~~ Page 1 OF 1
Report to: DAVE WALSH	Address: 81 TECHNOLOGY PARK DR	Project Number: TO-0010-03	
Invoice to: CATHY MOREY	Address: E. FALMOUTH, MA 02536	Project Manager: DAVE WALSH	
Voice: 508-540-8080	Fax:	email: DWALSH@WHGRP.COM	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
004	WQ-TOX-004-061410	6/14/10	13:10	DRW	G	20 L	P	NA	W		LEVEL I SAMPLES: PLEASE INCLUDE THESE SAMPLES IN DATA REPORT WITH OTHER LEVEL I SAMPLES TO BE SUBMITTED FOR ANALYSIS TOMORROW (6/15).
003	WQ-TOX-003-061410	6/14/10	12:15	DRW	G	20L	P	NA	W		
002	WQ-TOX-002-061410	6/14/10	0950	DRW	G	20L	P	NA	W		
001	WQ-TOX-001-061410	6/14/10	0920	DRW	G	20L	P	NA	W		
005	WQ-TOX-001-061410	06/15/10	0800	SJ	G	60mL	P	H_2SO_4 ~~NA~~ (E)	W	N	NH_3
006	WQ-TOX-002-061410	↓	↓	↓	G	↓	↓	↓	↓	↓	↓
007	WQ-TOX-003-0614-10	↓	↓	↓	G	↓	↓	↓	↓	↓	↓
008	WQ-TOX-004-061410	↓	↓	↓	G	↓	↓	↓	↓	↓	↓

Relinquished By: [signature]	Date: 6/14/10	Time: 1845	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received at Lab By: [signature]	Date: 06/14/10	Time: 1845

Comments:

Sample Delivery Group No: Page of

COC Doc No: 3764

Water Quality Monitoring Summary Report
W922WJ09-D0001

D-66

Delivery Order: 0010-03
December 2010

ESI
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Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 19798

S2

CHAIN OF CUSTODY DOCUMENTATION

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: NB Env. Monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Dr.	Project Number: TO-0010-03	
Invoice to: Cathy Morey	Address: E. Falmouth, MA 02536	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax:	email: Dwalsh@WHGRP.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
009	WQ-TOX-001-061510	6/15/10	09:15	DRW	G	20L	P	NA	W		Level I Samples: Please include these samples with other level 1 samples that were submitted for analysis on June 14, 2010
010	WQ-TOX-002-061510	6/15/10	10:00	↓	↓	↓	↓	↓	↓		
011	WQ-TOX-003-061510	6/15/10	14:45	↓	↓	↓	↓	↓	↓		
012	WQ-TOX-004-061510	6/15/10	13:15	↓	↓	↓	↓	↓	↓		
013	WQ-TOX-001-061510	6/16/10	0815	SJ	G	60mL	P	H_2SO_4	W	N	NH_3
014	WQ-TOX-002-061510	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
015	WQ-TOX-003-061510	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
016	WQ-TOX-004-061510	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

Relinquished By: [signature]	Date: 6/15/10 Time: 1720	Received By: [signature]	Date: 6/15/10 Time: 1720
Relinquished By: [signature]	Date: 6/15/10 Time: 1853	Received at Lab By: [signature]	Date: 6/15/10 Time: 1853

Comments:

Sample Delivery Group No: Page of

COC Doc No: 3766

Water Quality Monitoring Summary Report
W912WJ09-D0001
D-67
Delivery Order: 0010-03
December 2010

Biomonitoring of Surface Water Samples
New Bedford Harbor
New Bedford, Massachusetts

June 15, 2010 Level II Dilution Study Sampling Event

NED ACOE Job Number: TO-0010-03

Task Order No.: ESI0002

Prepared for

Woods Hole Group, Inc.
81 Technology Park Drive
Falmouth, Massachusetts 02536

Prepared by

EnviroSystems, Incorporated
1 Lafayette Road
Hampton, New Hampshire 03843

June 15, 2010
Reference Number: Woods Hole Group, Inc. 19812-10-06

Biomonitoring of Surface Water Samples
New Bedford Harbor, New Bedford, Massachusetts

June 15, 2010 Level II Dilution Study Sampling Event
NED ACOE Job Number: TO-0010-03

1.0 INTRODUCTION

This report provides a summary of data generated from acute and chronic exposure screening assays evaluating surface water samples collected from New Bedford Harbor in New Bedford, Massachusetts. Toxicity tests were conducted on ten surface water samples representing two grab samples collected from the specified areas in the harbor that had been diluted to five target concentrations each (0% or reference, 25%, 50%, 75% and 100% undiluted) representing five measured turbidity levels (7.1, 41, 160, 190 and 230 NTUs, respectively). Samples were collected in the vicinity of dredging operations under the supervision of Woods Hole Group, Inc. personnel from the Falmouth, Massachusetts office and were evaluated "As Received" without additional dilutions. Testing was based on programs and protocols developed by the US EPA (2002) and included the following assays; 48 hour acute assay conducted with the mysid shrimp, *Americamysis bahia*, and 60 minute chronic fertilization assays conducted with the purple sea urchin, *Arbacia punctulata*. Assay design included a laboratory control treatment. All assays were conducted by ESI at its Hampton, New Hampshire facility.

2.0 MATERIALS AND METHODS

2.1 General Methods

Toxicological and analytical protocols used in this program followed procedures primarily designed by the EPA to provide standard approaches for the evaluation of toxicological effects of discharges on aquatic organisms, and for the analysis of water samples.

2.2 Test Species

A. bahia were obtained from cultures maintained by Aquatic Research Organisms (ARO), Hampton, New Hampshire. Juvenile shrimp were collected daily, isolated, and placed in a rearing tank for up to 6 days. Holding tanks were maintained in a flow-through culture mode at a temperature of 25±2°C. At the start of the assays the mysids were 3 days old. Juveniles were fed ≤24 hour old brine shrimp on a daily basis. Water temperature, salinity, and pH were monitored on a daily basis. Prior to testing, organisms were siphoned from the rearing tanks to a holding vessel, and then transferred to test chambers using a large bore pipet, minimizing the amount of water added to test solutions.

A. punctulata adults were from cultures maintained by ESI. Original stock was obtained from commercial supply. Male and female urchins are maintained in separate chambers as recommended by protocol (EPA 2002) and ESI. Adult urchins were induced to spawn by the injection of a potassium chloride solution. The viability of gametes obtained was determined prior to their addition to the test solutions. Eggs and/or sperm that would not result in a fertilized egg were rejected from the pool of gametes used in the assay.

2.3 Surface Water Samples and Laboratory Control Water

Two grab surface water samples were collected in New Bedford Harbor and diluted in the field to nominal 7.1, 41, 160, 190 and 230 NTUs by Woods Hole Group, Inc. staff on June 15, 2010. Actual turbidity levels were documented by Alpha Analytical Labs after the start of the assays. Samples were placed in polyethylene cubitainers for shipment to the laboratory. One 20 L cubitainer was received for each sample. Sample receipt information is shown in Table 1.

Prior to testing, samples were evaluated to document salinity, conductivity, and total residual chlorine. Total residual chlorine was measured by amperometric titration (MDL 0.02 mg/L). When necessary, the salinity of samples for the *A. bahia* assay were adjusted to 25±2‰ while samples used for the *A. punctulata*

assays were adjusted to 30±2‰ using commercial sea salts. Samples with "as received" salinity above these levels were not adjusted. A summary of "As Received" water quality data are summarized in Table 2.

Laboratory control water used for the mysid and sea urchin assays was collected from the Hampton/Seabrook Estuary. This water is classified as SA-1 and has been used to culture marine test organisms since 1981.

2.4 Bioassays

For this round of sample analysis there were two reference site samples (DS-TOX-001-061510 and DS-TOX-006-061510) representing the samples with the lowest measured turbidity level.

2.4.1 *Americamysis bahia* Acute Exposure Assays

One *A. bahia* assay was run with the laboratory control and all site samples together. The endpoint for the *A. bahia* bioassay was survival (acute). The 48 hour static acute toxicity tests were conducted at 25±1°C with a photoperiod of 16:8 hours light:dark. Test chambers for the acute assays were 250 mL glass beakers containing 200 mL test solution in each of 4 replicates with 10 organisms/replicate. Survival and dissolved oxygen were measured daily in each replicate prior to test solution renewal. Salinity, temperature and pH were recorded in a composite sample of the "old" test solution and in the "new" test solution prior to being added to the test chamber. Specific conductivity was measured in one replicate of each sample at the start of the assay. Mysids were not fed during the assay.

2.4.2 *Arbacia punctulata* Chronic Exposure Fertilization Assays

Two separate *A. punctulata* assays were run with the reference samples being paired with their parent sample and sister diluents. The endpoint for the *A. punctulata* bioassay was fertilization. Gametes were obtained by potassium chloride injection to induce spawning. Sperm were collected dry, diluted to achieve a concentration of approximately 5.0×10^7 sperm/mL in the surface water treatments. Actual sperm concentrations are provided on laboratory bench sheets in Appendix A. Sperm solutions were added to 5 mL aliquots of each sample being evaluated and allowed to remain in the test solutions for 60 minutes before the addition of unfertilized eggs. Each treatment incorporated a total of four (4) replicates. After 20 minutes exposure, the assay was terminated by the addition of 0.2 mL of preservative. Aliquots of preserved solution were counted to determine numbers of fertilized and unfertilized eggs. Fertilization was accepted based on the presence or absence of a fertilization membrane around the egg.

2.5 Data Analysis

Statistical analysis of acute and chronic exposure data was completed using CETIS, Comprehensive Environmental Toxicity Testing System, software. The program computes acute and chronic exposure endpoints based on EPA decision tree guidelines specified in individual test methods. For chronic exposure endpoints statistical significance was accepted at $\propto < 0.05$. For the *A. bahia* assay, the two reference samples were used to determine whether there were significant reductions in survival as compared to the ten site samples. For the *A. punctulata* assay, the reference samples were used for statistical comparisons against the four other paired samples in each of the two groups of assays.

2.6 Quality Control

As part of the laboratory quality control program, standard reference toxicant assays are completed on a regular basis for each test species. These results, summarized in Table 3, provide relative health and response data while allowing for comparison with historic data sets.

3.0 RESULTS SUMMARY

Table 4 provides summaries of survival and fertilization endpoints and associated statistical analyses for *A. bahia* and *A. punctulata*. Support data, including copies of laboratory bench sheets, are provided in Appendix A.

Appendix A.

3.1 *Americamysis bahia* Acute Exposure Bioassay

Minimum test acceptability criteria for the acute exposure bioassay require ≥ 90% survival in the control concentrations. Achievement of these results indicate that healthy test organisms were used. See Table 4 for test acceptability and data summary.

3.2 *Arbacia punctulata* Chronic Fertilization Bioassay

Protocol specifies a 70% to 90% fertilization rate for *Arbacia punculata* (EPA 2002). Achievement of these results indicate that healthy test organisms were used. See Table 4 for test acceptability and data summary.

4.0 REFERENCES

APHA. 1998. *Standard Methods for the Examination of Water and Wastewater*, 20th edition. Washington D.C.

US EPA. 2002. *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms.* Fourth Edition. EPA-821-R-02-012.

US EPA. 2002. *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*. Fourth Edition. EPA-821-R-02-013.

Table 1. Sample Receipt Summary. New Bedford Harbor Surface Water Quality Monitoring June 15, 2010 Level II Dilution Study Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Field ID	ESI Code	Type of Sample	Matrix	Collection		Receipt	
				Date	Time	Date	Time
DS-TOX-001-061510	19812-001	Grab	Water	06/15/10	1225	06/15/10	1853
DS-TOX-002-061510	19812-002	Comp	Water	06/15/10	1225	06/15/10	1853
DS-TOX-003-061510	19812-003	Comp	Water	06/15/10	1225	06/15/10	1853
DS-TOX-004-061510	19812-004	Comp	Water	06/15/10	1225	06/15/10	1853
DS-TOX-005-061510	19812-005	Grab	Water	06/15/10	1225	06/15/10	1853
DS-TOX-006-061510	19812-006	Grab	Water	06/15/10	1400	06/15/10	1853
DS-TOX-007-061510	19812-007	Comp	Water	06/15/10	1400	06/15/10	1853
DS-TOX-008-061510	19812-008	Comp	Water	06/15/10	1400	06/15/10	1853
DS-TOX-009-061510	19812-009	Comp	Water	06/15/10	1400	06/15/10	1853
DS-TOX-010-061510	19812-010	Grab	Water	06/15/10	1400	06/15/10	1853

Table 2 Summary of "As Received" Sample Physical and Chemical Characteristics. New Bedford Harbor Surface Water Quality Monitoring June 15, 2010 Level II Dilution Study Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Field ID	ESI Code	Target Dilution / Reference	Measured Turbidity (NTUs)*	Ammonia** (mg/L)	pH (SU)	Salinity (‰)	Total Residual Chlorine (mg/L)
DS-TOX-001-061510	19812-001	Reference	7.1	0.16	7.40	25	<0.02
DS-TOX-002-061510	19812-002	25%	41	0.14	7.35	26	<0.02
DS-TOX-003-061510	19812-003	50%	160	<0.1	7.34	26	<0.02
DS-TOX-004-061510	19812-004	75%	190	<0.1	7.33	26	<0.02
DS-TOX-005-061510	19812-005	100%	230	<0.1	7.30	26	<0.02
DS-TOX-006-061510	19812-006	Reference	7.1	<0.1	7.69	25	<0.02
DS-TOX-007-061510	19812-007	25%	41	<0.1	7.65	25	<0.02
DS-TOX-008-061510	19812-008	50%	160	<0.1	7.56	26	<0.02
DS-TOX-009-061510	19812-009	75%	190	<0.1	7.39	26	<0.02
DS-TOX-010-061510	19812-010	100%	230	<0.1	7.34	26	<0.02

COMMENTS:
* Turbidity was measured by Alpha Analytical and provided via email communication.
** Ammonia samples were subsampled at ESI on June 16, 2010.

Table 3 Reference Toxicant Summary. New Bedford Harbor Surface Water Quality Monitoring June 15, 2010 Level II Dilution Study Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Date	Endpoint		Value	Historic Mean/ Central Tendency	Acceptable Range	Reference Toxicant
A. bahia						
06/23/10	Survival	LC-50 - 48 Hr	22.5	21.9	17.9 - 25.9	SDS (mg/L)
A. punctulata						
06/10/10	Fertilization	C-NOEC	1.0	10.0	5.0 - 20.0	Copper (µg/L)
06/10/10	Fertilization	IC-25	8.9	17.6	0.0 - 50.4	Copper (µg/L)

Mean and Acceptable Ranges based on most recent 20 reference toxicant assays (NELAP standard)

Table 4. Endpoint Summary Table. New Bedford Harbor Surface Water Quality Monitoring June 15, 2010 Level II Dilution Study Sampling Event. New Bedford Harbor Dredge Plume Monitoring Program.

Sample ID	Reps	Mean	Min	Max	CV	Significant Difference vs		Endpoint Summary (%)		
						p Value	Reference	EC-50	IC-10	NOEC
Series 1 Samples; 001 - 005										
Arbacia punctulata		Portion Fertilized								
Lab Control	4	93.8%	92.6%	96.2%	1.75%	-	-	-	-	-
Ref. / 7.1 NTUs (-001)		88.7%	84.0%	93.5%	4.36%	-	-	>100%	>100%	100%
25% / 41 NTUs (-002)		91.9%	87.7%	96.2%	3.79%	0.9861	NO			
50% / 160 NTUs (-003)		90.4%	83.8%	93.5%	5.00%	0.9402	NO			
75% / 190 NTUs (-004)		85.5%	79.0%	90.0%	5.44%	0.3499	NO			
100% / 230 NTUs (-005)		91.1%	89.0%	95.0%	2.95%	0.9657	NO			
Americamysis bahia		48-Hour Survival								
Lab Control	4	97.5%	90.0%	100.0%	5.13%	-	-	-	-	-
Ref. / 7.1 NTUs (-001)		100.0%	100.0%	100.0%	0.00%	-	-	>100%	>100%	100%
25% / 41 NTUs (-002)		100.0%	100.0%	100.0%	0.00%	0.4429	NO			
50% / 160 NTUs (-003)		100.0%	100.0%	100.0%	0.00%	0.4429	NO			
75% / 190 NTUs (-004)		100.0%	100.0%	100.0%	0.00%	0.4429	NO			
100% / 230 NTUs (-005)		100.0%	100.0%	100.0%	0.00%	0.4429	NO			
Series 2 Samples; 006 - 010										
Arbacia punctulata		Portion Fertilized								
Lab Control	4	93.8%	92.6%	96.2%	1.75%	-	-	-	-	-
Ref. / 7.1 NTUs (-006)		91.6%	86.7%	94.4%	3.90%	-	-	>100%	52.3%	41%
25% / 41 NTUs (-007)		85.1%	80.4%	93.5%	7.02%	0.0596	NO			
50% / 160 NTUs (-008)		66.1%	57.8%	71.6%	8.84%	<0.0001	YES			
75% / 190 NTUs (-009)		39.3%	38.1%	40.0%	2.15%	<0.0001	YES			
100% / 230 NTUs (-010)		54.1%	50.0%	62.3%	10.20%	<0.0001	YES			
Americamysis bahia		48-Hour Survival								
Lab Control	4	97.5%	90.0%	100.0%	5.13%	-	-	-	-	-
Ref. / 7.1 NTUs (-006)		100.0%	100.0%	100.0%	0.00%	-	-	>100%	>100%	100%
25% / 41 NTUs (-007)		100.0%	100.0%	100.0%	0.00%	0.4429	NO			
50% / 160 NTUs (-008)		100.0%	100.0%	100.0%	0.00%	0.4429	NO			
75% / 190 NTUs (-009)		100.0%	100.0%	100.0%	0.00%	0.4429	NO			
100% / 230 NTUs (-010)		100.0%	100.0%	100.0%	0.00%	0.4429	NO			

APPENDIX A

SUPPORT DATA

Contents	# Pages
Methods Summary	1
Study 19812: Sample Date June 15, 2010	
A. bahia Bench Sheets & Statistical Analysis Report	16
A. punctulata Bench Sheets and Statistical Analysis Report	19
Water Quality Bench Sheets, Dilution Prep Sheets and Meter Use Sheets	5
Analytical Chemistry Report	2
Sample Receipt Records	1
Chain of Custody and Organism Shipping Information	1
Total Appendix Pages	45

METHODS USED IN NPDES PERMIT BIOMONITORING TESTING

Parameter	Method
Acute Exposure Bioassays:	
Ceriodaphnia dubia, Daphnia pulex	EPA-821-R-02-012
Pimephales promelas	EPA-821-R-02-012
Americamysis bahia	EPA-821-R-02-012
Menidia beryllina, Cyprinodon variegatus	EPA-821-R-02-012
Chronic Exposure Bioassays:	
Ceriodaphnia dubia	EPA-821-R-02-013 1002.0
Pimephales promelas	EPA-821-R-02-013 1000.0
Cyprinodon variegatus	EPA-821-R-02-014 1004.0
Menidia beryllina	EPA-821-R-02-014 1006.0
Arbacia punctulata	EPA-821-R-02-014 1008.0
Champia parvula	EPA-821-R-02-014 1009.0
Trace Metals:	
Trace Metals	EPA 200.7/SW 6010 and EPA 200.8/SW 6020
Hardness	Standard Methods 20th Edition - Method 2340 B
Wet Chemistries:	
Alkalinity	EPA 310.2
Chlorine, Residual	Standard Methods 20th Edition - Method 4500CLD
Total Organic Carbon	Standard Methods 20th Edition - Method 5310C
Specific Conductance	Standard Methods 20th Edition - Method 2510B
Nitrogen - Ammonia	Standard Methods 20th Edition - Method 4500NH3G
pH	Standard Methods 20th Edition - Method 4500H+B
Solids, Total (TS)	Standard Methods 20th Edition - Method 2540 B
Solids, Total Suspended (TSS)	Standard Methods 20th Edition - Method 2540 D
Solids, Total Dissolved (TDS)	Standard Methods 20th Edition - Method 2540 C
Dissolved Oxygen	Standard Methods 20th Edition - Method 4500-O G

25±2ppt

ACUTE BIOASSAY DATA SUMMARY

W912WJ-09-D-0001 Water Quality Monitoring Summary Report Delivery Order: 0010 05 December 2010

STUDY: 19812

CLIENT: Woods Hole Group

TEST ORGANISM: *A. bahia*

SAMPLE: New Bedford Harbor

ORGANISM SUPPLIER/BATCH/AGE: *See Organism Culture Sheet*

"AS RECEIVED" EFFLUENT AND DILUENT CHEMISTRIES

	TRC	TS/TSS	AMM	TOC	T.METAL	SAL	pH	S/C
EFF	See A.bahia, A. punctulata Salt Water Assays Sheet							
DIL								

CONC	REP	SURVIVAL 0	SURVIVAL 24	SURVIVAL 48	DO (mg/L) 0	DO (mg/L) 24	DO (mg/L) 48	pH (SU) 0	pH (SU) 24	pH (SU) 48	TEMP (°C) 0	TEMP (°C) 24	TEMP (°C) 48	SALINITY (ppt) 0	SALINITY (ppt) 24	SALINITY (ppt) 48	S/C (µmhos/cm) 0
LAB	A	10	10	10	7.6	5.6	5.7	7.86	7.59	7.71	25	25	24	25	24	24	38850
	B	10	10	10	7.6	5.5	5.8										
	C	10	9	9	7.6	5.4	5.7										
	D	10	10	10	7.6	5.4	5.7										
~~Reference Site~~ -001	A	10	10 (8 6/11)	10	6.9	4.3	5.1	7.20	7.37	7.50	25	25	24	24	25	25	38260
	B	10	10	10	6.9	4.2	4.7										
	C	10	~~9~~ 10	10	6.9	4.5	4.8										
	D	10	10	10	6.9	4.8	6.5										
~~NTU~~ -002	A	10	10	10	6.7	4.5	5.4	7.16	7.41	7.57	25	25	24	25	26	26	39420
	B	10	10	10	6.7	4.2	4.8										
	C	10	10	10	6.7	5.1	5.2										
	D	10	10	10	6.7	5.4	5.3										
~~NTU~~ -003	A	10	10	10	6.5	5.1	5.4	7.16	7.49	7.65	25	25	24	26	26	26	40140
	B	10	10	10	6.5	5.2	5.4										
	C	10	~~9~~ 8 6/18	10	6.5	5.2	5.3										
	D	10	~~8~~	10	6.5	5.5	5.4										
DATE		6/16/10	6/17/10	6/18/10	6/16/10	6/17/10	6/18/10										
TIME		1610	1545	1515	1220	1520	1555										
INITIALS		JQ	LL	LL	SJ	JQ	LL										

ACUTE BIOASSAY DATA SUMMARY

STUDY: 19812 | SAMPLE: New Bedford Harbor

CLIENT: Woods Hole Group | TEST ORGANISM: *A. bahia*

CONC	REP	SURVIVAL 0	SURVIVAL 24	SURVIVAL 48	DO (mg/L) 0	DO (mg/L) 24	DO (mg/L) 48	pH (SU) 0	pH (SU) 24	pH (SU) 48	TEMP (°C) 0	TEMP (°C) 24	TEMP (°C) 48	SALINITY (ppt) 0	SALINITY (ppt) 24	SALINITY (ppt) 48	S/C (µmhos/cm) 0
~~NTU~~ 004	A	10	10	10	6.2	5.2	5.3	7.16	7.54	7.69	25	25	24	26	26	27	40840
	B	10	10	10	6.2	5.0	5.2										
	C	10	10	10	6.2	5.0	5.2										
	D	10	10	10	6.2	5.2	5.4										
~~NTU~~ 005	A	10	10	10	6.4	4.8	5.0	7.15	7.50	7.66	25	25	24	26	27	27	41070
	B	10	10	10	6.4	5.1	5.2										
	C	10	10	10	6.4	5.3	5.5										
	D	10	10	10	6.4	5.5	5.8										
~~NTU~~ 006	A	10	10	10	6.6	4.7	5.3	7.47	7.45	7.60	25	25	24	25	26	26	39010
	B	10	10	10	6.6	4.6	5.2										
	C	10	10	10	6.6	4.6	5.2										
	D	10	10	10	6.6	4.7	5.2										
~~NTU~~ 007	A	10	10	10	6.9	5.1	5.4	7.42	7.50	7.60	25	25	24	25	26	26	39750
	B	10	10	10	6.9	5.3	5.3										
	C	10	10	10	6.9	5.5	5.4										
	D	10	10	10	6.9	5.3	5.4										
DATE		6/16/10	6/17/10	6/18/10	6/16/10	6/17/10	6/18/10										
TIME		1610	1545	1515	1220	1520	1558										
INITIALS		JT/JG	JQ	KL	JJ	JQ	KL										

ACUTE BIOASSAY DATA SUMMARY

STUDY: 19812	SAMPLE: New Bedford Harbor	
CLIENT: Woods Hole Group	TEST ORGANISM: *A. bahia*	

CONC	REP	SURVIVAL 0	SURVIVAL 24	SURVIVAL 48	DO (mg/L) 0	DO (mg/L) 24	DO (mg/L) 48	pH (SU) 0	pH (SU) 24	pH (SU) 48	TEMP (°C) 0	TEMP (°C) 24	TEMP (°C) 48	SALINITY (ppt) 0	SALINITY (ppt) 24	SALINITY (ppt) 48	S/C 0
~~NTU~~ -008	A	10	10	10	6.9	5.3	5.0	7.36	7.56	7.63	25	25	24	26	26	27	40670
	B	10	10	10	6.9	5.3	5.1										
	C	10	10	10	6.9	4.5	5.1										
	D	10	10	10	6.9	4.6	5.0										
D-79 ~~NTU~~ -009	A	10	10	10	7.2	4.5	4.8	7.21	7.49	7.58	25	25	24	26	27	27	40790
	B	10	10	10	7.2	5.0	4.7										
	C	10	10	10	7.2	4.9	4.9										
	D	10	10	10	7.2	5.0	5.0										
~~NTU~~ -010	A	10	10	10	7.0	5.5	5.4	7.17	7.59	7.73	25	25	24	26	~~27~~ 26 (E)20 6/17/10	27	40650
	B	10	10	10	7.0	5.2	5.5										
	C	10	10	10	7.0	5.2	5.3										
	D	10	10	10	7.0	5.2	5.3										
Delivery Order: 101003	A																
	B																
	C																
	D																
DATE		6/16/10	6/17/10	6/18/10	6/16	6/17/10	6/18/10										
TIME		1010	1545	1515	1220	1520	1515										
INITIALS		SJ/JQ	JQ	KC	SJ	JQ	KC										

Water Quality Monitoring Summary Report
W912WJ-09-D-0001
December 2010

CETIS Summary Report

Report Date: 14 Jul-10 12:03 (p 1 of 1)
Test Code: 09-4080-8417/19812AbDSG1

Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Sample ID:	18-5187-9415	**Code:**	19812-005 Set	**Client:**	Woods Hole Group
Sample Date:	15 Jun-10 12:25	**Material:**	Surface Water	**Project:**	Ecological Risk Assessment
Receive Date:	15 Jun-10 18:53	**Source:**	New Bedford Harbor Dredge Monitoring		
Sample Age:	28h	**Station:**	DS Group 001 - 005		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
18-0953-4875	48h Proportion Survived	100	>100	N/A	2.5%		Steel Many-One Rank Test

Point Estimate Summary

Analysis ID	Endpoint	Level	NA	95% LCL	95% UCL	TU	Method
12-4054-6700	48h Proportion Survived	EC5	>100	N/A	N/A		Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A		
		EC15	>100	N/A	N/A		
		EC20	>100	N/A	N/A		
		EC25	>100	N/A	N/A		
		EC40	>100	N/A	N/A		
		EC50	>100	N/A	N/A		

48h Proportion Survived Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
0	Lab Water	4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	2.5%
25		4	1	1	1	1	1	0	0	0.0%	0.0%
50		4	1	1	1	1	1	0	0	0.0%	0.0%
75		4	1	1	1	1	1	0	0	0.0%	0.0%
100		4	1	1	1	1	1	0	0	0.0%	0.0%

48h Proportion Survived Detail

Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	1	1	1	1
0	Lab Water	1	1	0.9	1
25		1	1	1	1
50		1	1	1	1
75		1	1	1	1
100		1	1	1	1

Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Sample ID:	01-6900-7167	**Code:**	19812-010 Set	**Client:**	Woods Hole Group
Sample Date:	15 Jun-10 14:00	**Material:**	Surface Water	**Project:**	Ecological Risk Assessment
Receive Date:	15 Jun-10 18:53	**Source:**	New Bedford Harbor Dredge Monitoring		
Sample Age:	26h	**Station:**	DS Group 006 - 010		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
06-0559-9772	48h Proportion Survived	100	>100	N/A	2.5%		Steel Many-One Rank Test
01-4446-6346		25	>25	N/A	2.5%		Wilcoxon Rank Sum Two-Sample Test
03-8527-2876		100	>100	N/A	2.5%		Wilcoxon Rank Sum Two-Sample Test
04-0083-5322		50	>50	N/A	2.5%		Wilcoxon Rank Sum Two-Sample Test
16-8967-9295		75	>75	N/A	2.5%		Wilcoxon Rank Sum Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	NA	95% LCL	95% UCL	TU	Method
15-8696-3179	48h Proportion Survived	EC5	>100	N/A	N/A		Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A		
		EC15	>100	N/A	N/A		
		EC20	>100	N/A	N/A		
		EC25	>100	N/A	N/A		
		EC40	>100	N/A	N/A		
		EC50	>100	N/A	N/A		

48h Proportion Survived Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
0	Lab Water	4	0.975	0.956	0.994	0.9	1	0.00913	0.05	5.13%	2.5%
25		4	1	1	1	1	1	0	0	0.0%	0.0%
50		4	1	1	1	1	1	0	0	0.0%	0.0%
75		4	1	1	1	1	1	0	0	0.0%	0.0%
100		4	1	1	1	1	1	0	0	0.0%	0.0%

48h Proportion Survived Detail

Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	1	1	1	1
0	Lab Water	1	1	0.9	1
25		1	1	1	1
50		1	1	1	1
75		1	1	1	1
100		1	1	1	1

CETIS Analytical Report

Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Analysis ID:	03-8527-2876	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 11:20	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A		2.5%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-NA	Test Stat	Critical	Ties	P-Value	Decision(5%)
Dilution Water		100	18		1	0.4429	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0	0	1	65500	<0.0001	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Mod Levene Equality of Variance	65500	13.7	<0.0001	Unequal Variances

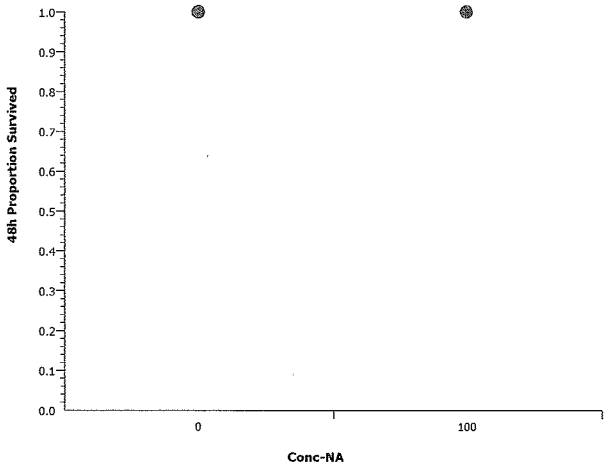
48h Proportion Survived Summary

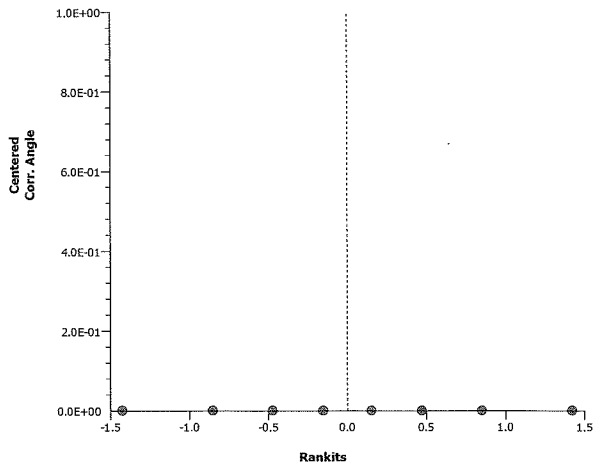
Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
100		4	1	1	1	1	1	0	0	0.0%	0.0%

Angular (Corrected) Transformed Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
100		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%

Graphics





Americamysis 48-Hr Survival Test					EnviroSystems, Inc.
Analysis ID:	16-8967-9295	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 11:20	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	75	>75	N/A		2.5%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-NA	Test Stat	Critical	Ties	P-Value	Decision(5%)
Dilution Water		75	18		1	0.4429	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0	0	1	65500	<0.0001	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Mod Levene Equality of Variance	65500	13.7	<0.0001	Unequal Variances

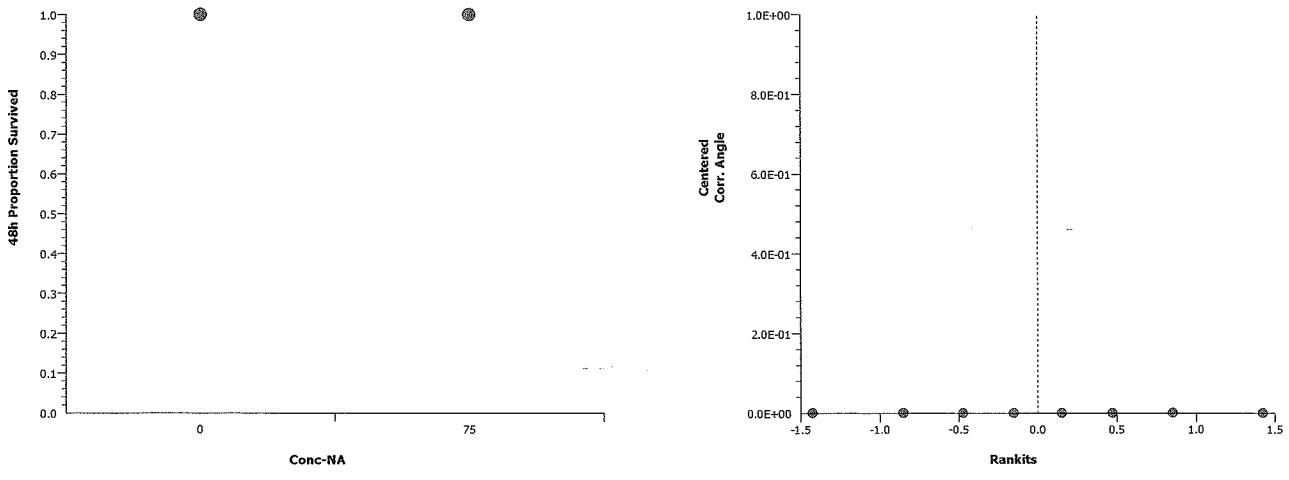
48h Proportion Survived Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
75		4	1	1	1	1	1	0	0	0.0%	0.0%

Angular (Corrected) Transformed Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
75		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%

Graphics



Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Analysis ID:	04-0083-5322	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 11:20	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	50	>50	N/A		2.5%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-NA	Test Stat	Critical	Ties	P-Value	Decision(5%)
Dilution Water		50	18		1	0.4429	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0	0	1	65500	<0.0001	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Mod Levene Equality of Variance	65500	13.7	<0.0001	Unequal Variances

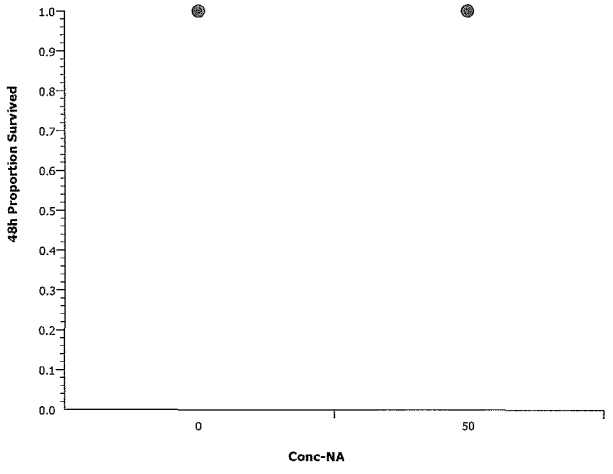
48h Proportion Survived Summary

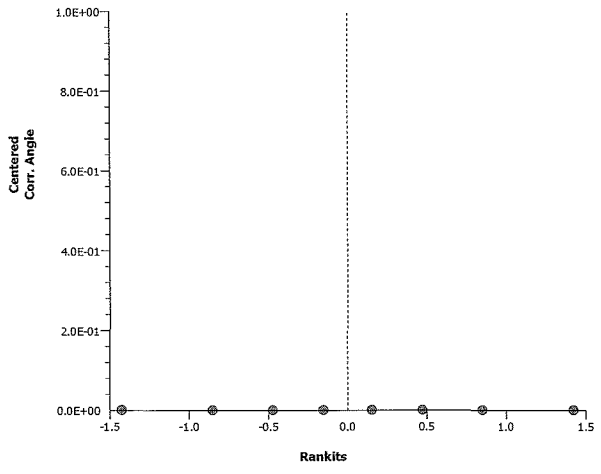
Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
50		4	1	1	1	1	1	0	0	0.0%	0.0%

Angular (Corrected) Transformed Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
50		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%

Graphics





Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Analysis ID:	01-4446-6346	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 11:20	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	25	>25	N/A		2.5%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-NA	Test Stat	Critical	Ties	P-Value	Decision(5%)
Dilution Water		25	18		1	0.4429	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0	0	1	65500	<0.0001	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Mod Levene Equality of Variance	65500	13.7	<0.0001	Unequal Variances

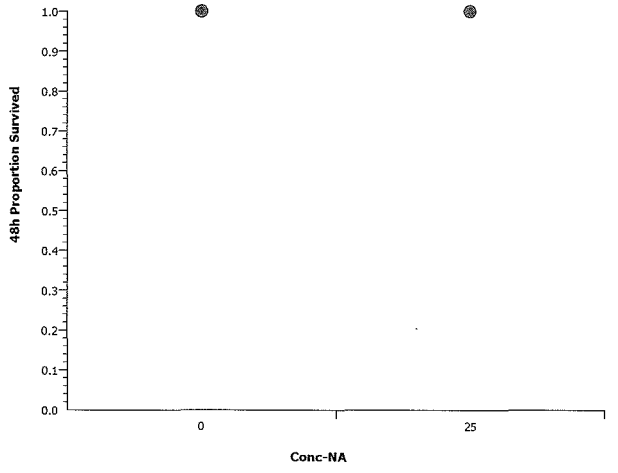
48h Proportion Survived Summary

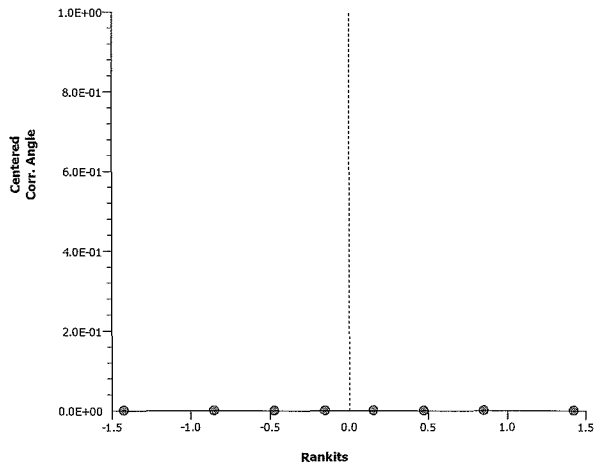
Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
25		4	1	1	1	1	1	0	0	0.0%	0.0%

Angular (Corrected) Transformed Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
25		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%

Graphics





Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Analysis ID:	06-0559-9772	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 11:17	**Analysis:**	Nonparametric-Control vs Treatments	**Official Results:**	Yes

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A		2.5%

Steel Many-One Rank Test

Control	vs	Conc-NA	Test Stat	Critical	Ties	P-Value	Decision(5%)
Dilution Water		25	18	10	1	0.8000	Non-Significant Effect
		50	18	10	1	0.8000	Non-Significant Effect
		75	18	10	1	0.8000	Non-Significant Effect
		100	18	10	1	0.8000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0	0	4	65500	<0.0001	Significant Effect
Error	0	0	15			
Total	0	0	19			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Mod Levene Equality of Variance	65500	4.89	<0.0001	Unequal Variances

48h Proportion Survived Summary

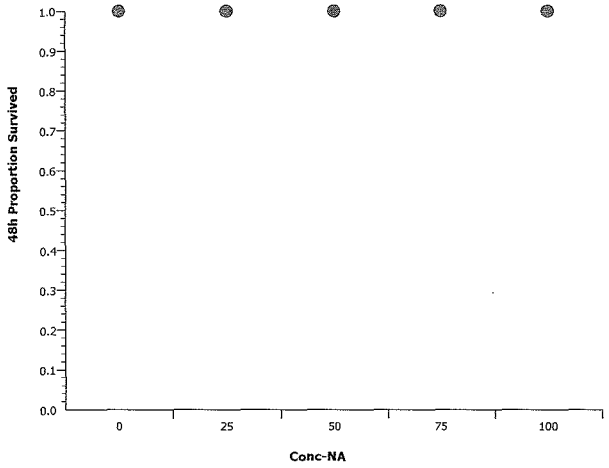
Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
25		4	1	1	1	1	1	0	0	0.0%	0.0%
50		4	1	1	1	1	1	0	0	0.0%	0.0%
75		4	1	1	1	1	1	0	0	0.0%	0.0%
100		4	1	1	1	1	1	0	0	0.0%	0.0%

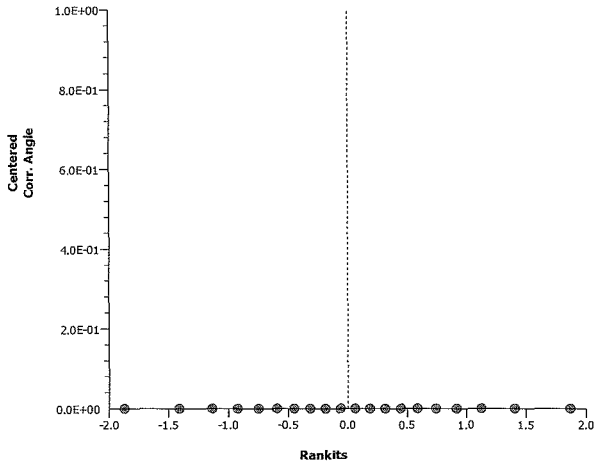
Angular (Corrected) Transformed Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
25		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
50		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
75		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
100		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%

Americamysis 48-Hr Survival Test					EnviroSystems, Inc.
Analysis ID:	06-0559-9772	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 11:17	**Analysis:**	Nonparametric-Control vs Treatments	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Report Date: 14 Jul-10 12:04 (p 1 of 1)
Test Code: 11-7183-3115/19812AbDSG2

Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Analysis ID:	15-8696-3179	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 11:18	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Point Estimates

Level	NA	95% LCL	95% UCL
EC5	>100	N/A	N/A
EC10	>100	N/A	N/A
EC15	>100	N/A	N/A
EC20	>100	N/A	N/A
EC25	>100	N/A	N/A
EC40	>100	N/A	N/A
EC50	>100	N/A	N/A

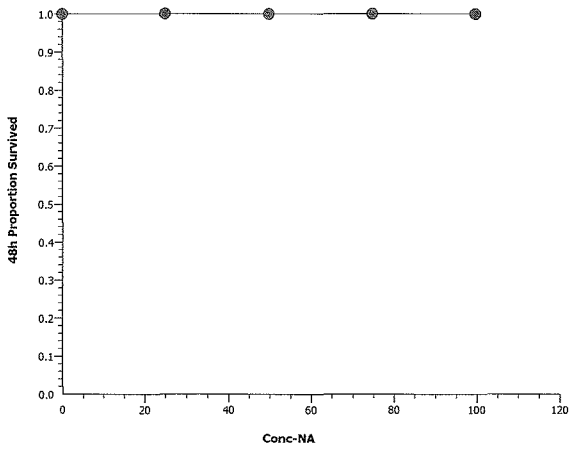
48h Proportion Survived Summary

			Calculated Variate(A/B)								
Conc-NA	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Dilution Water	4	1	1	1	0	0	0.0%	0.0%	40	40
25		4	1	1	1	0	0	0.0%	0.0%	40	40
50		4	1	1	1	0	0	0.0%	0.0%	40	40
75		4	1	1	1	0	0	0.0%	0.0%	40	40
100		4	1	1	1	0	0	0.0%	0.0%	40	40

48h Proportion Survived Detail

Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	1	1	1	1
25		1	1	1	1
50		1	1	1	1
75		1	1	1	1
100		1	1	1	1

Graphics



Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Analysis ID:	18-0953-4875	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 10:45	**Analysis:**	Nonparametric-Control vs Treatments	**Official Results:**	Yes

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A		2.5%

Steel Many-One Rank Test

Control	vs	Conc-NA	Test Stat	Critical	Ties	P-Value	Decision(5%)
Dilution Water		25	18	10	1	0.8000	Non-Significant Effect
		50	18	10	1	0.8000	Non-Significant Effect
		75	18	10	1	0.8000	Non-Significant Effect
		100	18	10	1	0.8000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0	0	4	65500	<0.0001	Significant Effect
Error	0	0	15			
Total	0	0	19			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Mod Levene Equality of Variance	65500	4.89	<0.0001	Unequal Variances

48h Proportion Survived Summary

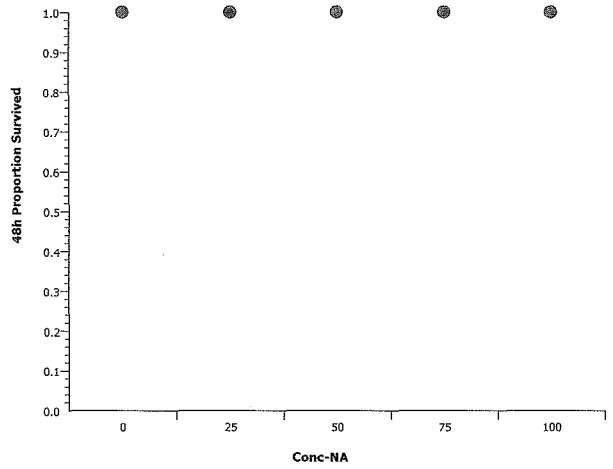
Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1	1	1	1	1	0	0	0.0%	0.0%
25		4	1	1	1	1	1	0	0	0.0%	0.0%
50		4	1	1	1	1	1	0	0	0.0%	0.0%
75		4	1	1	1	1	1	0	0	0.0%	0.0%
100		4	1	1	1	1	1	0	0	0.0%	0.0%

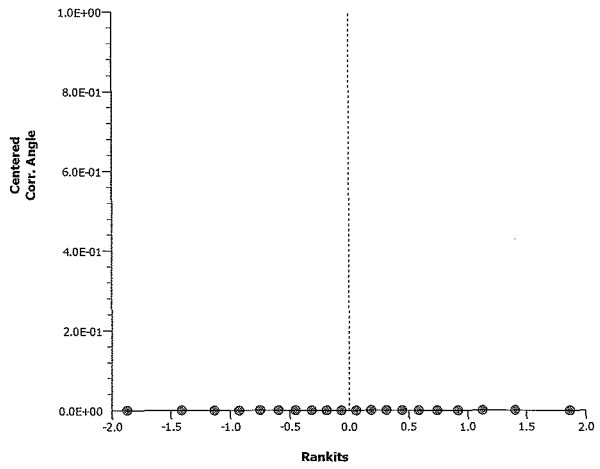
Angular (Corrected) Transformed Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
25		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
50		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
75		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%
100		4	1.41	1.41	1.41	1.41	1.41	0	0	0.0%	0.0%

Americamysis 48-Hr Survival Test					EnviroSystems, Inc.
Analysis ID:	18-0953-4875	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 10:45	**Analysis:**	Nonparametric-Control vs Treatments	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Report Date: 14 Jul-10 12:04 (p 1 of 1)
Test Code: 09-4080-8417/19812AbDSG1

Americamysis 48-Hr Survival Test — **EnviroSystems, Inc.**

Analysis ID:	12-4054-6700	**Endpoint:**	48h Proportion Survived	**CETIS Version:**	CETISv1.7.0
Analyzed:	21 Jun-10 10:45	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Batch ID:	11-3144-5901	**Test Type:**	Survival (48h)	**Analyst:**	
Start Date:	16 Jun-10 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	18 Jun-10 15:15	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Duration:	47h	**Source:**	ARO - Aquatic Research Organisms, NH	**Age:**	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Point Estimates

Level	NA	95% LCL	95% UCL
EC5	>100	N/A	N/A
EC10	>100	N/A	N/A
EC15	>100	N/A	N/A
EC20	>100	N/A	N/A
EC25	>100	N/A	N/A
EC40	>100	N/A	N/A
EC50	>100	N/A	N/A

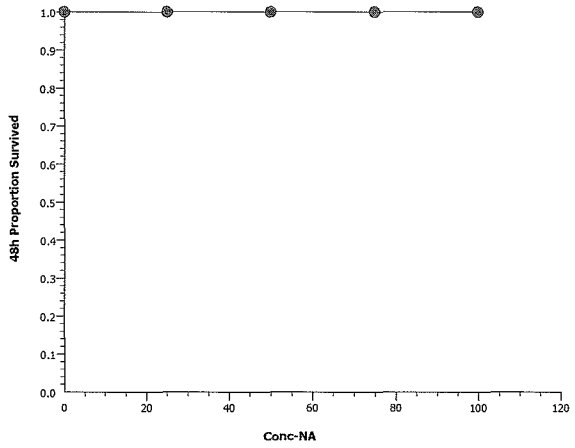
48h Proportion Survived Summary

			Calculated Variate(A/B)								
Conc-NA	**Control Type**	**Count**	**Mean**	**Min**	**Max**	**Std Err**	**Std Dev**	**CV%**	**Diff%**	**A**	**B**
0	Dilution Water	4	1	1	1	0	0	0.0%	0.0%	40	40
25		4	1	1	1	0	0	0.0%	0.0%	40	40
50		4	1	1	1	0	0	0.0%	0.0%	40	40
75		4	1	1	1	0	0	0.0%	0.0%	40	40
100		4	1	1	1	0	0	0.0%	0.0%	40	40

48h Proportion Survived Detail

Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	1	1	1	1
25		1	1	1	1
50		1	1	1	1
75		1	1	1	1
100		1	1	1	1

Graphics





Aquatic Research Organisms

DATA SHEET

Rec 6/14/10

I. Organism History

Species AMERICAMYSIS BAHIA

Source: Lab reared ✓ Hatchery reared _____ Field collected _____

Hatch date 6-13-10 Receipt date _____

Lot number 061310MS Strain _____

Brood origination FLORIDA

II. Water Quality

Temperature 25 °C Salinity ~30 ppt D.O. ~ ppm

pH 7.8 su Hardness ~ ppm Alkalinity ~ ppm

III. Culture Conditions

Freshwater _____ Saltwater ✓ Other _____

Recirculating ✓ Flow through _____ Static _____

DIET: Flake food ✓ Phytoplankton _____ Trout chow ✓

Artemia ✓ Rotifers _____ YCT _____ Other Ewos. Shrimp Diet

Prophylactic treatments: _____

Comments: _____

_____

IV. Shipping Information

Client: ESI # of Organisms 500+

Carrier: _____ Date shipped 6-16-10

Biologist: Mark Dorgan

PO BOX 1271 HAMPTON NH 03843-1271 (603) 926-1650 AROFISH@AOL.COM

DS1

Arbacia punctulata Chronic Fertilization Assay
Water Quality and Gamete Preparation Data

STUDY: 19812	CLIENT: Woods Hole Group	LOCATION: New Bedford	DATE: 6/16/10 INITIALS: CB

SALINITY ADJUSTMENT RECORD: 200 mL -001 + 1 g SALT A-2606

SALINITY ADJUSTMENT RECORD: 200 mL -002 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -003 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -004 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -005 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -006 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -007 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -008 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -009 + 1 g SALT

SALINITY ADJUSTMENT RECORD: 200 mL -010 + 1 g SALT

SALINITY ADJUSTED SAMPLE	D.O. (mg/L)	pH (SU)	SPEC COND (µmhos)	TEMP (°C)	SALINITY (ppt)
Lab Control	7.3	7.67	44360	20	29
-001	7.4	7.56	45680	19	30
-002	6.4	7.51	46090	19	30
-003	6.5	7.51	47180	19	31
-004	6.93 6/17/10	7.49	46230	19	30
-005	6.6	7.53	46860	19	31
-006	7.0	7.83	46780	19	30
-007	7.0	7.84	47770	19	31
-008	7.0	7.74	46680	19	30
-009	6.8	7.58	46000	20	30
-010	6.5	7.49	45930	20	30

1481C
DS1

METERS USED

DO meter # 23 DO probe # 90 pH meter # 470 pH probe # 92 S/C meter # YSI30D S/C probe # YSI30D

SALINITY meter # YSI30D

DATE & INITIALS FOR GAMETE PREPARATION: 10/16/10 LB

SPERM DILUTIONS:

HEMACYTOMETER COUNT, E: 120 X 10^4 = SPM SOLUTION E = 1.20×10^6

SPERM CONCENTRATIONS:
SOLUTION E X 40 = SOLUTION A = 4.80×10^7 SPM
SOLUTION E X 20 = SOLUTION B = 2.40×10^7 SPM
SOLUTION E X 5 = SOLUTION C = 6.00×10^6 SPM

FINAL COUNTS:

FINAL SPERM COUNT: 4.80×10^7
FINAL EGG COUNT: 2400

TEST TIMES:

SPERM COLLECTED: 1135
EGGS COLLECTED: 1135
SPERM ADDED: 1213
EGGS ADDED: 1313
FIXATIVE ADDED: 1333

See ESI SOP #1412 for additional information

DS1

FERTILIZATION COUNTS

STUDY	CLIENT	LOCATION	DATE 6/16/10
19812	Woods Hole Group	New Bedford	INITIALS LB

	REPLICATE VIAL			
	1	2	3	4
SAMPLE	FERT/TOTAL	FERT/TOTAL	FERT/TOTAL	FERT/TOTAL
Lab Control	100/108	103/111	100/104	101/108
-001	168/185	96/107	95/100	89/100
-002	86/100	79/100	87/100	90/100
-003	100/110	88/105	100/107	97/104
-004	100/114	95/104	101/105	97/105
-005	100/107	99/111	100/119	90/102
-006	LB 6/16/10 ~~87/117~~ 71/114	52/100	59/113	56/112
-007	40/100	40/105	LB 6/16/10 ~~42/106~~ 42/106	42/106
-008	67/100	73/102	59/102	70/103
-009	83/102	87/102	86/107	101/108
-010	94/103	95/101	101/107	104/120

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Sample ID:	18-5187-9415	**Code:**	19812-005 Set	**Client:**	Woods Hole Group
Sample Date:	15 Jun-10 12:25	**Material:**	Surface Water	**Project:**	Ecological Risk Assessment
Receive Date:	15 Jun-10 18:53	**Source:**	New Bedford Harbor Dredge Monitoring		
Sample Age:	24h	**Station:**	DS Group 001 - 005		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
11-9269-7283	Proportion Fertilized	100	>100	N/A	8.19%		Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	NA	95% LCL	95% UCL	TU	Method
14-1219-8582	Proportion Fertilized	EC10	848	N/A	N/A		Nonlinear Regression
		EC15	1230	N/A	N/A		
		EC20	1620	N/A	N/A		
		EC25	2040	N/A	N/A		
		EC40	3540	N/A	N/A		
		EC50	4900	N/A	N/A		
06-0526-3004	Proportion Fertilized	EC5	>100	N/A	N/A		Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A		
		EC15	>100	N/A	N/A		
		EC20	>100	N/A	N/A		
		EC25	>100	N/A	N/A		
		EC40	>100	N/A	N/A		
		EC50	>100	N/A	N/A		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
06-0526-3004	Proportion Fertilized	Control Resp	0.887	0.7 - 1	Yes	Result Within Limits
11-9269-7283	Proportion Fertilized	Control Resp	0.887	0.7 - 1	Yes	Result Within Limits
14-1219-8582	Proportion Fertilized	Control Resp	0.887	0.7 - 1	Yes	Result Within Limits
11-9269-7283	Proportion Fertilized	PMSD	0.0819	NL - 0.25	No	Result Within Limits

Proportion Fertilized Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	0.887	0.873	0.902	0.84	0.935	0.00706	0.0387	4.36%	0.0%
0	Lab Water	4	0.938	0.932	0.944	0.926	0.962	0.003	0.0164	1.75%	-5.68%
25		4	0.919	0.906	0.932	0.877	0.962	0.00636	0.0348	3.79%	-3.58%
50		4	0.904	0.887	0.92	0.838	0.935	0.00825	0.0452	5.0%	-1.84%
75		4	0.855	0.838	0.872	0.79	0.9	0.0085	0.0465	5.44%	3.64%
100		4	0.911	0.901	0.921	0.89	0.95	0.0049	0.0268	2.94%	-2.71%

Proportion Fertilized Detail

Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	0.935	0.892	0.84	0.882
0	Lab Water	0.926	0.928	0.962	0.935
25		0.877	0.913	0.962	0.924
50		0.909	0.838	0.935	0.933
75		0.86	0.79	0.87	0.9
100		0.908	0.897	0.95	0.89

Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	11-9269-7283	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	17 Jun-10 12:19	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	100	>100	N/A		8.19%

Dunnett's Multiple Comparison Test

Control	vs	Conc-NA	Test Stat	Critical	MSD	P-Value	Decision(5%)
Dilution Water		25	-1.23	2.36	0.106	0.9861	Non-Significant Effect
		50	-0.628	2.36	0.106	0.9402	Non-Significant Effect
		75	1.08	2.36	0.106	0.3499	Non-Significant Effect
		100	-0.868	2.36	0.106	0.9657	Non-Significant Effect

Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision
Extreme Value	Grubbs Single Outlier	1.83	2.71	1.0000	No Outliers Detected

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.02682337	0.006705842	4	1.64	0.2151	Non-Significant Effect
Error	0.06119692	0.004079795	15			
Total	0.08802029	0.01078564	19			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	0.343	13.3	0.9869	Equal Variances
Distribution	Shapiro-Wilk Normality	0.953		0.4212	Normal Distribution

Proportion Fertilized Summary

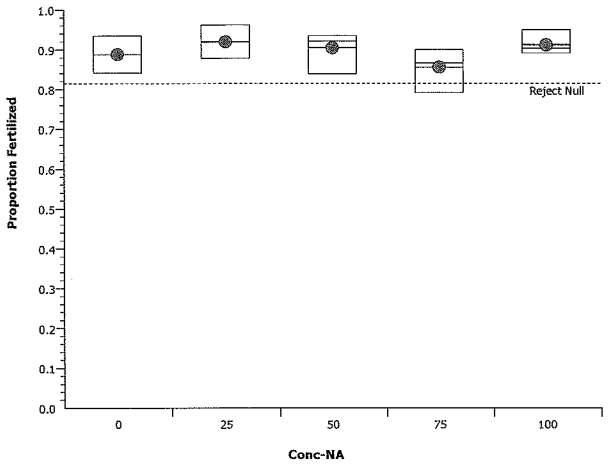
Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	0.887	0.873	0.902	0.84	0.935	0.00718	0.0387	4.36%	0.0%
25		4	0.919	0.906	0.932	0.877	0.962	0.00647	0.0348	3.79%	-3.58%
50		4	0.904	0.886	0.921	0.838	0.935	0.00839	0.0452	5.0%	-1.84%
75		4	0.855	0.837	0.873	0.79	0.9	0.00864	0.0465	5.44%	3.64%
100		4	0.911	0.901	0.922	0.89	0.95	0.00498	0.0268	2.94%	-2.71%

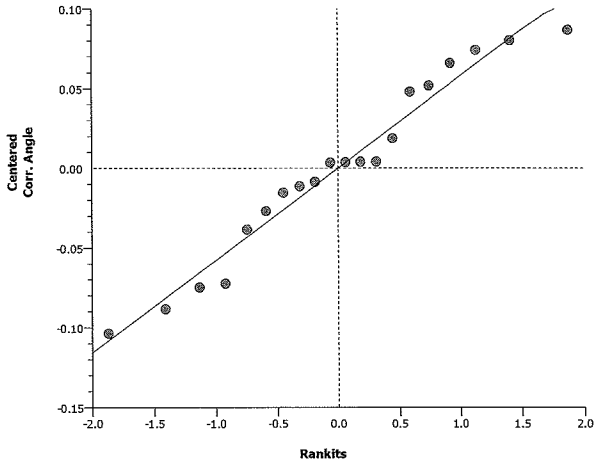
Angular (Corrected) Transformed Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Dilution Water	4	1.23	1.21	1.26	1.16	1.31	0.0116	0.0627	5.09%	0.0%
25		4	1.29	1.26	1.31	1.21	1.37	0.0124	0.0668	5.19%	-4.51%
50		4	1.26	1.23	1.29	1.16	1.31	0.0135	0.0725	5.75%	-2.3%
75		4	1.18	1.16	1.21	1.09	1.25	0.012	0.0646	5.46%	3.96%
100		4	1.27	1.25	1.29	1.23	1.35	0.00944	0.0508	4.0%	-3.18%

Arbacia Sperm Cell Fertilization Test					EnviroSystems, Inc.
Analysis ID:	11-9269-7283	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	17 Jun-10 12:19	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	14-1219-8582	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	14 Jul-10 12:31	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Log-Logistic EV [Y=A/(1+(X/D)^C)]	None	None	Normal [W=1]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(5%)
28	54	-100		Yes	3.34	3.68	0.0632	Non-Significant Lack of Fit

Point Estimates

Level	NA	95% LCL	95% UCL
EC10	848	N/A	N/A
EC15	1230	N/A	N/A
EC20	1620	N/A	N/A
EC25	2040	N/A	N/A
EC40	3540	N/A	N/A
EC50	4900	N/A	N/A

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(5%)
A	0.898	0.0211	0.854	0.943	42.5	<0.0001	Significant Parameter
C	1.25	11.9	-23.8	26.3	0.106	0.9171	Non-Significant Parameter
D	4900	179000	-372000	382000	0.0274	0.9785	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Model	0.0001175	5.874E-05	2	0.0302	0.9704	Non-Significant
Lack of Fit	0.0102036	0.0051018	2	3.34	0.0632	Non-Significant
Pure Error	0.0229165	0.0015278	15			
Residual	0.0331201	0.0019482	17			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(5%)
Variances	Bartlett Equality of Variance	0.962	9.49	0.9155	Equal Variances
	Mod Levene Equality of Variance	0.137	3.06	0.9659	Equal Variances
Distribution	Shapiro-Wilk Normality	0.962		0.5800	Normal Distribution

Proportion Fertilized Summary

			Calculated Variate(A/B)								
Conc-NA	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Dilution Water	4	0.887	0.84	0.935	0.00706	0.0387	4.36%	0.0%	389	439
25		4	0.919	0.877	0.962	0.00636	0.0348	3.79%	-3.58%	393	428
50		4	0.904	0.838	0.935	0.00825	0.0452	5.0%	-1.84%	385	426
75		4	0.855	0.79	0.9	0.0085	0.0465	5.44%	3.64%	342	400
100		4	0.911	0.89	0.95	0.0049	0.0268	2.94%	-2.71%	448	492

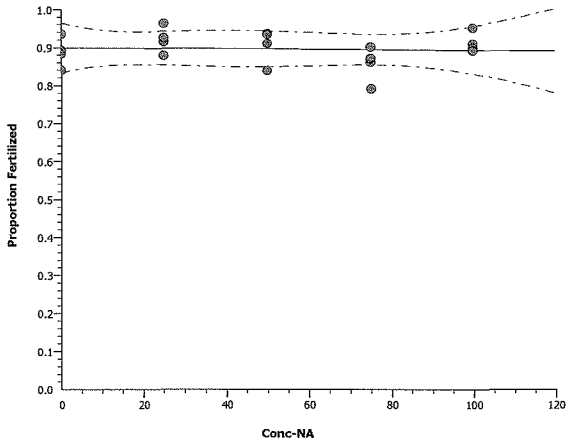
Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

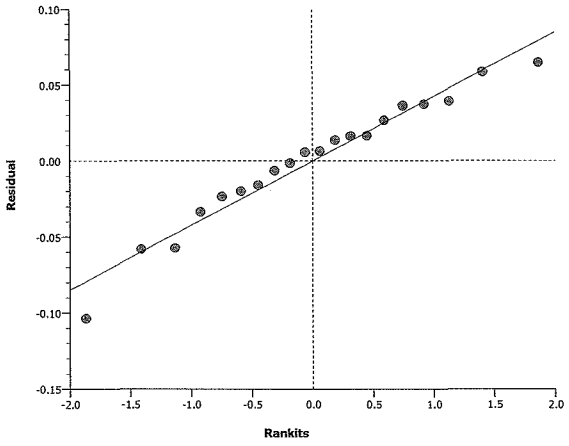
Analysis ID:	14-1219-8582	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	14 Jul-10 12:31	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

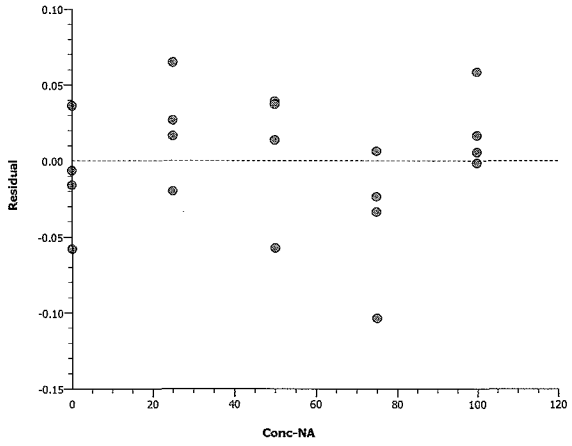
Proportion Fertilized Detail

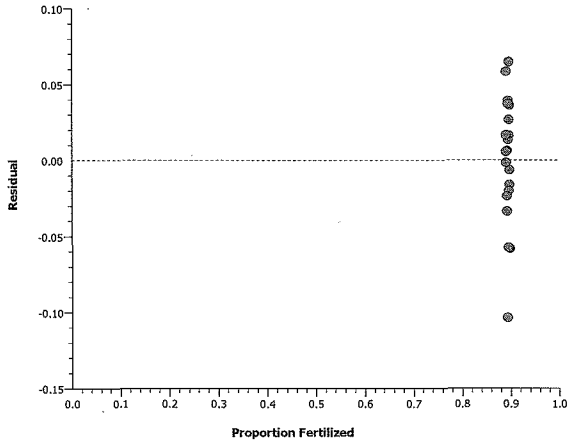
Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	0.935	0.892	0.84	0.882
25		0.877	0.913	0.962	0.924
50		0.909	0.838	0.935	0.933
75		0.86	0.79	0.87	0.9
100		0.908	0.897	0.95	0.89

Graphics









Arbacia Sperm Cell Fertilization Test					EnviroSystems, Inc.
Analysis ID:	06-0526-3004	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	17 Jun-10 12:19	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(5%)
Extreme Value	Grubbs Extreme Value	1.83	2.71	1.0000	No Outliers Detected

Point Estimates

Level	NA	95% LCL	95% UCL
EC5	>100	N/A	N/A
EC10	>100	N/A	N/A
EC15	>100	N/A	N/A
EC20	>100	N/A	N/A
EC25	>100	N/A	N/A
EC40	>100	N/A	N/A
EC50	>100	N/A	N/A

Proportion Fertilized Summary

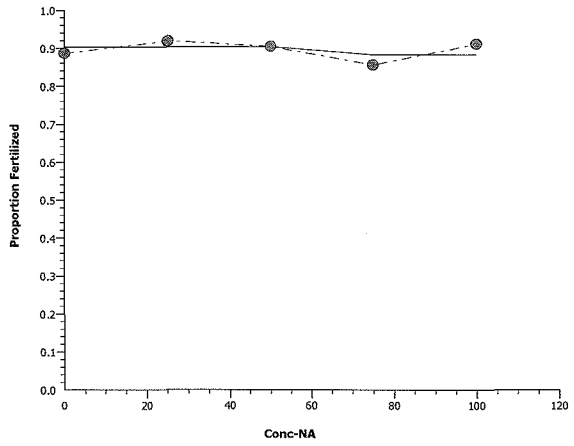
			Calculated Variate(A/B)								
Conc-NA	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
0	Dilution Water	4	0.887	0.84	0.935	0.00706	0.0387	4.36%	0.0%	389	439
25		4	0.919	0.877	0.962	0.00636	0.0348	3.79%	-3.58%	393	428
50		4	0.904	0.838	0.935	0.00825	0.0452	5.0%	-1.84%	385	426
75		4	0.855	0.79	0.9	0.0085	0.0465	5.44%	3.64%	342	400
100		4	0.911	0.89	0.95	0.0049	0.0268	2.94%	-2.71%	448	492

Proportion Fertilized Detail

Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Dilution Water	0.935	0.892	0.84	0.882
25		0.877	0.913	0.962	0.924
50		0.909	0.838	0.935	0.933
75		0.86	0.79	0.87	0.9
100		0.908	0.897	0.95	0.89

Arbacia Sperm Cell Fertilization Test					EnviroSystems, Inc.
Analysis ID:	06-0526-3004	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	17 Jun-10 12:19	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Graphics



Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	
Sample ID:	01-6900-7167	**Code:**	19812-010 Set 2	**Client:**	Woods Hole Group
Sample Date:	15 Jun-10 14:00	**Material:**	Surface Water	**Project:**	Ecological Risk Assessment
Receive Date:	15 Jun-10 18:53	**Source:**	New Bedford Harbor Dredge Monitoring		
Sample Age:	22h	**Station:**	DS Group 006 - 010		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
07-7635-2558	Proportion Fertilized	41	160	81	6.86%		Dunnett's Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	NA	95% LCL	95% UCL	TU	Method
12-1514-3368	Proportion Fertilized	EC5	33.7	3.08	66.1		Linear Regression (MLE)
		EC10	52.3	8.52	88.3		
		EC15	70.4	16.9	108		
		EC20	89	28.8	127		
		EC25	109	45.3	147		
		EC40	181	127	239		
		EC50	246	191	396		
02-3348-9521	Proportion Fertilized	EC10	50.3	2.96	91		Nonlinear Regression
		EC15	69.4	22.8	117		
		EC20	88.7	43.2	139		
		EC25	109	66.2	158		
		EC40	180	148	216		
		EC50	241	184	316		
18-8577-9625	Proportion Fertilized	EC5	26.2	7.57	67.6		Linear Interpolation (ICPIN)
		EC10	50.6	15.8	79.9		
		EC15	70.2	37	107		
		EC20	97.1	58.6	153		
		EC25	134	80.4	179		
		EC40	177	168	184		
		EC50	>230	N/A	N/A		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
02-3348-9521	Proportion Fertilized	Control Resp	0.916	0.7 - 1	Yes	Result Within Limits
07-7635-2558	Proportion Fertilized	Control Resp	0.916	0.7 - 1	Yes	Result Within Limits
12-1514-3368	Proportion Fertilized	Control Resp	0.916	0.7 - 1	Yes	Result Within Limits
18-8577-9625	Proportion Fertilized	Control Resp	0.916	0.7 - 1	Yes	Result Within Limits
07-7635-2558	Proportion Fertilized	PMSD	0.0686	NL - 0.25	No	Result Within Limits

Proportion Fertilized Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
0	Lab Water	4	0.938	0.932	0.944	0.926	0.962	0.003	0.0164	1.75%	0.0%
7.1	Dilution Water	4	0.916	0.903	0.929	0.867	0.944	0.00652	0.0357	3.9%	2.31%
41		4	0.851	0.829	0.874	0.804	0.935	0.0109	0.0598	7.02%	9.2%
160		4	0.661	0.639	0.683	0.578	0.716	0.0107	0.0584	8.84%	29.5%
190		4	0.393	0.39	0.397	0.381	0.4	0.00154	0.00846	2.15%	58.0%
230		4	0.541	0.521	0.562	0.5	0.623	0.0101	0.0553	10.2%	42.3%

Arbacia Sperm Cell Fertilization Test — EnviroSystems, Inc.

Proportion Fertilized Detail

Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water	0.926	0.928	0.962	0.935
7.1	Dilution Water	0.913	0.941	0.944	0.867
41		0.814	0.853	0.804	0.935
160		0.67	0.716	0.578	0.68
190		0.4	0.381	0.396	0.396
230		0.623	0.52	0.522	0.5

Arbacia Sperm Cell Fertilization Test — EnviroSystems, Inc.

Analysis ID:	07-7635-2558	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	13 Jul-10 14:37	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Data Transform	Zeta	Alt Hyp	Monte Carlo	NOEL	LOEL	TOEL	TU	PMSD
Angular (Corrected)	0	C > T	Not Run	41	160	81		6.86%

Dunnett's Multiple Comparison Test

Control	vs	Conc-NA	Test Stat	Critical	MSD	P-Value	Decision(5%)
7.1		41	2.26	2.36	0.104	0.0596	Non-Significant Effect
7.1		160*	7.53	2.36	0.104	<0.0001	Significant Effect
7.1		190*	13.7	2.36	0.104	<0.0001	Significant Effect
7.1		230*	10.3	2.36	0.104	<0.0001	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Between	0.9872664	0.2468166	4	63.9	<0.0001	Significant Effect
Error	0.05796837	0.003864558	15			
Total	1.045235	0.2506812	19			

ANOVA Assumptions

Attribute	Test	Test Stat	Critical	P-Value	Decision(1%)
Variances	Bartlett Equality of Variance	8.98	13.3	0.0616	Equal Variances
Distribution	Shapiro-Wilk Normality	0.965		0.6491	Normal Distribution

Proportion Fertilized Summary

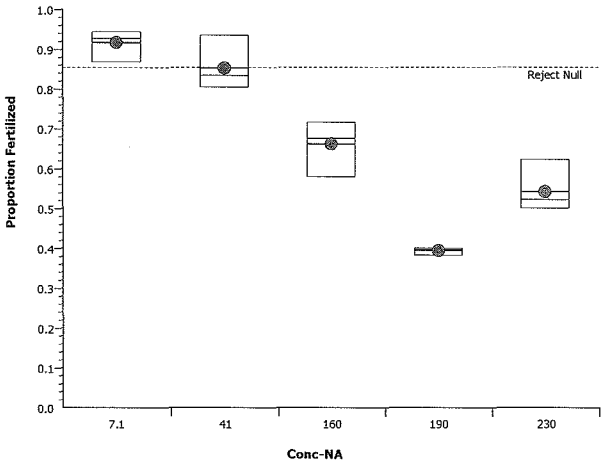
Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
7.1	Dilution Water	4	0.916	0.902	0.93	0.867	0.944	0.00663	0.0357	3.9%	0.0%
41		4	0.851	0.829	0.874	0.804	0.935	0.0111	0.0598	7.02%	7.05%
160		4	0.661	0.639	0.683	0.578	0.716	0.0108	0.0584	8.84%	27.8%
190		4	0.393	0.39	0.397	0.381	0.4	0.00157	0.00846	2.15%	57.1%
230		4	0.541	0.52	0.562	0.5	0.623	0.0103	0.0553	10.2%	40.9%

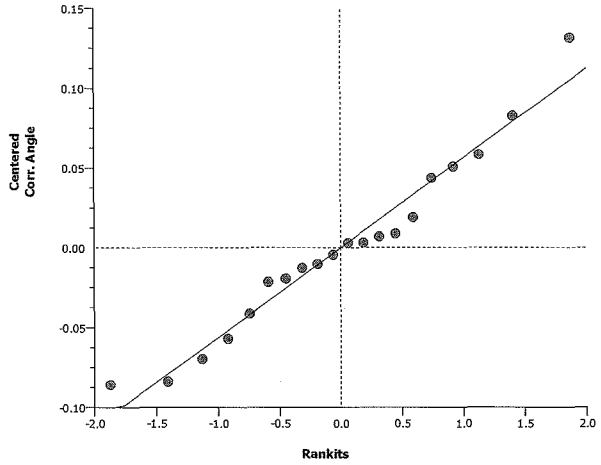
Angular (Corrected) Transformed Summary

Conc-NA	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	Diff%
7.1	Dilution Water	4	1.28	1.26	1.3	1.2	1.33	0.0116	0.0623	4.86%	0.0%
41		4	1.18	1.15	1.22	1.11	1.31	0.0171	0.0922	7.8%	7.75%
160		4	0.95	0.927	0.973	0.864	1.01	0.0114	0.0612	6.44%	25.8%
190		4	0.678	0.675	0.681	0.665	0.685	0.00161	0.00867	1.28%	47.1%
230		4	0.827	0.806	0.848	0.785	0.909	0.0104	0.0559	6.76%	35.4%

Arbacia Sperm Cell Fertilization Test					EnviroSystems, Inc.
Analysis ID:	07-7635-2558	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	13 Jul-10 14:37	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





Arbacia Sperm Cell Fertilization Test — EnviroSystems, Inc.

Analysis ID:	12-1514-3368	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	13 Jul-10 14:40	**Analysis:**	Linear Regression (MLE)	**Official Results:**	Yes
Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Linear Regression Options

Model Function	Threshold Option	Threshold	Optimized	Pooled	Het Corr	Weighted
Log-Normal [NED=A+B*log(X)]	Control Threshold	0.0858469	Yes	No	Yes	Yes

Regression Summary

Iters	LL	QAICc	Mu	Sigma	G Stat	Chi-Sq	Critical	P-Value	Decision(5%)
5	-958	413	0.235	0.525	0.328	65.7	23.7	0.0000	Significant Heterogeneity

Point Estimates

Level	NA	95% LCL	95% UCL
EC5	33.7	3.08	66.1
EC10	52.3	8.52	88.3
EC15	70.4	16.9	108
EC20	89	28.8	127
EC25	109	45.3	147
EC40	181	127	239
EC50	246	191	396

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(5%)
Threshold	0.0853	0.0289	0.0233	0.147	2.95	0.0105	Significant Parameter
Slope	1.9	0.508	0.814	2.99	3.75	0.0022	Significant Parameter
Intercept	0.447	1.14	-2	2.9	0.392	0.7011	Non-Significant Parameter

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(5%)
Variances	Bartlett Equality of Variance	8.04	7.81	0.0452	Unequal Variances
	Mod Levene Equality of Variance	1.06	3.49	0.4027	Equal Variances
Distribution	Shapiro-Wilk Normality	0.927		0.2161	Normal Distribution

Proportion Fertilized Summary

			Calculated Variate(A/B)								
Conc-NA	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
7.1	Dilution Water	4	0.916	0.867	0.944	0.00652	0.0357	3.9%	0.0%	394	431
41		4	0.851	0.804	0.935	0.0109	0.0598	7.02%	7.05%	357	419
160		4	0.661	0.578	0.716	0.0107	0.0584	8.84%	27.8%	269	407
190		4	0.393	0.381	0.4	0.00154	0.00846	2.15%	57.1%	164	417
230		4	0.541	0.5	0.623	0.0101	0.0553	10.2%	40.9%	237	439

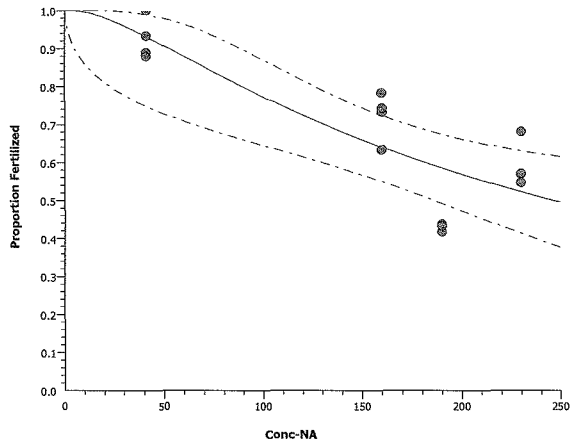
Proportion Fertilized Detail

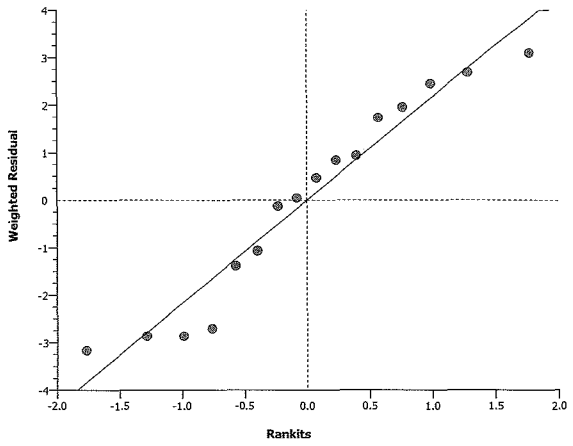
Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
7.1	Dilution Water	0.913	0.941	0.944	0.867
41		0.814	0.853	0.804	0.935
160		0.67	0.716	0.578	0.68
190		0.4	0.381	0.396	0.396
230		0.623	0.52	0.522	0.5

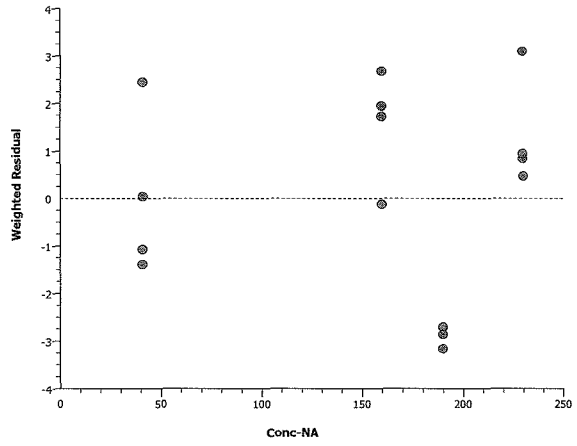
Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

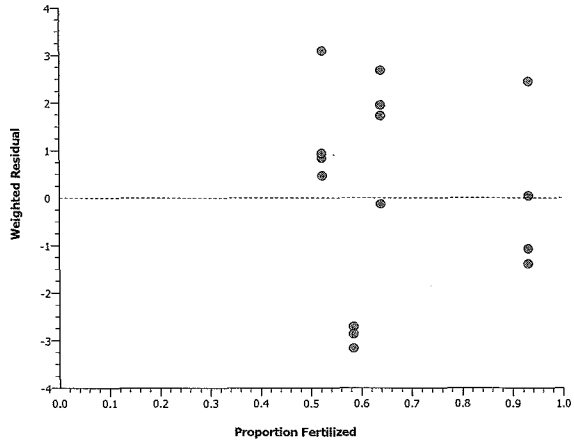
Analysis ID:	12-1514-3368	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	13 Jul-10 14:40	**Analysis:**	Linear Regression (MLE)	**Official Results:**	Yes

Graphics









Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	02-3348-9521	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	13 Jul-10 14:40	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Log-Logistic EV [Y=A/(1+(X/D)^C)]	None	None	Normal [W=1]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(5%)
5	38.7	-69.7	0.7797	Yes	26.3	3.68	0.0000	Significant Lack of Fit

Point Estimates

Level	NA	95% LCL	95% UCL
EC10	50.3	2.96	91
EC15	69.4	22.8	117
EC20	88.7	43.2	139
EC25	109	66.2	158
EC40	180	148	216
EC50	241	184	316

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(5%)
A	0.926	0.0562	0.808	1.04	16.5	<0.0001	Significant Parameter
C	1.36	0.547	0.208	2.52	2.49	0.0235	Significant Parameter
D	238	29.4	176	300	8.1	<0.0001	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(5%)
Lack of Fit	0.1196965	0.0598483	2	26.3	<0.0001	Significant
Model	0.6265515	0.3132758	2	34.6	<0.0001	Significant
Pure Error	0.0341637	0.0022776	15			
Residual	0.1538602	0.0090506	17			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(5%)
Variances	Bartlett Equality of Variance	7.66	9.49	0.1050	Equal Variances
	Mod Levene Equality of Variance	0.669	3.06	0.6234	Equal Variances
Distribution	Shapiro-Wilk Normality	0.946		0.3114	Normal Distribution

Proportion Fertilized Summary

			Calculated Variate(A/B)								
Conc-NA	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	Diff%	A	B
7.1	Dilution Water	4	0.916	0.867	0.944	0.00652	0.0357	3.9%	0.0%	394	431
41		4	0.851	0.804	0.935	0.0109	0.0598	7.02%	7.05%	357	419
160		4	0.661	0.578	0.716	0.0107	0.0584	8.84%	27.8%	269	407
190		4	0.393	0.381	0.4	0.00154	0.00846	2.15%	57.1%	164	417
230		4	0.541	0.5	0.623	0.0101	0.0553	10.2%	40.9%	237	439

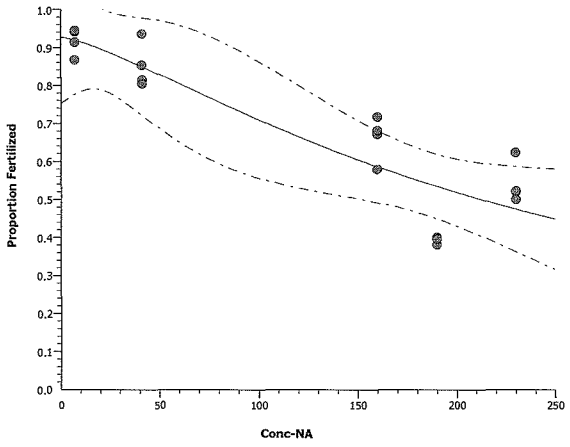
Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

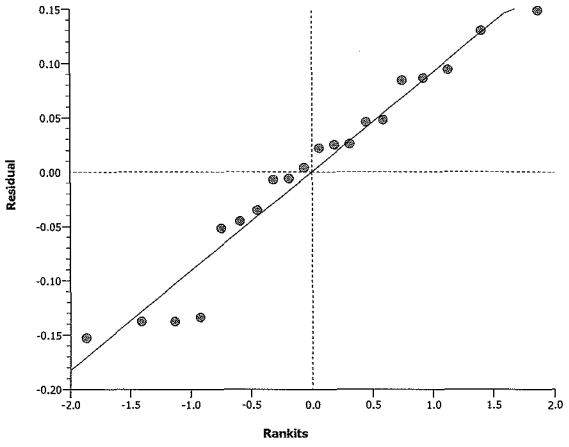
Analysis ID:	02-3348-9521	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	13 Jul-10 14:40	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

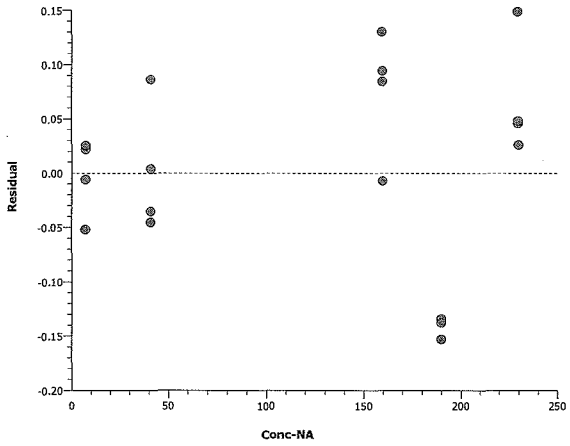
Proportion Fertilized Detail

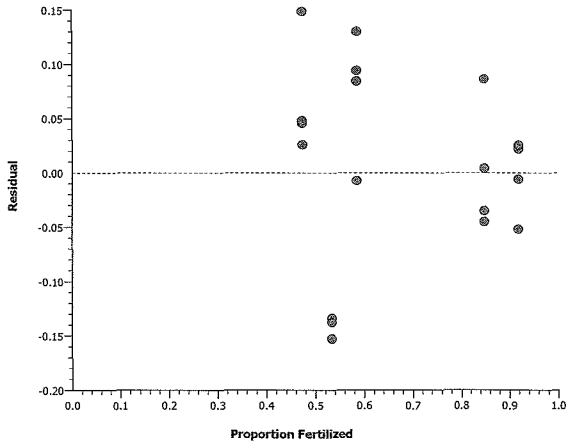
Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
7.1	Dilution Water	0.913	0.941	0.944	0.867
41		0.814	0.853	0.804	0.935
160		0.67	0.716	0.578	0.68
190		0.4	0.381	0.396	0.396
230		0.623	0.52	0.522	0.5

Graphics









Arbacia Sperm Cell Fertilization Test — **EnviroSystems, Inc.**

Analysis ID:	18-8577-9625	**Endpoint:**	Proportion Fertilized	**CETIS Version:**	CETISv1.7.0
Analyzed:	13 Jul-10 14:40	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Batch ID:	05-2047-0565	**Test Type:**	Fertilization	**Analyst:**	
Start Date:	16 Jun-10 12:13	**Protocol:**	EPA/821/R-02-014 (2002)	**Diluent:**	Not Applicable
Ending Date:	16 Jun-10 13:33	**Species:**	Arbacia punctulata	**Brine:**	Generic commercial salts
Duration:	80m	**Source:**	In-House Culture	**Age:**	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X+1)	Linear	57951	200	Yes	Two-Point Interpolation

Point Estimates

Level	NA	95% LCL	95% UCL
EC5	26.2	7.57	67.6
EC10	50.6	15.8	79.9
EC15	70.2	37	107
EC20	97.1	58.6	153
EC25	134	80.4	179
EC40	177	168	184
EC50	>230	N/A	N/A

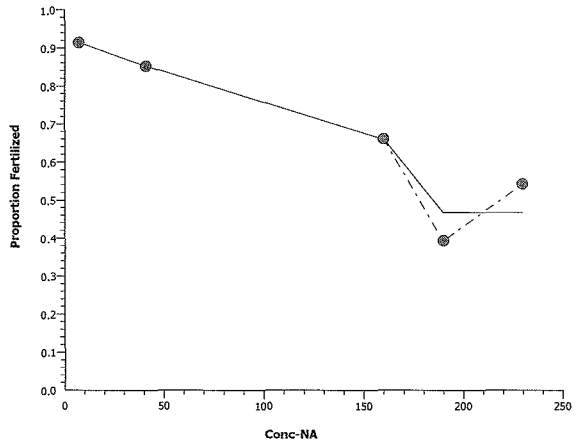
Proportion Fertilized Summary

			Calculated Variate(A/B)								
Conc-NA	**Control Type**	**Count**	**Mean**	**Min**	**Max**	**Std Err**	**Std Dev**	**CV%**	**Diff%**	**A**	**B**
7.1	Dilution Water	4	0.916	0.867	0.944	0.00652	0.0357	3.9%	0.0%	394	431
41		4	0.851	0.804	0.935	0.0109	0.0598	7.02%	7.05%	357	419
160		4	0.661	0.578	0.716	0.0107	0.0584	8.84%	27.8%	269	407
190		4	0.393	0.381	0.4	0.00154	0.00846	2.15%	57.1%	164	417
230		4	0.541	0.5	0.623	0.0101	0.0553	10.2%	40.9%	237	439

Proportion Fertilized Detail

Conc-NA	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
7.1	Dilution Water	0.913	0.941	0.944	0.867
41		0.814	0.853	0.804	0.935
160		0.67	0.716	0.578	0.68
190		0.4	0.381	0.396	0.396
230		0.623	0.52	0.522	0.5

Graphics



SALTWATER ASSAYS

A. bahia, A. punctulata

STUDY: 19812	LOCATION: New Bedford Harbor				
CHEMISTRY	Lab Salt Control	-001	-002	-003	-004
AMMONIA	19797-008	-011	-012	-013	-014
AS RECEIVED WATER QUALITIES	Lab Salt Control	-001	-002	-003	-004
SALINITY (ppt)	25	24.5	25.5	25.9	26.0
pH (SU)	7.86	7.40	7.35	7.34	7.33
TRC (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02
DO (mg/L)	7.6	8.4	7.3	7.3	7.1
S/C (µmhos/cm)	38850	38780	40240	40500	40950
WQ STATION USED	1	1	1	1	1
INITIALS	SJ	LB	LB	LB	LB
A. bahia SALINITY ADJUSTMENT RECORD	Lab Salt Control	-001	-002	-003	-004
SAMPLE (mLs)		19,500	19,500	19,500	19,500
SEA SALT (g)		0	0	0	0
DATE:	6/16/10				
TIME:	1100				
INITIALS:	SJ				

Sample ID	ESI Cube ID
-001	-001
-002	-002
-003	-003
-004	-004

(B) SJ 6/16/10

SALTWATER ASSAYS

A. bahia, A. punctulata

STUDY: 19812	LOCATION: New Bedford Harbor					
CHEMISTRY	-005	-006	-007	-008	-009	-010
AMMONIA	-015	-016	-017	-018	-019	-020
AS RECEIVED WATER QUALITIES	-005	-006	-007	-008	–009	-010
SALINITY (ppt)	26.4	24.9	25.4	26.1	26.3	26.3
pH (SU)	7.30	7.69	7.65	7.56	7.39	7.34
TRC (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
DO (mg/L)	7.2	7.9	7.8	7.9	7.8	7.4
S/C (µmhos/cm)	41440	39280	40110	40940	41240	41460
WQ STATION USED	1	1	1	1	1	1
INITIALS	LB	LB	LB	LB	LB	LB
A. bahia SALINITY ADJUSTMENT RECORD	-005	-006	–007	-008	-009	-010
SAMPLE (mLs)						
SEA SALT (g)						
DATE:						
TIME:						
INITIALS:						

(LB) ST 4/16/10

Sample ID	ESI Cube ID
-001	-001
-002	-002
-003	-003
-004	-004
-005	-005
-006	-006
-007	-007
-008	-008
-009	-009
-010	-010

DILUTIONS

STUDY: 19812	CLIENT: Woods Hole Group	
SPECIES: *A. bahia*		
	Sample: New Bedford Harbor	
Concentration %	Vol. Eff.(mls)	Final Vol.(mls)
Lab	~~0~~	800
Reference Water	~~0~~	↓
NTU 001	800	↓
NTU 002	↓	↓
NTU 003	↓	↓
NTU 004	↓	↓
NTU 005	↓	↓
NTU 006	↓	↓
NTU 007	↓	↓
NTU 008	↓	↓
NTU 009	↓	↓
INITIALS:	SJ	
TIME:	1200	
DATE:	10/16/10	

Arbacia punctulata Chronic Fertilization Assay

SAMPLE USE RECORD

STUDY: 19812	CLIENT: Woods Hole Group New Bedford	
SPECIES: *A. punctulata*		
	Day: 0	
SAMPLE	Volume Used (mL)	ESI Cube ID
Lab Control	200	Lab
-001		001
-002		002
-003		003
-004		004
-005		005
-006		006
-007		007
-008		008
-009		009
-010		010
INITIALS:	LB	
TIME:	0930	
DATE:	6/16/10	

RECORD OF METERS USED

STUDY: 19812	CLIENT: Woods Hole Group		
A.bahia			
Exposure (Hours)			
	0	24	48
Water Quality Station #	1	1	1
Initials / Date	SJ 6/16/10	JQ 6/17/10	MC 6/18/10

Water Quality Station #1		Water Quality Station #2		COMMENTS
DO meter #	24	DO meter #		
DO probe #	89	DO probe #		
pH meter #	1097	pH meter #		
pH probe #	90	pH probe #		
S/C meter #	YSI30D	S/C meter #		
S/C probe #	↓	S/C probe #		
Salinity meter #		Salinity meter #		

Report No: 19812 SDG:
Project: New Bedford Harbor - Level II Dilution Study

Parameter: Ammonia-N
Matrix: Water
Sampled: 06/16/10 0830

Sample ID:		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
DS-TOX-001-061510	19812-011	0.16	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-002-061510	19812-012	0.14	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-003-061510	19812-013	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-004-061510	19812-014	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-005-061510	19812-015	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-006-061510	19812-016	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-007-061510	19812-017	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-008-061510	19812-018	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-009-061510	19812-019	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G
DS-TOX-010-061510	19812-020	ND	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G

Notes:

ND = Not Detected

Report No: 19797 SDG:
Project: Laboratory Seawater

Sample ID: ESIN1 LAB SALT 06/16/10
Matrix: Water
Sampled: 06/16/10 1030

Parameter		Result		Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Ammonia-N	19797-008	ND	Se	0.1	mg/L as N	06/17/10	06/17/10	JLH/SM 4500-NH3 G

Notes:

ND = Not Detected

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19812		
SDG No:			
Project:	WHG-NB Env. Monitoring		
Delivered via:	Client		
Date and Time Received:	06/15/10 1853	Date and TIme Logged into Lab:	06/16/10 0845
Recieved By:	DM	Logged into Lab by:	SJ
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	4	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	3762		
COC Complete:	Yes	Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
DS-TOX-001-061510	19812-001	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-002-061510	19812-002	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-003-061510	19812-003	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-004-061510	19812-004	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-005-061510	19812-005	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-006-061510	19812-006	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-007-061510	19812-007	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-008-061510	19812-008	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-009-061510	19812-009	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-010-061510	19812-010	W	AB48AD, AP01CR;	20L	4C	
DS-TOX-001-061510	19812-011	W	NH3;	60mL p	H2SO4	
DS-TOX-002-061510	19812-012	W	NH3;	60mL p	H2SO4	
DS-TOX-003-061510	19812-013	W	NH3;	60mL p	H2SO4	
DS-TOX-004-061510	19812-014	W	NH3;	60mL p	H2SO4	
DS-TOX-005-061510	19812-015	W	NH3;	60mL p	H2SO4	
DS-TOX-006-061510	19812-016	W	NH3;	60mL p	H2SO4	
DS-TOX-007-061510	19812-017	W	NH3;	60mL p	H2SO4	
DS-TOX-008-061510	19812-018	W	NH3;	60mL p	H2SO4	
DS-TOX-009-061510	19812-019	W	NH3;	60mL p	H2SO4	
DS-TOX-010-061510	19812-020	W	NH3;	60mL p	H2SO4	

Notes and qualifications:

Subsampled NH3 Bottles from corresponding cubitainers upon receipt at the laboratory

DS1

ESI

EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 19812

CHAIN OF CUSTODY DOCUMENTATION

Water Quality Monitoring Summary Report
W912WJ-09-D-0001
D-120
Delivery Order: 0000-03
December 2010

Client: Woods Hole Grop	Contact: Dave Walsh	Project Name: NB Env. Monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Dr.	Project Number: TO-0010-03	
Invoice to: Cathy Morey	Address: E. Falmouth, MA 02536	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax: 508-540-1001	email: dwalsh@whgrp.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or comp-posit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preser-vation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
001	DS-TOX-ΦΦ1-Φ6151Φ	6/15/10	12:25	DRW	G	20L	P	NA	W		Level II dilution study - Tox
002	DS-TOX-ΦΦ2-Φ6151Φ		12:25		C						AB48AD, APOICR
003	DS-TOX-ΦΦ3-Φ6151Φ		12:25		C						
004	DS-TOX-ΦΦ4-Φ6151Φ		12:25		C						
005	DS-TOX-ΦΦ5-Φ6151Φ		12:25		G						
006	DS-TOX-ΦΦ6-Φ6151Φ		1400		G						
007	DS-TOX-ΦΦ7-Φ6151Φ		1400		C						
008	DS-TOX-ΦΦ8-Φ6151Φ		1400		C						
009	DS-TOX-ΦΦ9-Φ6151Φ		1400		C						
010	DS-TOX-Φ1Φ-Φ6151Φ		1400		G						

Relinquished By: Dave Walsh Date: 6/15/11 Time: 1720 Received By: [signature] Date: 6/15/10 Time: 1720

Relinquished By: [signature] Date: 6/15/11 Time: 1853 Received at Lab By: [signature] Date: 6-15-10 Time: 1853

Comments:

Sample Delivery Group No: Page of

COC Doc No: 2703

FINAL
SEDIMENT MONITORING SUMMARY REPORT
2010 REMEDIAL DREDGING
NEW BEDFORD HARBOR SUPERFUND SITE, OU #1

Contract No. W912WJ-09-D-0001-0010-03



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

April 2011

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FINAL

SEDIMENT MONITORING SUMMARY REPORT
2010 REMEDIAL DREDGING
NEW BEDFORD HARBOR SUPERFUND SITE,
OPERATIONAL UNIT #1
NEW BEDFORD, MASSACHUSETTS

Contract No. W912WJ-09-D-0001-0010-03

April 2011

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

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East Falmouth MA 02536
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Table of Contents

EXECUTIVE SUMMARY ES-1

1.0 INTRODUCTION 1

1.1 SITE LOCATION AND DESCRIPTION 1

1.2 PROJECT OBJECTIVES AND SCOPE 3

1.2.1 Pre-dredge Sediment Sampling 4

1.2.2 Post-dredge Sediment Sampling 4

1.2.3 Boat House Sediment Sampling 4

2.0 METHODS 7

2.1 CORE, SOIL, AND GRAB LOCATIONS 7

2.2 CORE COLLECTION 7

2.3 CORE CALCULATIONS 7

2.4 SOIL SAMPLE COLLECTION 9

2.5 EXTERNAL SEDIMENT CORE EXAMINATION 10

2.6 INTERNAL SEDIMENT CORE EXAMINATION 10

2.7 POLYCHLORINATED BIPHENYL ANALYSIS (NOAA 18 CONGENERS) 11

2.7.1 Calculation of Total PCBs from NOAA-18 Congener Results 11

3.0 RESULTS 13

3.1 PRE-DREDGE CORE SAMPLING 13

3.2 POST-DREDGE CORE SAMPLING 24

3.2.1 Area G 24

3.2.2 Area J 24

3.2.3 Area K 24

3.2.4 Area M 24

3.3 BOATHOUSE SEDIMENT SAMPLING 37

3.3.1 Push Core Samples 37

3.3.2 Shoreline Soil Samples and CSO Grab Sample 37

4.0 DISCUSSION 43

5.0 REFERENCES 45

APPENDIX A. 2010 CORING PHOTOGRAPHS AND FIELD LOGS (ON CD) A-1

APPENDIX B. ALPHA ANALYTICAL LABORATORIES ANALYTICAL DATA REPORTS (ON CD) B-1

APPENDIX C. NEW ENVIRONMENTAL HORIZONS, INC. DATA VALIDATION REPORTS (ON CD) C-1

List of Figures

Figure 1. Basemap of New Bedford Harbor Superfund Site in Southeastern, MA ... 1
Figure 2. Basemap of 2010 Active Remediation Dredging Areas 3
Figure 3. Graphical Representation of Sediment Core Measurements 8
Figure 4. Basemap of Area G Pre-Dredge Core Locations Collected in 2010 14
Figure 5. Basemap of Area J Pre-Dredge Core Locations Collected in 2010..... 15
Figure 6. Basemap of Area K Pre-Dredge Core Locations Collected in 2010 16
Figure 7. Basemap of Area L Pre-Dredge Core Locations Collected in 2010..... 17
Figure 8. Basemap of Area M Pre-Dredge Core Locations Collected in 2010..... 18
Figure 9. Basemap of Area N Pre-Dredge Core Locations Collected in 2010 19
Figure 10. Basemap of Area O Pre-Dredge Core Locations Collected in 2010 20
Figure 11. Basemap of Area P Pre-Dredge Core Locations Collected in 2010 21
Figure 12. Area G Total PCB Concentrations and OL Thickness for 2010 Post-Dredge Cores 25
Figure 13. Area J Total PCB Concentrations and OL Thickness for 2010 Post-Dredge Cores 26
Figure 14. Area K Total PCB Concentrations and OL Thickness for 2010 Post-Dredge Cores 27
Figure 15. Area M Total PCB Concentrations and OL Thickness for 2010..... 28
Figure 16. Total PCB Concentration in Area G Post Dredge Cores 29
Figure 17. Total PCB Concentration in Area J Post Dredge Cores 30
Figure 18. Total PCB Concentration in Area K Post Dredge Cores 31
Figure 19. Total PCB Concentration in Area M Post Dredge Cores 32
Figure 20. Boat House Total PCB Concentrations for 2010..... 38
Figure 21. Total PCB Concentration of Northern Boat House Sediment Samples.... 39
Figure 22. Total PCB Concentration of Southern Boat House Sediment Samples.... 40

List of Tables

Table 1. Summary of External Descriptions by Dredge Area from 2010 Pre-dredge Sampling Event, April 12-15, 2010 22
Table 2. Elevation Data from 2010 Pre-dredge Sampling Event, April 12–15, 2010 23
Table 3. Elevation Data from Area G Post-Dredge Cores 33
Table 4. Elevation Data from Area J Post-Dredge Cores 33
Table 5. Elevation Data from Area K Post-Dredge Cores 34
Table 6. Elevation Data from Area M Post-Dredge Cores 34
Table 7. Total PCB Concentrations of Area G Post-Dredge Cores 35
Table 8. Total PCB Concentrations of Area J Post-Dredge Cores 35
Table 9. Total PCB Concentrations of Area K Post-Dredge Cores 36
Table 10. Total PCB Concentrations of Area M Post-Dredge Cores 36
Table 11. Elevation Data from Boat House Sediment Samples 41
Table 12. Total PCB Concentrations from Boat House Sediment Samples 42

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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 2010 field season. As part of this effort, two hundred thirty-four sediment core samples were collected at the Site to characterize the extent of the polychlorinated biphenyl (PCB) contamination in harbor sediments. Sediment sampling occurred in three phases: 1) pre-dredge, 2) post-dredge, and 3) boathouse. Sediment was conducted between April and November, 2010. All analytical sediment data were validated and posted to the New Bedford Harbor Database.

Pre-dredge cores were collected in April 2010 at 68 locations. 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 externally described and archived for potential analysis. These data are used by the USACE and its contractors to confirm the target remediation dredge elevation estimates and to assist with the development of the 2010 remediation dredge plan.

Post-dredge sediment sampling was performed with two objectives: 1) to assess the sediment condition during and following dredging operations, relative to the target dredge elevation set for the area of interest; and 2) to confirm whether remediation dredging completed removal of PCB contaminated sediments to concentrations at or below the 10 ppm remediation criterion. Post-dredge sampling occurred during two sampling events (August and October), recovering cores from 115 locations within remedial Dredge Areas M, G, J, and K. 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, and 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. The underlying sediments were generally comprised of clayey silt (ML/CL) or silty clay (CL/ML) with small amounts of fine sand. Analytical results reveal that the OL surface layer contained total PCB concentrations up to 619.6 mg/kg.

Boathouse sediment cores were collected outside of the 2010 remediation areas. These cores were collected at a site along the southwest shoreline of the Acushnet River that may be developed for recreational rowing, including the construction of a boathouse, by the City of New Bedford and other partners. The objective of the Boathouse sampling was to confirm the presence of PCBs in subaqueous sediments and shoreline soils within the potentially developed area. Sampling occurred in late October and early November 2010. A total of 51 cores were collected, described, and sub-sampled at one-foot intervals. Analysis was performed on the top two intervals with results indicating that PCB contamination was primarily within the top one-foot interval, on average.

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1.0 INTRODUCTION

1.1 SITE LOCATION AND DESCRIPTION

The New Bedford Harbor Superfund 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.

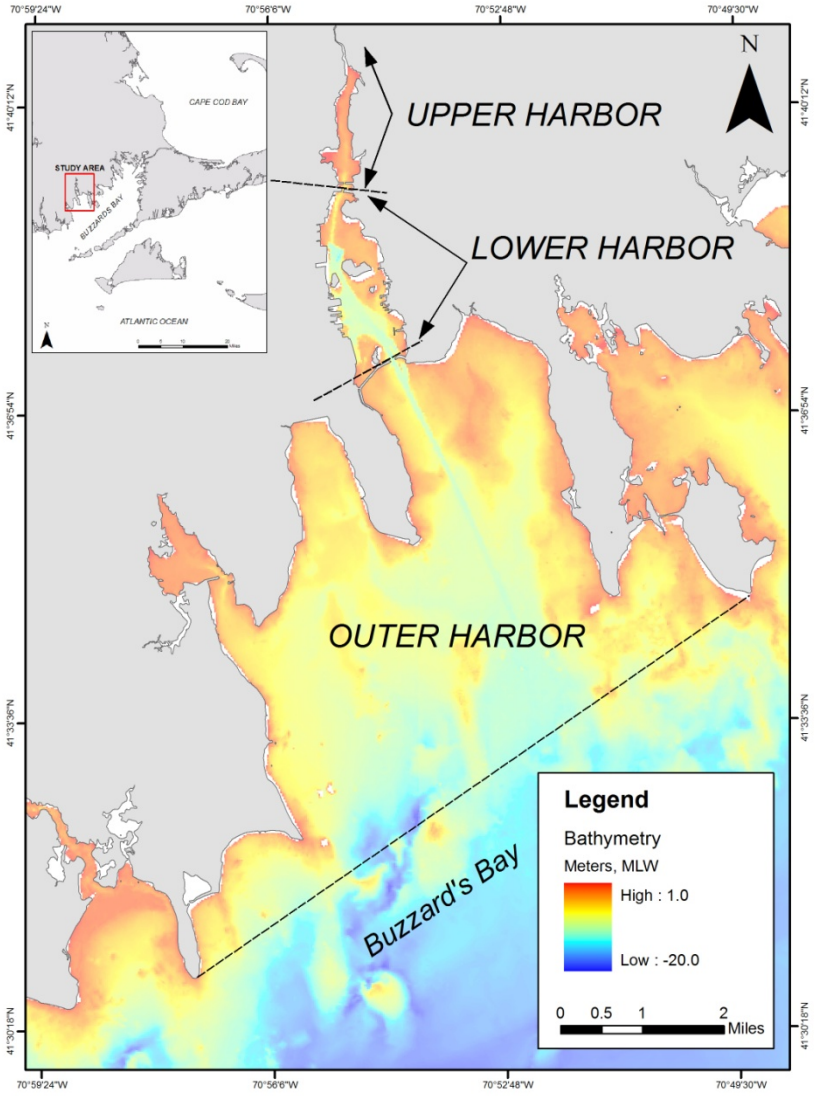

Figure 1. Basemap of New Bedford Harbor Superfund Site in Southeastern, MA

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.

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 sources of the contamination have been attributed to two electrical capacitor manufacturing facilities that operated between the 1940s and the 1970s. One facility, Aerovox Corporation, is 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 the removal of the most contaminated hot spot sediments in 1994 and 1995, as part of EPA's first cleanup phase, 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 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).

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 2010, remediation activities at the Site included hydraulic dredging and excavation in six areas: G, J, K, L, and M (Figure 2). Five of the six areas (Areas G, J, K, and M) dredged during the 2010 season were in the vicinity of the Aerovox facility. These five areas comprise the majority of the estuary between the Wood Street Bridge and the Aerovox facility. The sixth area, Area L, is located south of the submerged cable crossing.

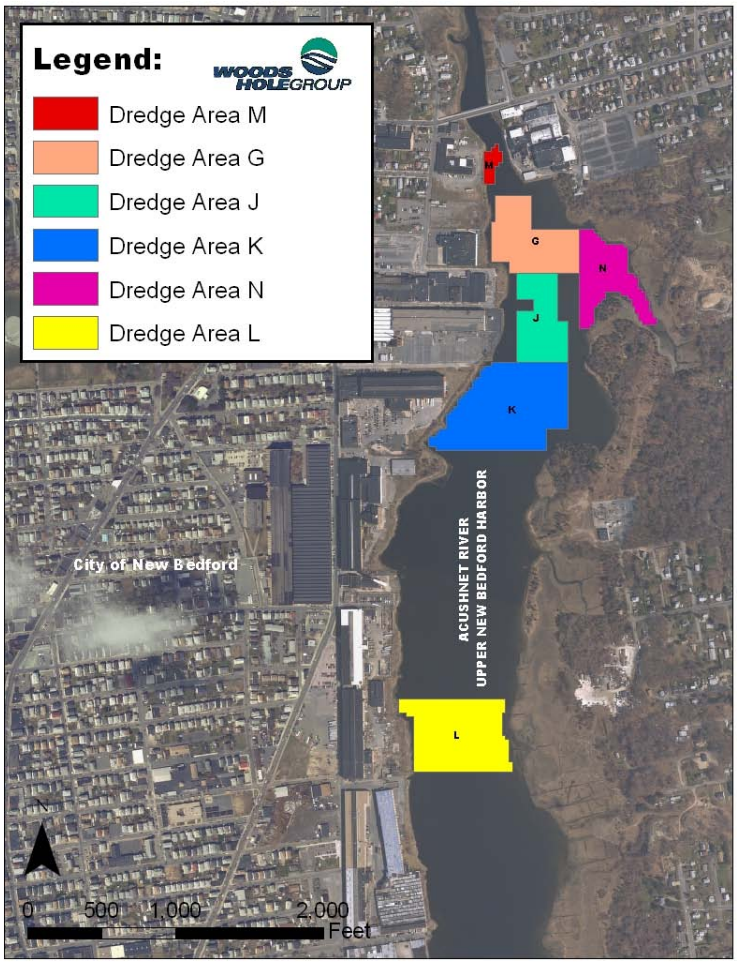

Figure 2. Basemap of 2010 Active Remediation Dredging Areas

The objectives of the 2010 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 2010 required visual characterization of both split and unsplit 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. 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 2010 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, estimating 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 Jacobs Engineering (JE).

1.2.1 Pre-dredge Sediment Sampling

In 2010, Pre-Dredge sampling was performed 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 characterization from the pre-dredge cores was used by the USACE and JE to prepare the final dredge plan for 2010 and subsequent dredging seasons.

1.2.2 Post-dredge Sediment Sampling

Post-dredge sediment sampling was conducted 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 cores were visually characterized to determine the thickness and elevation of "OL" material remaining. Cores also were subsampled for analytical testing of PCB concentrations in the sediment. If PCB concentrations exceeded 10 ppm, the location was identified by the USACE for further dredging.

1.2.3 Boat House Sediment Sampling

Boathouse sediment sampling was conducted during the 2010 post-dredge season to assess PCB concentration in sediments along the shoreline where the city of New

Bedford has proposed to develop and construct a recreational rowing center and boathouse. The intent of Boathouse sampling was to identify areas with PCB contaminated sediments at concentrations above 10 ppm. Boathouse sediment samples were visually characterized to determine the thickness and elevation of "OL" material present, and subsampled in one-foot increments for analytical testing.

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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 2010a) and Quality Assurance Project Plan (Woods Hole Group 2010b).

2.1 CORE, SOIL, AND GRAB LOCATIONS

All locations for the collection of sediment samples were approved by the USACE and USEPA, and provided electronically to Woods Hole Group by JE. Locations were provided in Massachusetts State Plane Mainland coordinates, and were converted into latitude and longitude using the program Corpscon 6. The Woods Hole Group navigation system required all waypoints to be entered in geographic coordinates.

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 Jacobs 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 gauged tide boards previously secured to a steel sheet pile with 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 recovery of the core onto the survey vessel, 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. A core was deemed acceptable if the barrel penetrated and recovered sediment from the target elevation. The required measurements and calculations are described in detail below and illustrated in Figure 3. All measurements were recorded in units of ±0.1 feet.

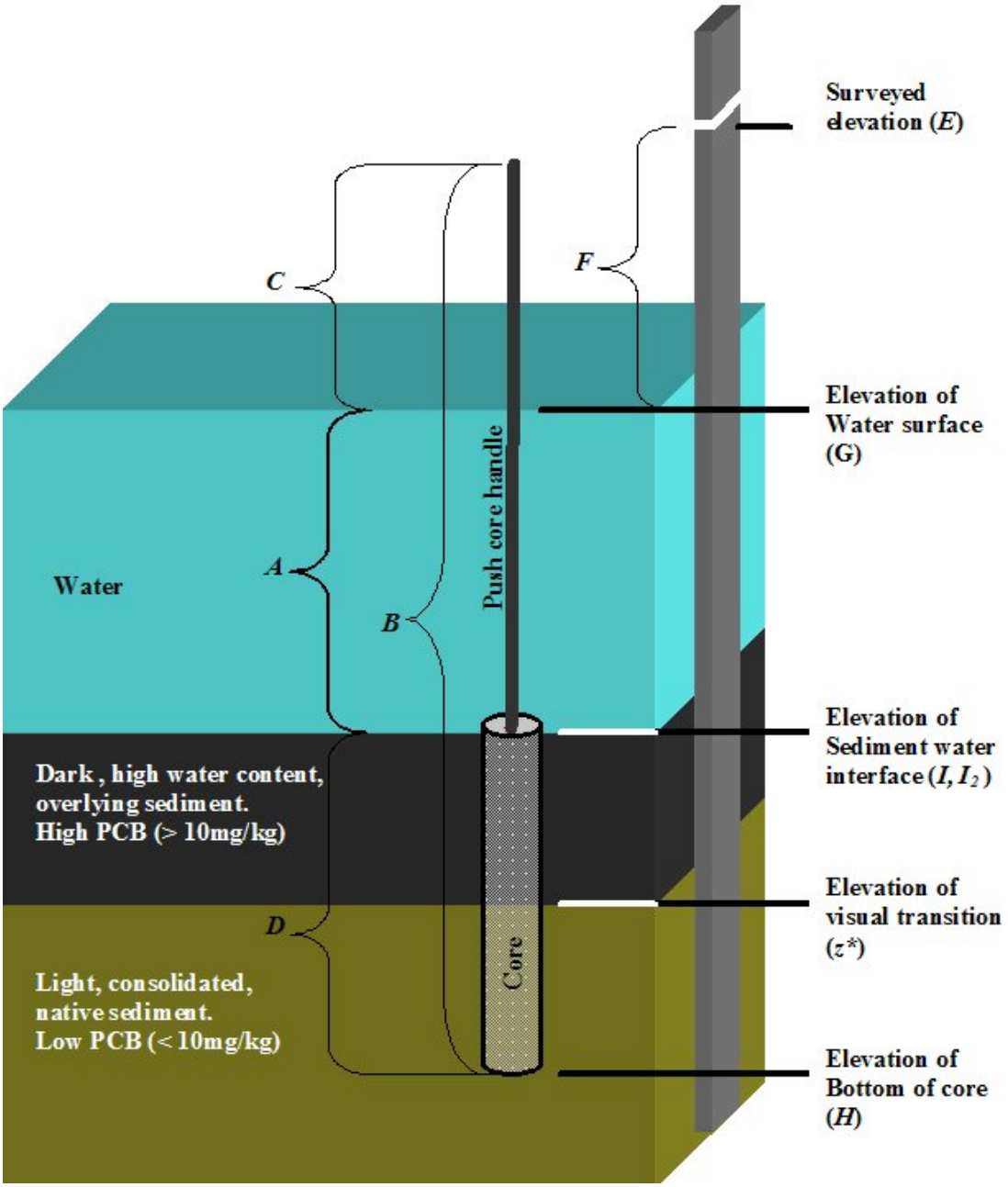

Figure 3. Graphical Representation of Sediment Core Measurements

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 + (distance to visual transition) = **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. The difference between I and I_2 could have been 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 SOIL SAMPLE COLLECTION

Shoreline soil samples were collected in a 2 5/8 inch inner diameter clear polycarbonate core barrel inserted into a soil auger. When sampling with the soil auger, the auger head was pushed and rotated into the sediment until the depth of auger barrel was reached, approximately 6 inches. The collected sediment was removed from the auger by placing a core liner at the top of the auger barrel. The auger was then inverted, placing the sediment into the capped core liner. If necessary, a cleaned spoon was used to push the soil into the liner. This process was repeated until the required depth was reached or if the auger reached refusal. Both ends of the core barrel were capped and the sample was

stored vertically for transport to the lab. In one instance a surficial sediment sample was collected using a stainless steel spoon.

2.5 EXTERNAL SEDIMENT CORE EXAMINATION

All acceptable Pre-Dredge cores were brought back to the field laboratory at the Sawyer Street facility for external inspection. The external inspection process included: 1) archival photography; and 2) a geological description through the polycarbonate core barrel, where the visual transitions between each type of sediment were recorded on a log sheet.

Although it is an efficient procedure, the external examination of the sediments through the transparent core barrel has proven difficult to provide: 1) an accurate physical description; and 2) the thicknesses of *in-situ* sediment strata. For example, during penetration, the core barrel can push overlaying sediment downward along the sides of the core barrel, obscuring the sediments that actually comprise that section of the core. This is common in the New Bedford Harbor sediments where the upper unconsolidated black silt is dragged downward in the core barrel, and causes a "streaking" effect when observed externally. It is often difficult to determine whether the streaking is an actual stratigraphic feature (e.g., mixing), or a remnant of the coring process.

2.6 INTERNAL SEDIMENT CORE EXAMINATION

All Post-Dredge and Boathouse 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, 180 degrees apart. A clean piece of stainless steel wire (18 gauge) was used to slice through the middle of the barrel, using the two cuts in the barrel as guidelines. Care was used to prevent the wire from pulling obstructions (shells, rocks) down the core barrel and potentially mixing sediment layers. After splitting, the cores were rolled 90 degrees and separated. Following separation, the core was geologically 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 predetermined sections of each split core was composited and sampled into 8 ounce glass jars for PCB analysis. Typically, subsamples were collected in 0.5 or 1.0 foot increments. However, variations in core compositions required unique sampling schemes to best characterize the sediment in a given core. If the core had a clear transition from the "OL" to another sediment layer, a one-half foot (0.5 foot) interval of sediment below the transition line was also sampled and composited for PCB analysis. Additional samples were collected for laboratory-based quality control analysis. All core samples were sent to Alpha Analytical Laboratories (AAL) for PCB congener (NOAA-18) analysis.

2.7 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, 2010b).

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 a modified USEPA Method 8082 (Woods Hole Group 2010b). 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) and Pattern Recognition (PR). Concentrations are calculated from the ECD response using internal standard techniques. Sample results were reported in micrograms per kilogram (µg/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.

2.7.1 Calculation of Total PCBs from NOAA-18 Congener Results

Although this sediment monitoring program analyzed and reported PCB concentrations for the NOAA-18 congeners, this report also provides a value for the total concentration of PCBs. The value for "Total PCBs" presented in this report is calculated (not quantitatively analyzed) 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 factor of 2.6 and divided by 1000 to convert to mg/kg (Equation 1).

$$\text{Total PCBs} = (\sum \text{NOAA-18 Congeners}) \times 2.6/1000$$

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

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).

3.0 RESULTS

Results from the 2010 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 and Boat House cores have also been uploaded to the New Bedford Harbor project database. In the database, 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. The underlying strata are generally composed of moderate- to well-consolidated fine-grained grey sediments, varying in texture between silt and clay or a combination of both (e.g., clayey silt - ML/CL or silty clay - CL/ML). In certain locations, the underlying strata also contained low percentages of sand. 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 the transition from the OL layer to the underlying strata.

3.1 PRE-DREDGE CORE SAMPLING

Pre-Dredge cores were collected on April 12–15, 2010. Cores were collected from 68 locations within 8 proposed Dredge Areas: G, J, K, L, M, N, O, and P (Figures 4 through 11). After collection, sediment cores were externally examined and frozen in case analytical subsampling was subsequently requested by the project team. No analytical samples from the 2010 Pre-Dredge have been collected as of the publication date of this document. Results are summarized in Tables 1 and 2.

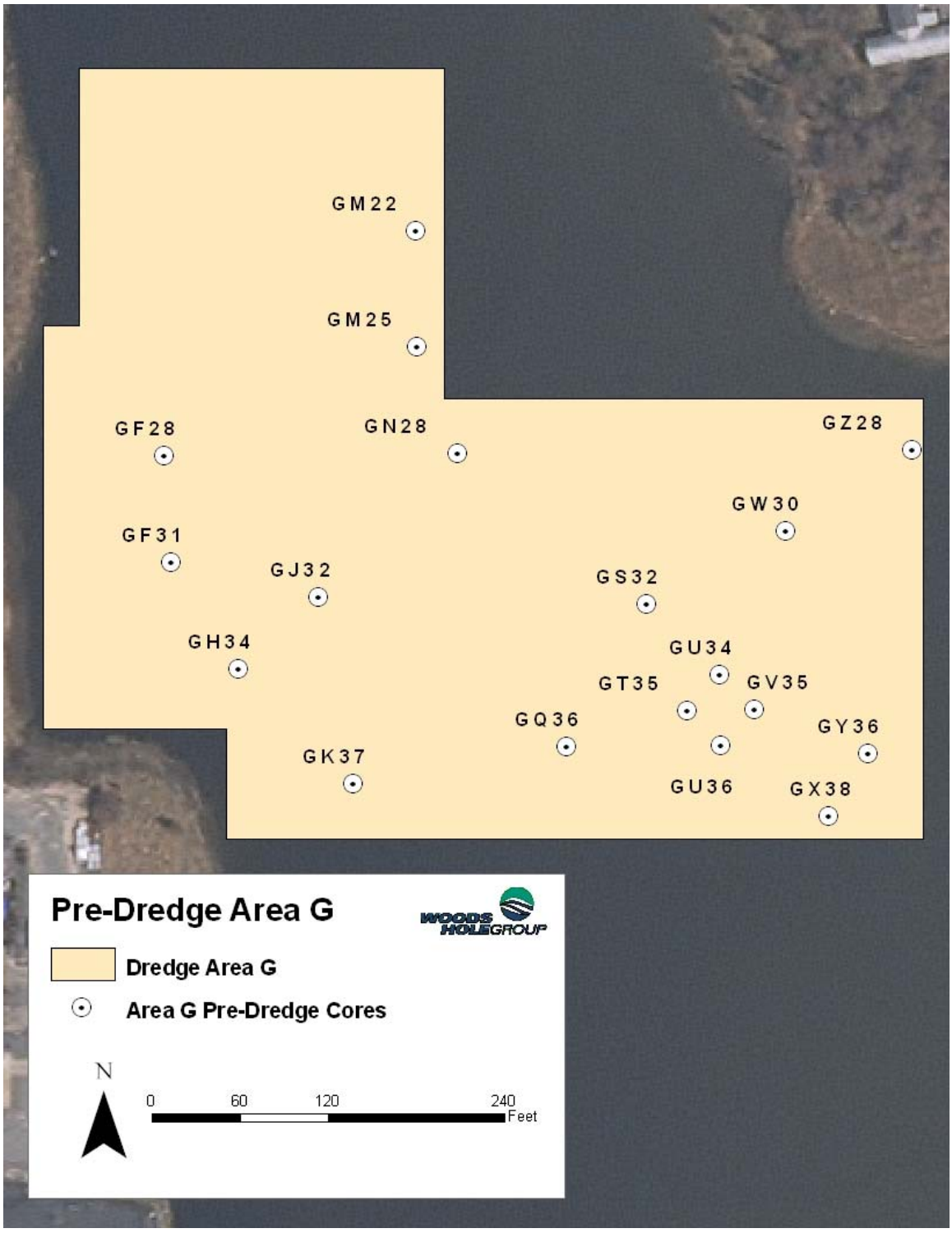

Figure 4. Basemap of Area G Pre-Dredge Core Locations Collected in 2010



Figure 5. Basemap of Area J Pre-Dredge Core Locations Collected in 2010

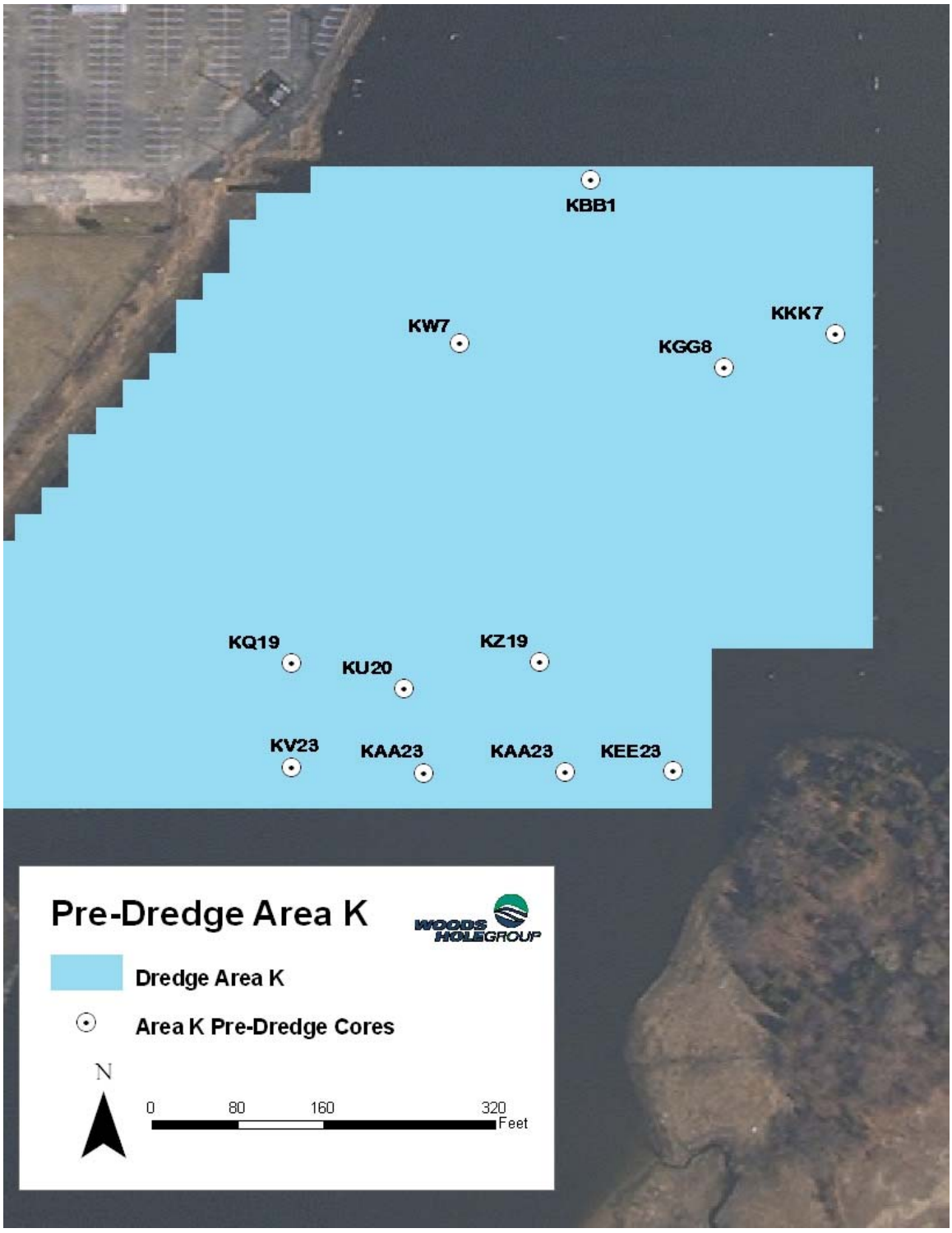

Figure 6. Basemap of Area K Pre-Dredge Core Locations Collected in 2010



Figure 7. Basemap of Area L Pre-Dredge Core Locations Collected in 2010



Figure 8. Basemap of Area M Pre-Dredge Core Locations Collected in 2010

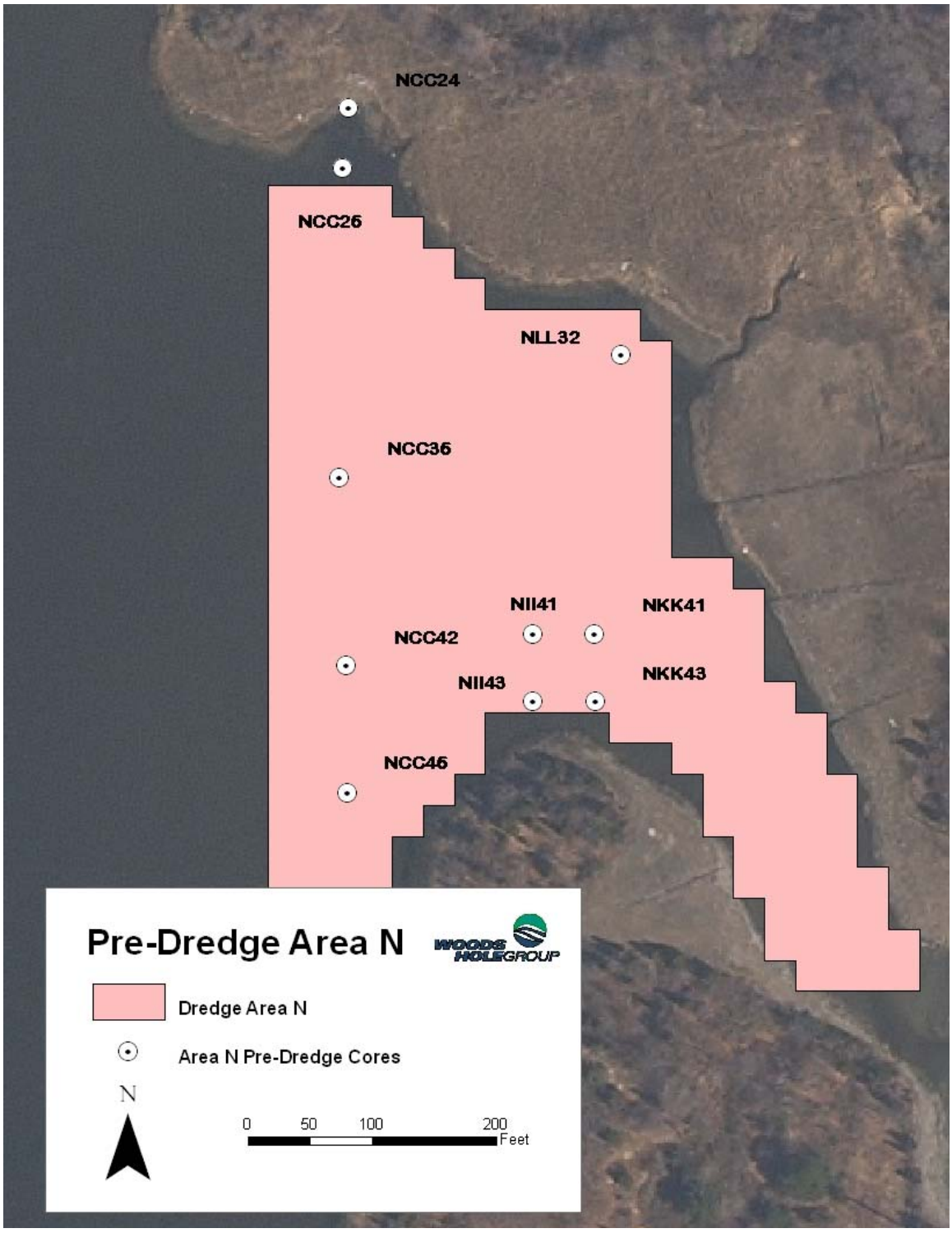

Figure 9. Basemap of Area N Pre-Dredge Core Locations Collected in 2010

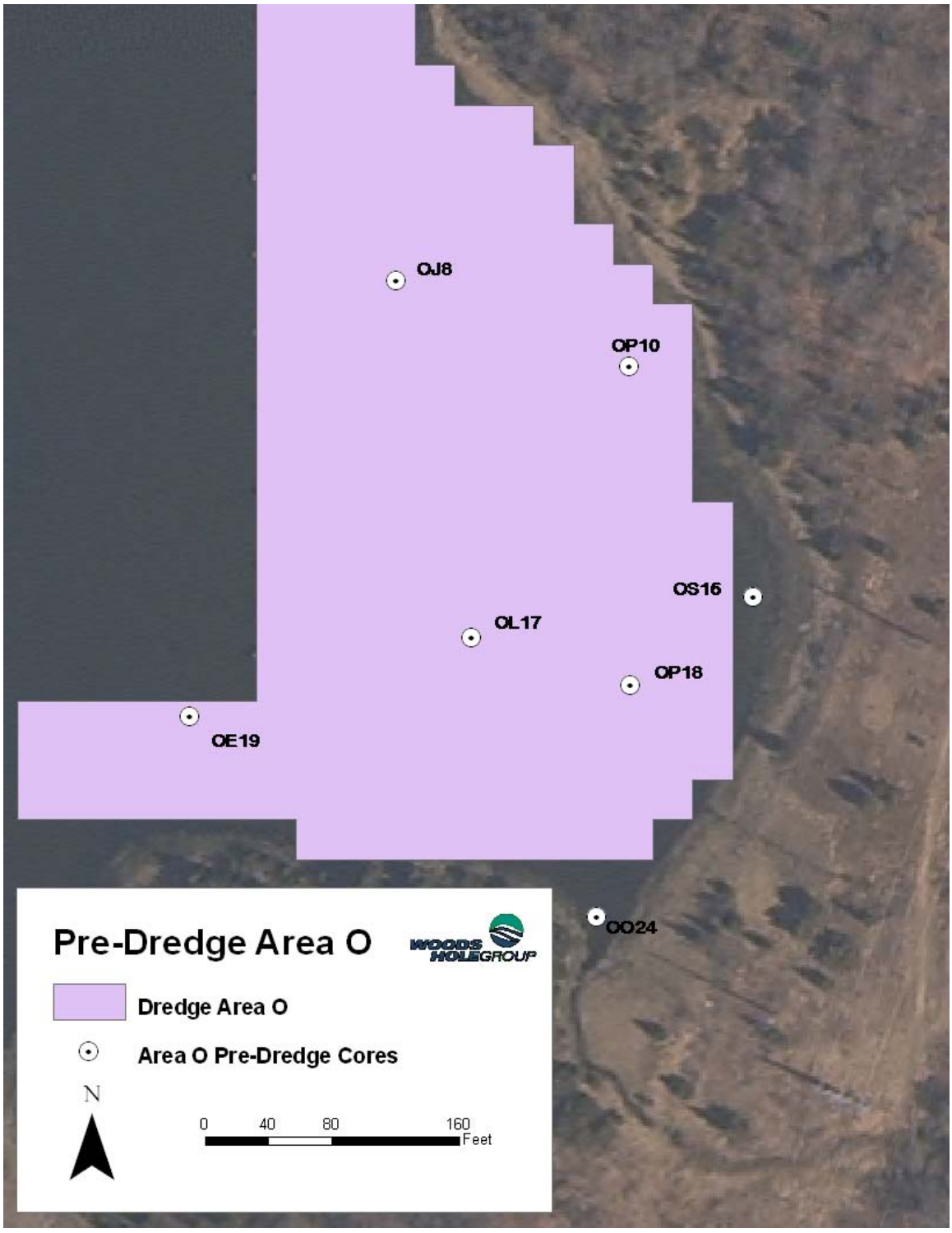

Figure 10. Basemap of Area O Pre-Dredge Core Locations Collected in 2010

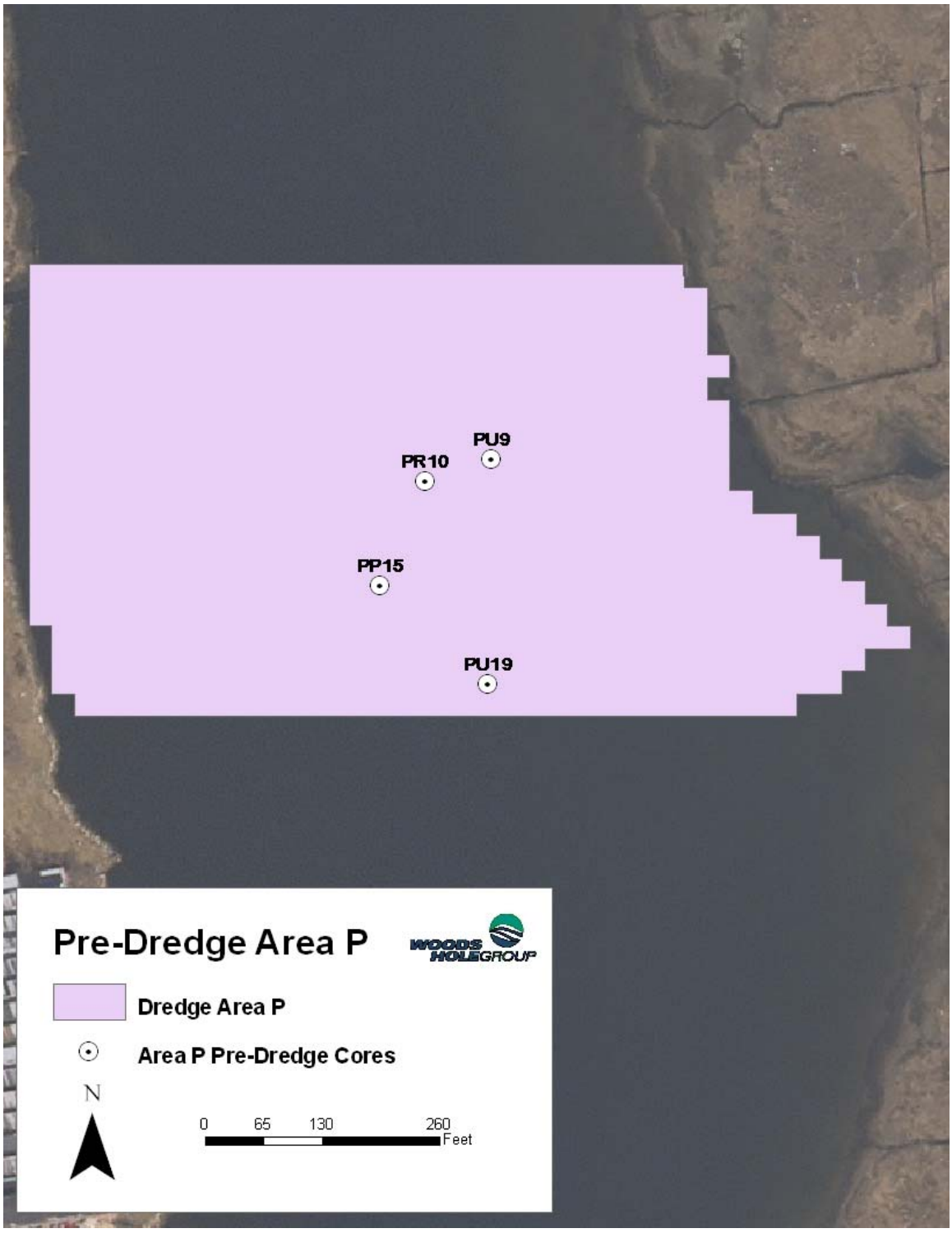

Figure 11. Basemap of Area P Pre-Dredge Core Locations Collected in 2010

Table 1. Summary of External Descriptions by Dredge Area from 2010 Pre-dredge Sampling Event, April 12-15, 2010

Dredge Area	OL Thickness Range (ft)	Underlying Strata Composition
Area G	0.0-1.6	CL/ML, ML/CL
Area J	0.3-0.8	CL/ML, ML/CL, CL
Area K	0.5-1.3	CL/ML, ML/CL, PT, ML
Area L	0.0-4.3	CL/ML w/fine sand
Area M	1.3-2.3	CL/ML
Area N	0.5-1.3	CL/ML, ML/CL, PT, CL
Area O	0.45-1.1	CL/ML, ML/CL, CL
Area P	1.10-3.05	CL/ML

Table 2. Elevation Data from 2010 Pre-dredge Sampling Event, April 12–15, 2010

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)		Measured Sediment Thickness of 'OL' Layer Remaining (ft)
			Measured Elevation of Sediment Surface	Measured Elevation of Transition ('OL' to Underlying Strata)	
GF28	2707523.816	815620.544	-3.1	-3.1	0
GF31	2707450.97	815625.596	-3.15	-3.15	0
GH34	2707378.405	815671.627	-3.55	-4.05	0.5
GJ32	2707427.363	815725.932	-2	-3.3	1.3
GK37	2707299.984	815749.571	-3.95	-5.05	1.1
GM22	2707676.828	815792.524	-3.05	-3.55	0.5
GM25	2707597.878	815793.065	-3.85	-4.65	0.8
GN28	2707525.188	815820.883	-2.7	-4	1.3
GQ36	2707325.275	815895.107	-2.05	-3.65	1.6
GS32	2707422.819	815949.079	-1.55	-2.65	1.1
GT35	2707350.129	815976.898	-3	-3.4	0.4
GU34	2707374.578	815999.497	-2.65	-3.15	0.5
GU36	2707325.993	815999.831	-2	-3.2	1.2
GV35	2707350.442	816022.43	-2.45	-2.95	0.5
GW30	2707472.06	816044.362	-1.7	-2.3	0.6
GX38	2707277.908	816073.015	-2.75	-4.1	1.35
GY36	2707320.607	816100.042	-1.55	-2.95	1.4
GZ28	2707527.311	816130.497	-1.15	-1.45	0.3
JB6	2707123.864	815750.778	-7.2	-7.6	0.4
JC24	2706674.611	815776.622	-7.6	-8.1	0.5
JF23	2706699.402	815849.308	-7.3	-7.6	0.3
JH5	2707143.113	815900.909	-5.9	-6.7	0.8
JI24	2706675.641	815926.881	-8.3	-8.6	0.3
JK15	2706900.533	815952.66	-6.5	-7.3	0.8
JM23	2706700.401	815995.015	-6.8	-7.2	0.4
KAA23	2706097.635	815776.02	-4	-4.95	0.95
KBB1	2706650.474	815799.555	-5.2	-6.5	1.3
KEE23	2706098.322	815876.196	-3.6	-4.65	1.05
KGG8	2706475.197	815923.702	-4.9	-5.4	0.5
KKK7	2706506.281	816028.221	-4.75	-5.25	0.5
KQ19	2706199.133	815520.322	-5.3	-6.8	1.5
KQ23	2706101.963	815520.986	-6.2	-6.8	0.6
KU20	2706175.557	815625.217	-5.8	-7.1	1.3
KV23	2706096.731	815643.971	-5.15	-5.75	0.6
KW7	2706497.805	815677.654	-3.75	-5.05	1.3
KZ19	2706200.722	815752.546	-5.1	-6.3	1.2
LA5	2704274.24	815574.471	-2.6	-2.6	0
LC3	2704337.065	814991.131	-3.8	-7.1	3.3
LP1	2704375.616	815300.539	-6.6	-6.6	0
LT4	2704297.319	815396.707	-6.35	-6.65	0.3
LX1	2704370.881	815496.392	-5.45	-6.05	0.6
LZ10	2704152.623	815552.533	-2.2	-2.2	0
MA8	2708021.001	815498.757	-1.35	-1.8	0.45
MB11	2707948.279	815522.021	-1.45	-3.05	1.6
MB14	2707875.433	815527.072	-3.2	-4	0.8
MD4	2708118.762	815584.6	-3	-3	0
MD6	2708076.188	815575.785	-5.85	-5.85	0
NCC24	2707624.981	816202.68	0.35	-0.65	1
NCC26	2707576.365	816198.461	-1.2	-2.1	0.9
NCC36	2707327.337	816195.618	-1.85	-2.35	0.5
NCC42	2707175.541	816201.214	-1.95	-2.75	0.8
NCC46	2707072.298	816201.923	-1.75	-3.05	1.3
NII41	2707200.865	816351.303	-1.35	-2.15	0.8
NII43	2707146.207	816351.679	-0.75	-2.1	1.35
NKK41	2707201.21	816401.388	-1.05	-2.5	1.45
NKK43	2707146.552	816401.764	-1	-1.65	0.65
NLL32	2707426.071	816422.609	-0.9	-1.8	0.9
OE19	2706202.563	816021.197	-2.1	-3.1	1
OJ8	2706476.759	816151.37	-2.1	-3	0.9
OL17	2706252.367	816198.447	-1.6	-2.05	0.45
OO24	2706076.779	816277.064	-0.5	-1.8	1.3
OP10	2706423.102	816297.453	-1.45	-2.55	1.1
OP18	2706222.69	816298.83	-1.3	-2.4	1.1
OS16	2706277.88	816375.862	-0.95	-1.95	1
PP15	2703532.108	815401.935	-8.1	-11.15	3.05
PR10	2703647.839	815451.24	-5.65	-7.05	1.4
PU19	2703423.602	815521.085	-6	-7.6	1.6
PU9	2703672.63	815523.937	-4.75	-5.85	1.1

3.2 POST-DREDGE CORE SAMPLING

Post-Dredge cores were collected in August and October 2010. Cores were collected at 115 locations in Dredge Areas G, J, K, and M (Figures 12 through 15). Figures 12–15 were provided by JE, which include the core locations, PCB concentrations, and "OL" thicknesses, plotted over the post-dredge surveyed bathymetry. During the August and October collection events, 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. Two samples were collected from each core: one from 0.0–0.5 feet; and the other from 0.5–1.0 feet. The 0.0–0.5 foot samples were analyzed while the 0.5–1.0 foot samples were archived at Alpha Analytical in dedicated freezers. Results from sediment characterizations and PCB congener analysis are summarized by Dredge Area below, and presented in Tables 3 through 10 and Figures 16 through 19.

3.2.1 Area G

The thickness of the OL layer in Dredge Area G ranged from 0.1–0.7 feet. The underlying strata generally consisted of ML/CL or CL/ML. The total PCB concentration (mg/kg) from the 0.0–0.5 foot samples ranged from 15.69 to 270.21, with a mean of 70.88.

3.2.2 Area J

The OL layer in Dredge Area J had a light to heavy sheen, and ranged in thickness from 0.0–0.8 feet. The underlying strata consisted of ML/CL sediment that transitioned to CL/ML at depth. The total PCB concentration (mg/kg) of the 0.0–0.5 foot sample ranged from 8.62 to 368.63, with a mean of 114.18.

3.2.3 Area K

The thickness of the OL layer in Dredge Area K ranged from 0.0–1.1 feet. The underlying strata consisted of ML/CL sediment that transitioned to CL/ML at depth. The total PCB concentration (mg/kg) of the 0.0–0.5 foot sample ranged from 5.81 to 619.60, with a mean of 211.60.

3.2.4 Area M

The thickness of the OL layer in Dredge Area M ranged from 0.0–0.2 feet and had a slight petroleum odor. The underlying strata generally consisted of ML/CL or CL/ML sediment. The total PCB concentration (mg/kg) of the 0.0–0.5 foot sample ranged from 13.19 to 580.64, with a mean of 117.16

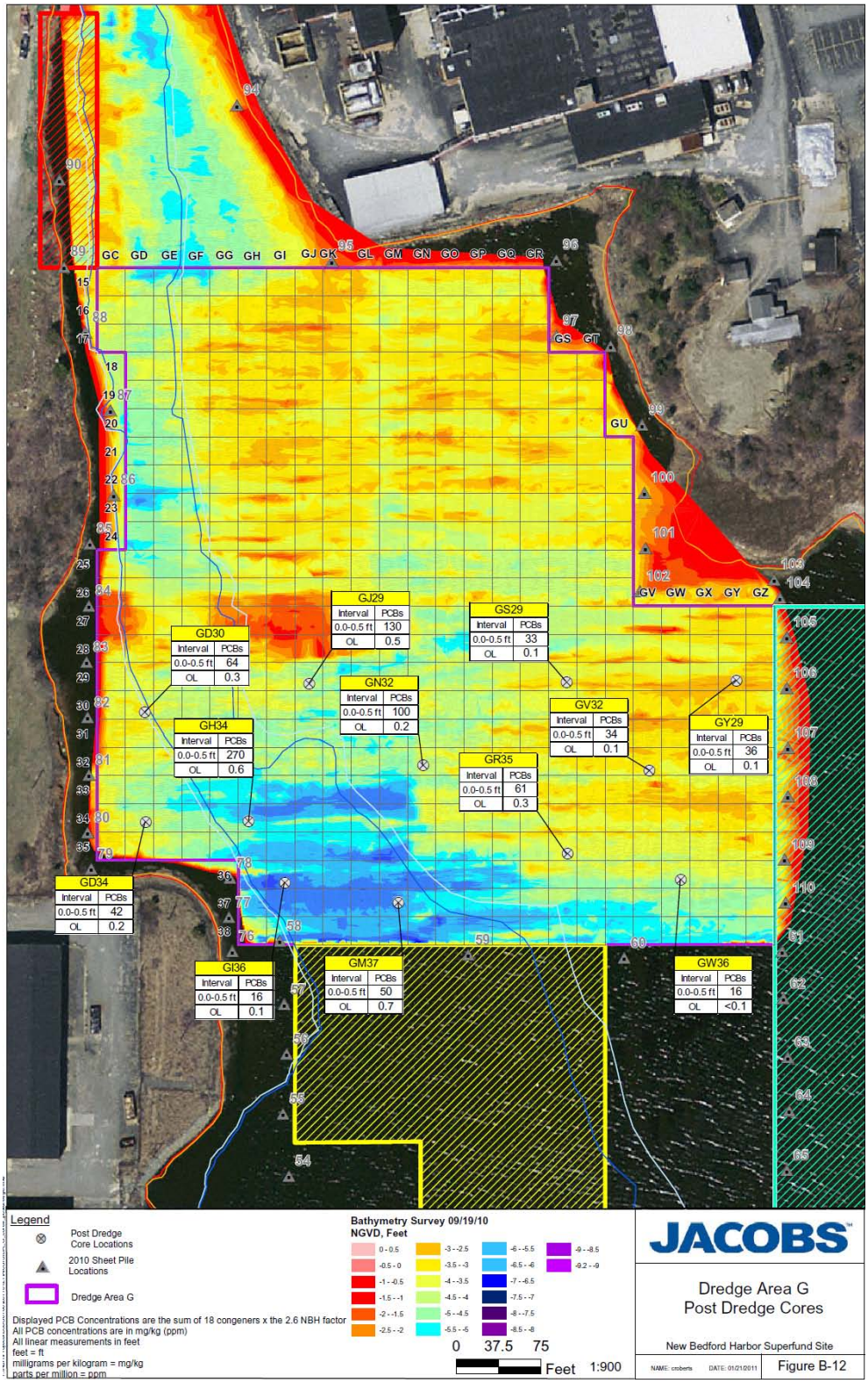

Figure 12. Area G Total PCB Concentrations and OL Thickness for 2010 Post-Dredge Cores

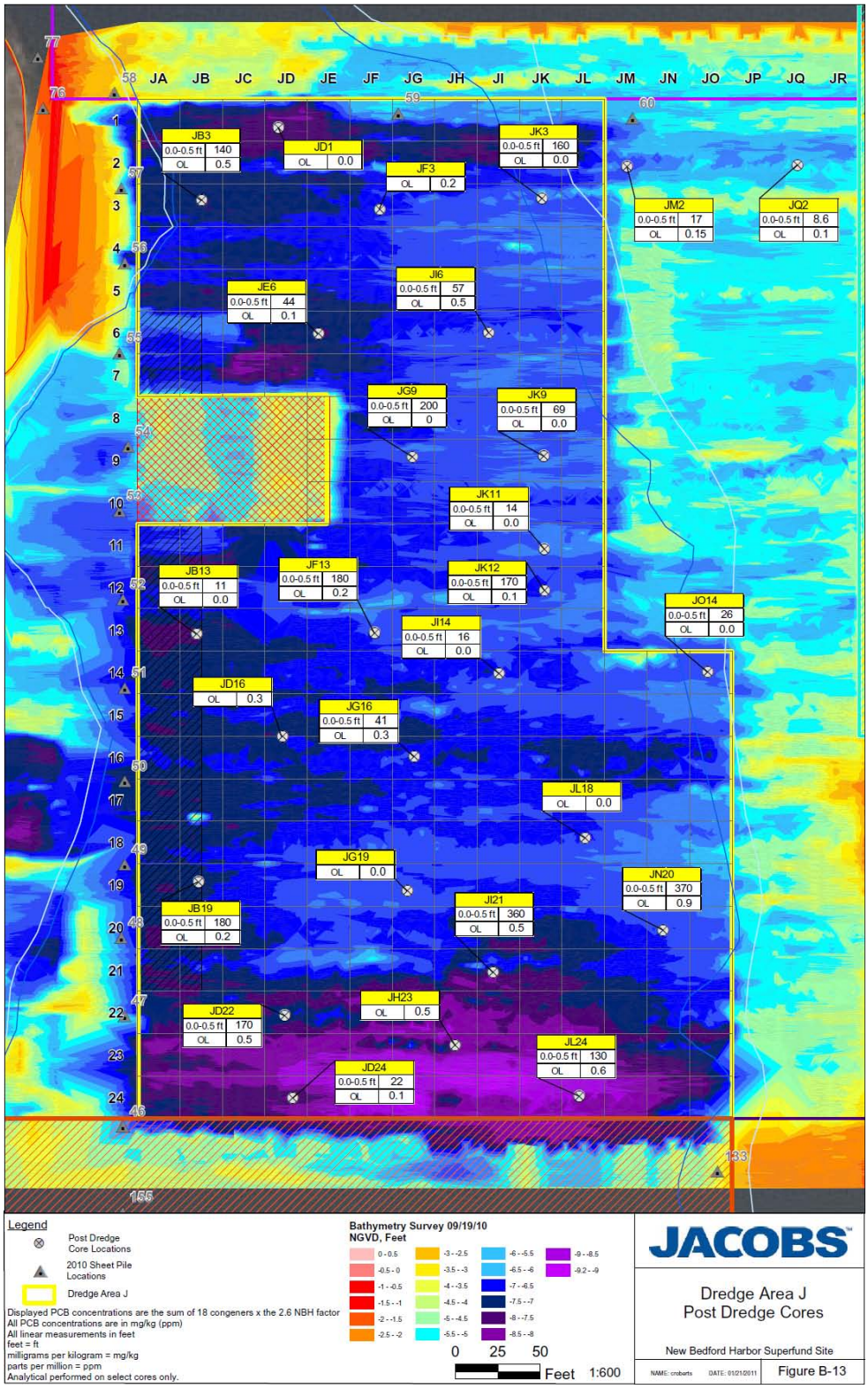

Figure 13. Area J Total PCB Concentrations and OL Thickness for 2010 Post-Dredge Cores

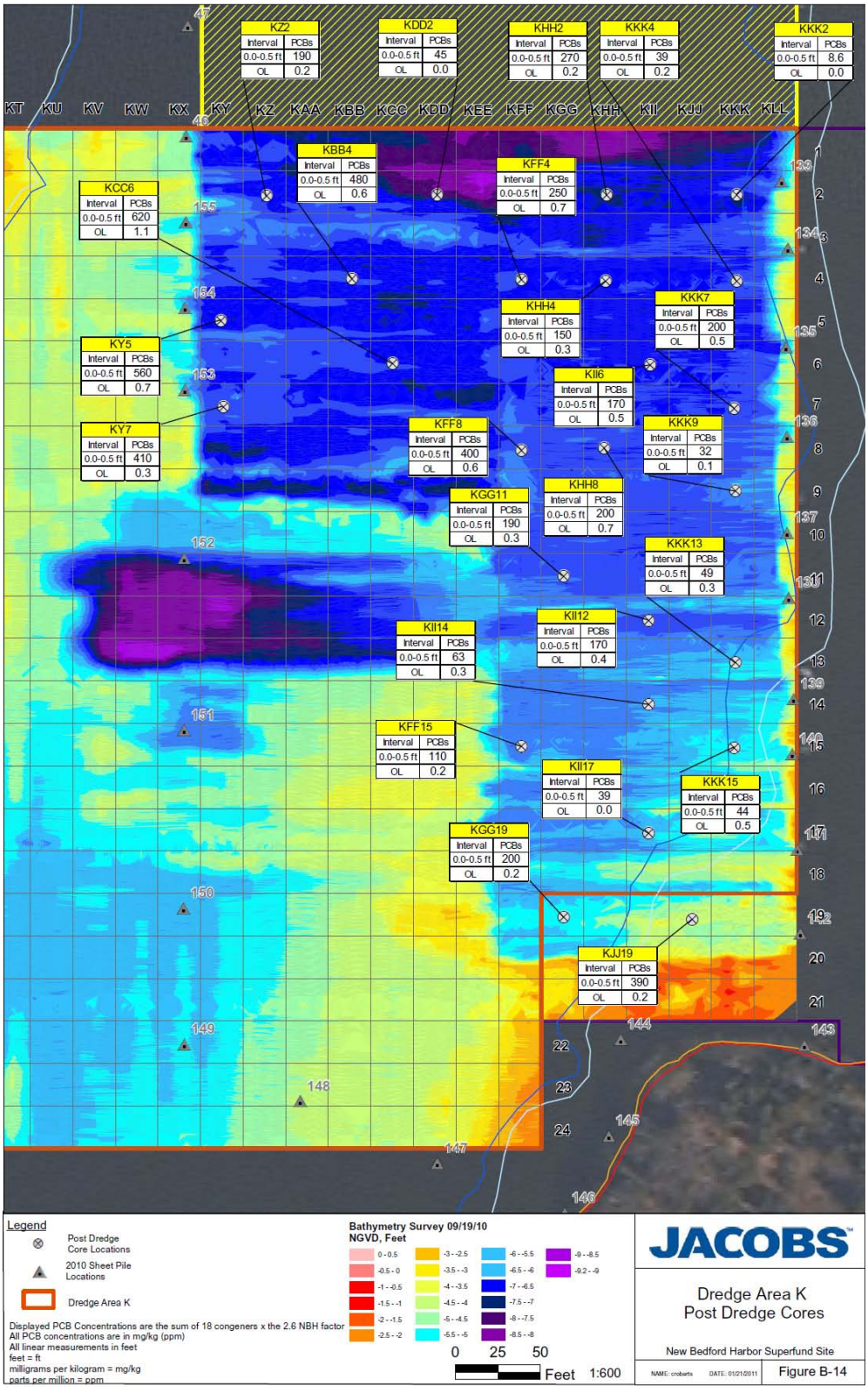

Figure 14. Area K Total PCB Concentrations and OL Thickness for 2010 Post-Dredge Cores

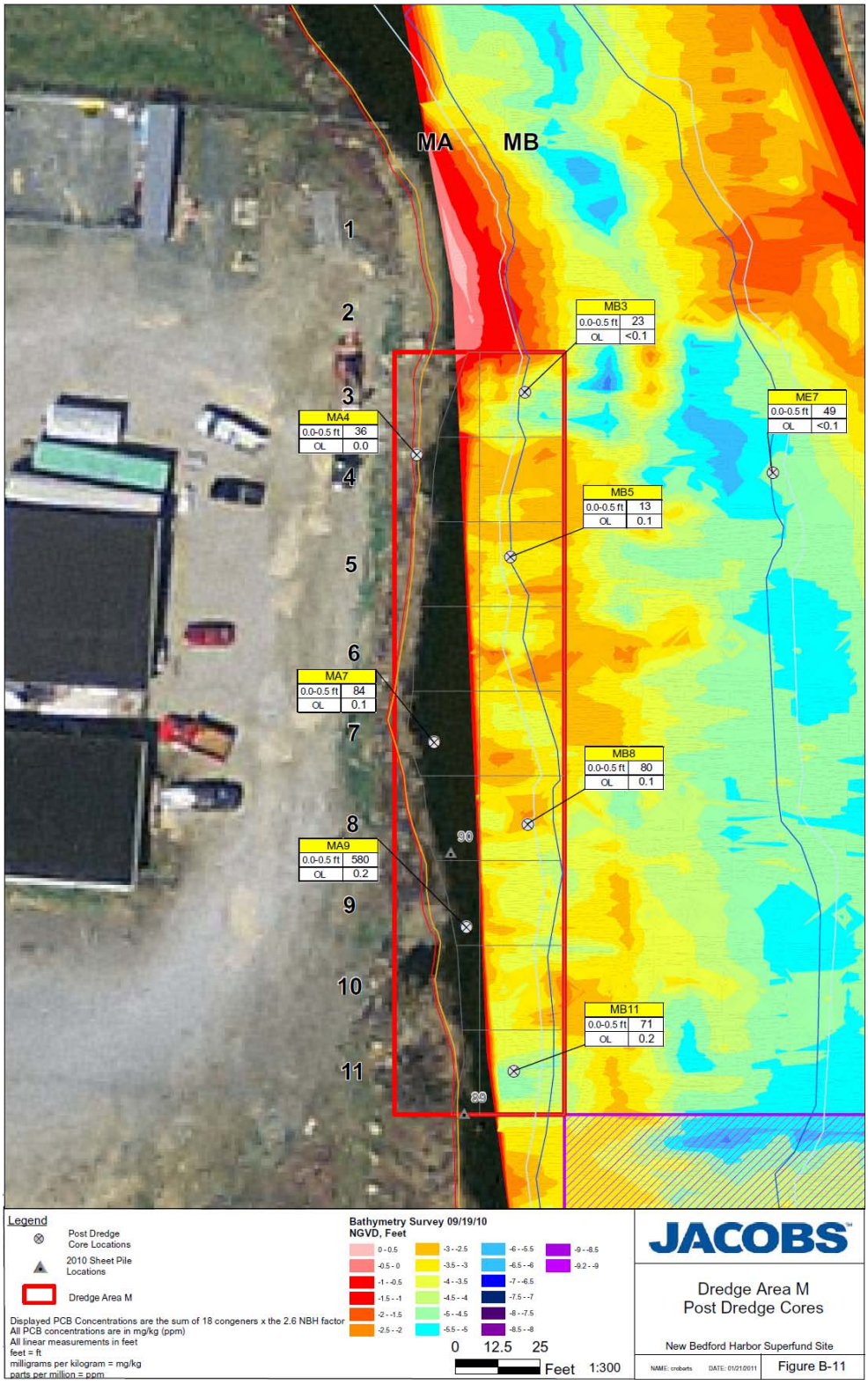

Figure 15. Area M Total PCB Concentrations and OL Thickness for 2010

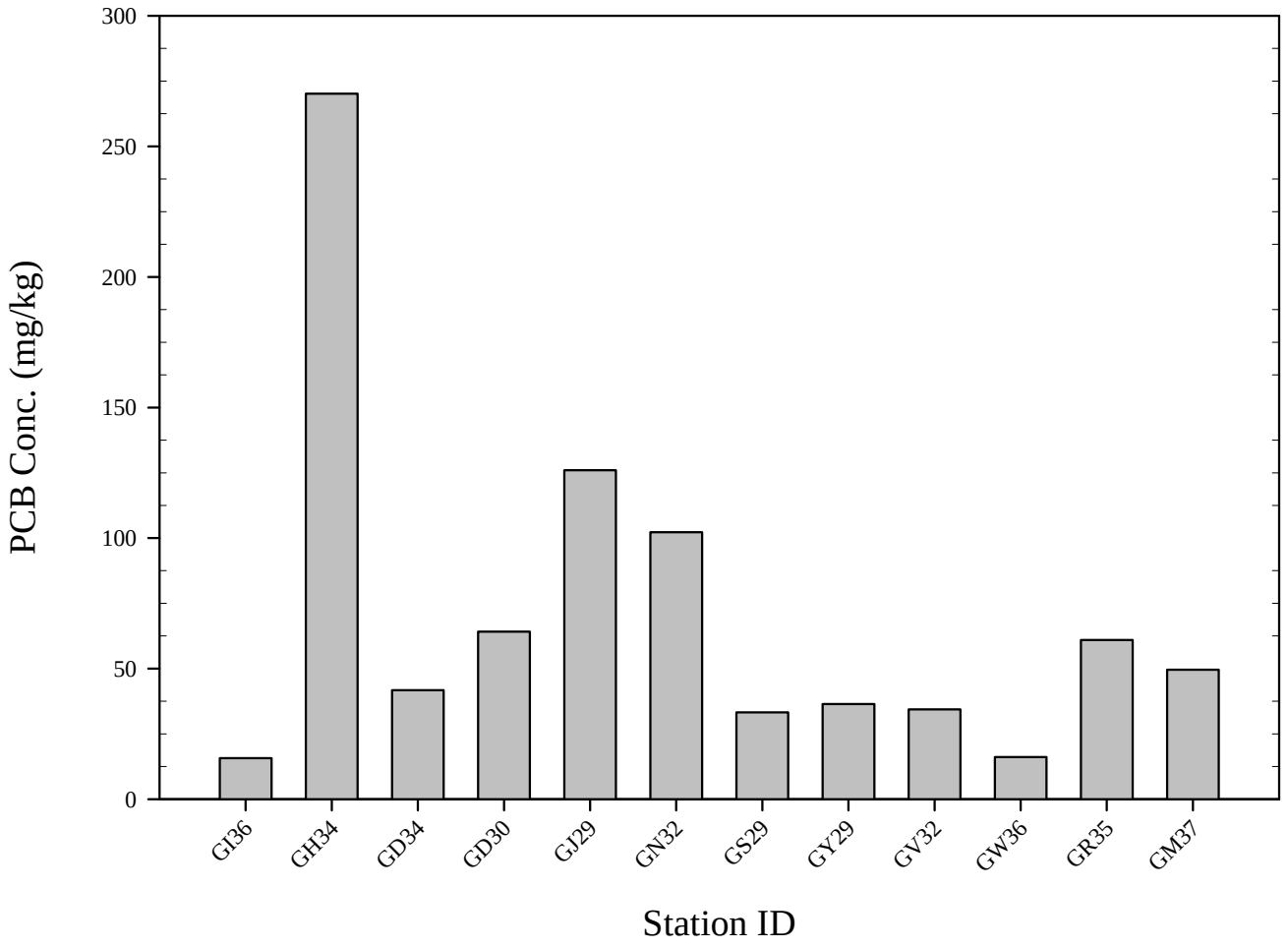

Figure 16. Total PCB Concentration in Area G Post Dredge Cores

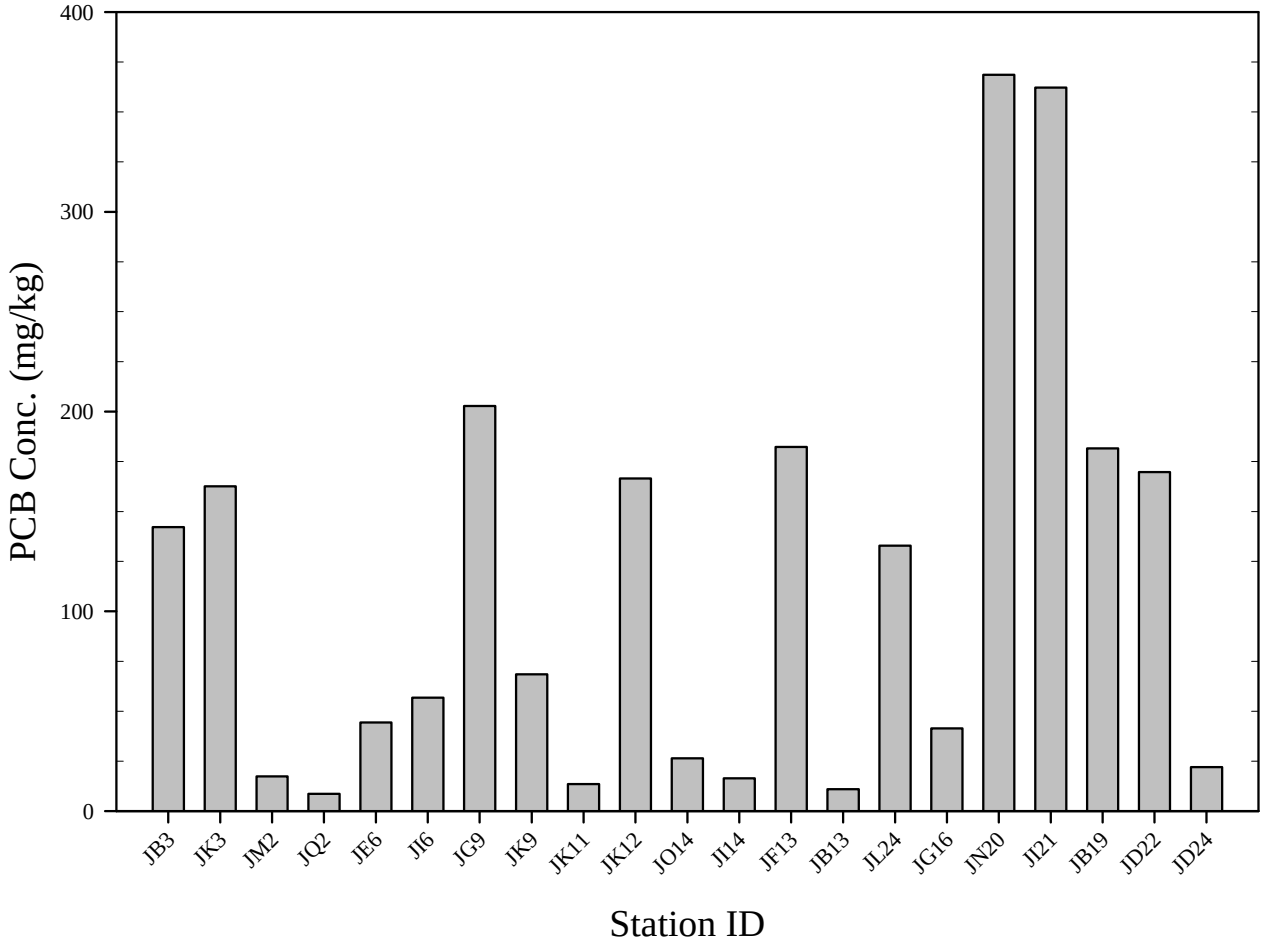

Figure 17. Total PCB Concentration in Area J Post Dredge Cores

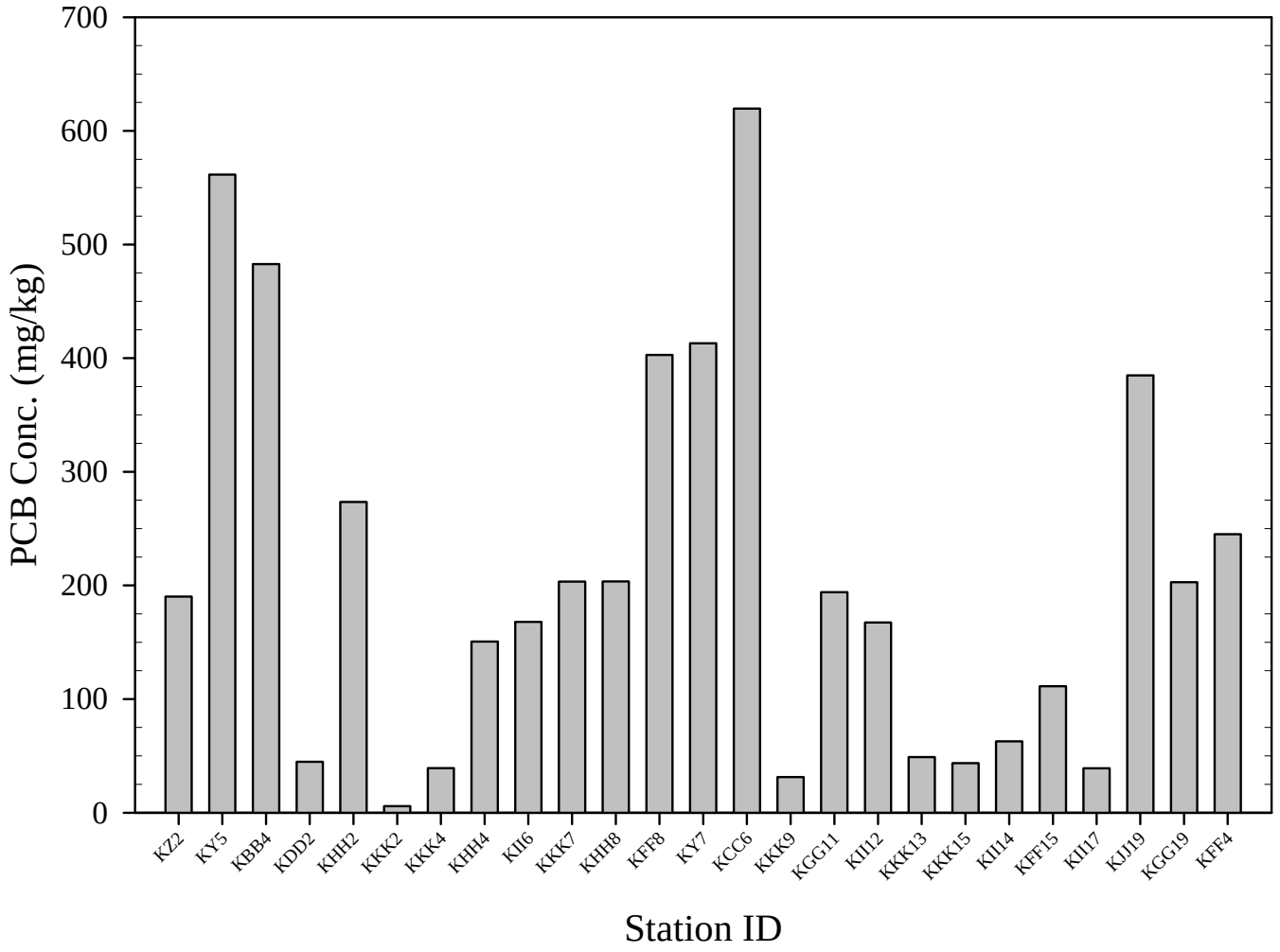

Figure 18. Total PCB Concentration in Area K Post Dredge Cores

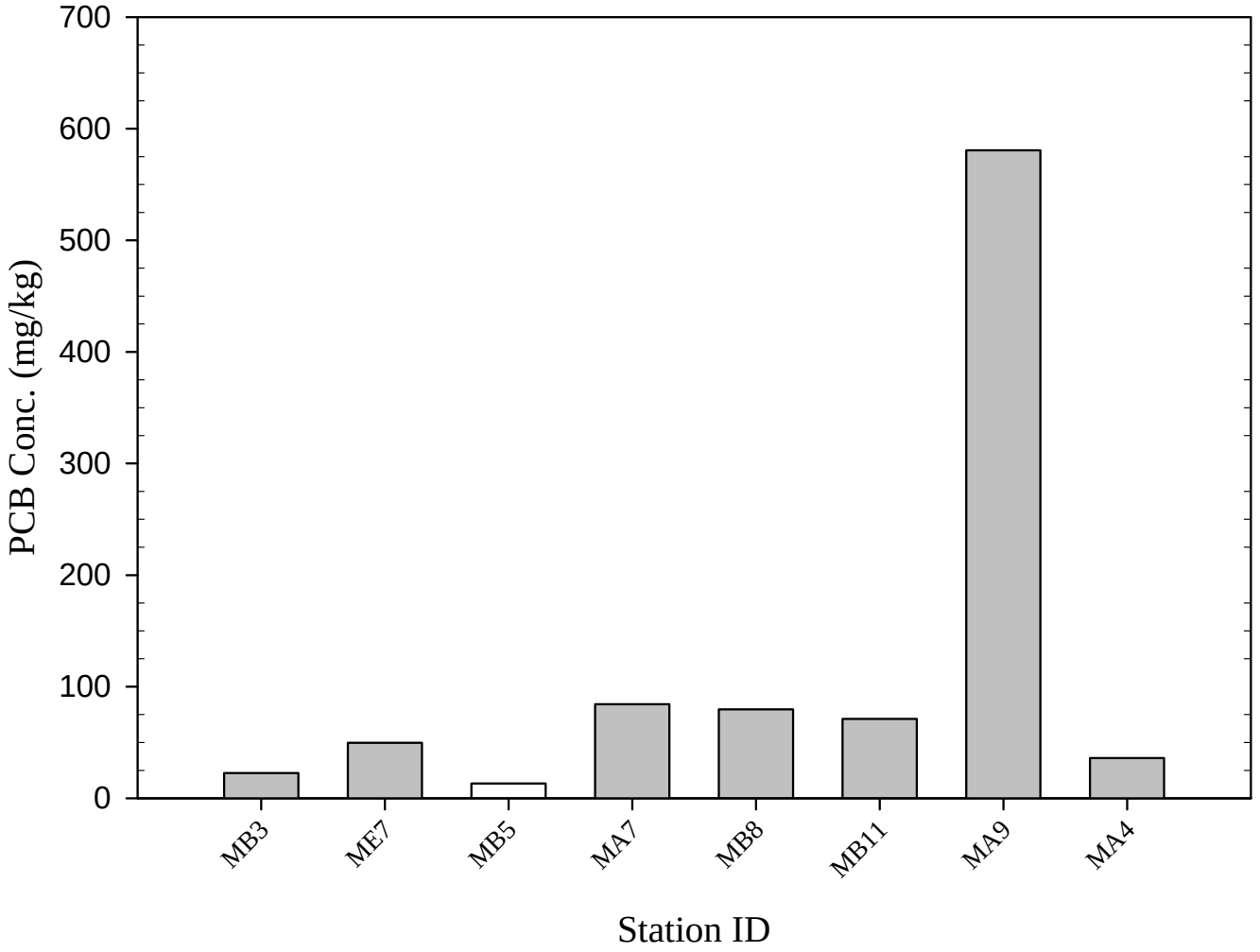

Figure 19. Total PCB Concentration in Area M Post Dredge Cores

Table 3. Elevation Data from Area G Post-Dredge Cores

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)			Measured Sedimnet Thickness of 'OL' Layer Remaining (ft)	Actual vs. Predicted Transition Elevation (ft)
			Measured Elevation of Sediment Surface	Measured Elevation of Transition ('OL' to Underlying Strata)	Target Dredge Elevation		
GD30	2707468.878	815579.94	-3.05	-3.35	-2.8	0.3	-0.55
GD34	2707371.708	815580.605	-4.3	-4.5	-3.1	0.2	-1.4
GH34	2707372.332	815671.668	-4.65	-5.25	-4.1	0.6	-1.15
GI36	2707317.892	815703.915	-7.35	-7.45	-4.8	0.1	-2.65
GJ29	2707494.168	815725.475	-4.4	-4.9	-3.5	0.5	-1.4
GM37	2707300.359	815804.21	-5.25	-5.95	-4.7	0.7	-1.25
GN32	2707421.977	815826.143	-3.9	-4.1	-3.8	0.2	-0.3
GR35	2707343.9	815954.174	-3.7	-4	-3.4	0.3	-0.6
GS29	2707495.728	815953.133	-3.25	-3.75	-3.2	0.5	-0.55
GV32	2707417.277	816026.525	-3.2	-3.8	-2.7	0.6	-1.1
GW36	2707320.295	816054.51	-4.05	-4.65	-3.3	0.6	-1.35
GY29	2707496.758	816103.387	-2.7	-3.1	-2.1	0.4	-1

[a] Source: Jacobs 2010 Dredge Plan
[b] Actual vs. Predicted = Measured Elevation of Visual Transition (ft) – Target Dredge Elevation (ft).

Table 4. Elevation Data from Area J Post-Dredge Cores

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)			Measured Sedimnet Thickness of 'OL' Layer Remaining (ft)	Actual vs. Predicted Transition Elevation (ft)
			Measured Elevation of Sediment Surface	Measured Elevation of Transition ('OL' to Underlying Strata)	Target Dredge Elevation		
JB13	2706947.713	815747.43	-7.45	-7.45	-8	0	0.55
JB19	2706801.959	815748.429	-7.75	-8.1	-7.8	0.35	-0.3
JB3	2707202.815	815750.237	-7.65	-7.95	-6.7	0.3	-1.25
JB3	2707202.815	815750.237	-7.65	-7.95	-6.7	0.3	-1.25
JD1	2707245.638	815795.478	-7.9	-7.9	-7.6	0	-0.3
JD16	2706887.325	815797.932	-7.7	-8	-6.3	0.3	-1.7
JD22	2706723.352	815799.056	-7.35	-7.35	-6.8	0	-0.55
JD24	2706674.798	815803.942	-8.4	-8.5	-7.5	0.1	-1
JE6	2707124.332	815819.076	-7.85	-8	-7.4	0.15	-0.6
JF13	2706948.431	815852.156	-6.65	-7.05	-6.1	0.4	-0.95
JF3	2707197.459	815855.002	-6.9	-7.1	-6.4	0.2	-0.7
JG16	2706875.71	815875.421	-7.05	-7.45	-6.3	0.4	-1.15
JG19	2706796.728	815871.409	-6.8	-7.05	-6.1	0.25	-0.95
JG9	2707051.829	815874.214	-6.9	-7.15	-6	0.25	-1.15
JH23	2706705.819	815899.353	-9.45	-9.65	-7.6	0.2	-2.05
JI14	2706924.638	815925.174	-6.55	-6.9	-5.8	0.35	-1.1
JI21	2706748.518	815926.382	-8.05	-8.75	-7.8	0.7	-0.95
JI6	2707125.019	815919.247	-6.6	-7.25	-5.4	0.65	-1.85
JK11	2706997.702	815951.994	-6.55	-6.75	-5.9	0.2	-0.85
JK12	2706973.41	815952.161	-6.9	-7.3	-6	0.4	-1.3
JK3	2707204.188	815950.578	-6.6	-6.6	-5.8	0	-0.8
JK9	2707052.36	815951.619	-6.7	-6.7	-5.7	0	-1
JL18	2706827.811	815975.927	-6.3	-6.3	-6.5	0	0.2
JL24	2706675.953	815972.415	-9	-9.45	-8	0.45	-1.45
JM2	2707222.75	816000.539	-6.5	-6.85	N/A	0.35	N/A
JN20	2706773.466	816021.834	-6.85	-7.65	-6.3	0.8	-1.35
JO14	2706925.481	816048.113	-6.7	-6.95	-5.1	0.25	-1.85
JQ2	2707223.438	816100.709	-5.5	-5.75	N/A	0.25	N/A

[a] Source: Jacobs 2010 Dredge Plan
[b] Actual vs. Predicted = Measured Elevation of Visual Transition (ft) – Target Dredge Elevation (ft).
* Note: Target Dredge Elevation Not Established

Table 5. Elevation Data from Area K Post-Dredge Cores

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)			Measured Sedimnet Thickness of 'OL' Layer Remaining (ft)	Actual vs. Predicted Transition Elevation (ft)
			Measured Elevation of Sediment Surface	Measured Elevation of Transition ('OL' to Underlying Strata)	Target Dredge Elevation		
KBB4	2706571.524	815800.096	-6.85	-7.95	-6.3	1.1	-1.65
KCC6	2706523.064	815818.642	-7.1	-8.2	-5.6	1.1	-2.6
KDD2	2706620.452	815849.85	-6.7	-6.7	-6.8	0	0.1
KFF15	2706298.921	815902.142	-5.45	-5.65	-5.2	0.2	-0.45
KFF4	2706572.211	815900.269	-6.9	-7.6	-6.6	0.7	-1
KFF8	2706475.01	815896.382	-6.15	-6.75	-5.4	0.6	-1.35
KGG11	2706396.278	815928.797	-6	-6.3	-5.2	0.3	-1.1
KGG19	2706195.803	815921.064	-5.1	-6.1	-4.4	1	-1.7
KHH2	2706621.108	815945.469	-7.35	-7.55	-7.7	0.2	0.15
KHH4	2706572.554	815950.356	-7.05	-7.35	-6.9	0.3	-0.45
KHH8	2706475.384	815951.022	-6.8	-7.5	-5.6	0.7	-1.9
KII12	2706372.298	815974.497	-5.8	-6.2	-5.5	0.4	-0.7
KII14	2706323.713	815974.83	-5.25	-5.55	-5	0.3	-0.55
KII17	2706244.763	815975.372	-5.4	-5.4	-4	0	-1.4
KII6	2706524.157	815978.009	-6.7	-7.2	-6.1	0.5	-1.1
KJJ19	2706196.365	816003.025	-4.55	-4.75	-3.4	0.2	-1.35
KKK13	2706348.349	816024.751	-5.4	-5.7	-4.3	0.3	-1.4
KKK15	2706299.764	816025.084	-4.85	-5.35	-3.9	0.5	-1.45
KKK2	2706621.67	816027.429	-7.15	-7.95	-6.3	0.8	-1.65
KKK4	2706573.085	816027.763	-7.1	-7.3	-6	0.2	-1.3
KKK7	2706500.176	816023.709	-6.55	-7.05	-5.6	0.5	-1.45
KKK9	2706445.519	816024.084	-5.75	-5.85	-5.2	0.1	-0.65
KY5	2706546.702	815722.855	-6.1	-6.8	-5.6	0.7	-1.2
KY7	2706498.117	815723.188	-6.3	-6.6	-6.3	0.3	-0.3
KZ2	2706619.766	815749.676	-7.15	-7.35	-7.2	0.2	-0.15

[a] Source: Jacobs 2010 Dredge Plan
[b] Actual vs. Predicted = Measured Elevation of Visual Transition (ft) – Target Dredge Elevation (ft).

Table 6. Elevation Data from Area M Post-Dredge Cores

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)			Measured Sedimnet Thickness of 'OL' Layer Remaining (ft)	Actual vs. Predicted Transition Elevation (ft)
			Measured Elevation of Sediment Surface	Measured Elevation of Transition ('OL' to Underlying Strata)	Target Dredge Elevation		
MA4	2708057.408	815493.955	1.30	1.30	-2.00	0.00	0.00
MA7	2707972.416	815499.089	-1.90	-2.00	-2.00	0.10	0.00
MA9	2707917.82	815508.569	-1.75	-1.95	-2.00	0.20	0.05
MB11	2707875.402	815522.519	-3.85	-4.05	-3.70	0.20	-0.35
MB3	2708075.845	815525.702	-4.40	-4.40	-4.00	0.00	-0.40
MB5	2708027.23	815521.481	-3.05	-3.15	-3.20	0.10	0.05
MB8	2707948.31	815526.574	-3.25	-3.35	-3.20	0.10	-0.15
ME7	2708052.051	815598.717	-4.60	-4.60	N/A	0.00	N/A

[a] Source: Jacobs 2010 Dredge Plan
[b] Actual vs. Predicted = Measured Elevation of Visual Transition (ft) – Target Dredge Elevation (ft).
* Note: Target Dredge Elevation Not Established

Table 7. Total PCB Concentrations of Area G Post-Dredge Cores

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/kg)	Total PCB (mg/kg)
GI36	S-10O-C030-0-0.5	0.0-0.5	6.036	15.6936
GH34	S-10O-C029-0-0.5	0.0-0.5	103.927	270.2102
GD34	S-10O-C027-0-0.5	0.0-0.5	16.055	41.743
GD30	S-10O-C026-0-0.5	0.0-0.5	24.683	64.1758
GJ29	S-10O-C028-0-0.5	0.0-0.5	48.459	125.9934
GN32	S-10O-C031-0-0.5	0.0-0.5	39.322	102.2372
GS29	S-10O-C033-0-0.5	0.0-0.5	12.762	33.1812
GY29	S-10O-C036-0-0.5	0.0-0.5	14.001	36.4026
GV32	S-10O-C035-0-0.5	0.0-0.5	13.229	34.3954
GW36	S-10O-C037-0-0.5	0.0-0.5	6.197	16.1122
GR35	S-10O-C034-0-0.5	0.0-0.5	23.43	60.918
GM37	S-10O-C032-0-0.5	0.0-0.5	19.054	49.5404

[a] Total PCB = Sum NOAA 18 congeners * 2.6

Table 8. Total PCB Concentrations of Area J Post-Dredge Cores

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/kg)	Total PCB (mg/kg)
JB3	S-10S-C003-0-0.5	0.0-0.5	54.67	142.14
JK3	S-10S-C004-0-0.5	0.0-0.5	62.54	162.60
JM2	S-10S-C001-0-0.5	0.0-0.5	6.71	17.43
JQ2	S-10S-C002-0-0.5	0.0-0.5	3.32	8.62
JE6	S-10S-C005-0-0.5	0.0-0.5	17.08	44.40
JI6	S-10S-C006-0-0.5	0.0-0.5	21.84	56.77
JG9	S-10S-C008-0-0.5	0.0-0.5	77.98	202.74
JK9	S-10S-C007-0-0.5	0.0-0.5	26.35	68.52
JK11	S-10S-C009-0-0.5	0.0-0.5	5.23	13.59
JK12	S-10S-C010-0-0.5	0.0-0.5	64.04	166.51
JO14	S-10S-C014-0-0.5	0.0-0.5	10.16	26.43
JI14	S-10S-C013-0-0.5	0.0-0.5	6.30	16.39
JF13	S-10S-C011-0-0.5	0.0-0.5	70.12	182.30
JB13	S-10S-C012-0-0.5	0.0-0.5	4.22	10.97
JL24	S-10O-C046-0-0.5	0.0-0.5	51.11	132.89
JG16	S-10S-C015-0-0.5	0.0-0.5	15.92	41.39
JN20	S-10S-C017-0-0.5	0.0-0.5	141.78	368.63
JI21	S-10S-C018-0-0.5	0.0-0.5	139.29	362.15
JB19	S-10S-C016-0-0.5	0.0-0.5	69.86	181.63
JD22	S-10S-C019-0-0.5	0.0-0.5	65.28	169.73
JD24	S-10S-C020-0-0.5	0.0-0.5	8.48	22.04

[a] Total PCB = Sum NOAA 18 congeners * 2.6

Table 9. Total PCB Concentrations of Area K Post-Dredge Cores

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/kg)	Total PCB (mg/kg)
KZ2	S-10O-C001-0-0.5	0.0-0.5	73.18	190.268
KY5	S-10O-C002-0-0.5	0.0-0.5	216.005	561.613
KBB4	S-10O-C003-0-0.5	0.0-0.5	185.647	482.6822
KDD2	S-10O-C004-0-0.5	0.0-0.5	17.227	44.7902
KHH2	S-10O-C005-0-0.5	0.0-0.5	105.18	273.468
KKK2	S-10O-C006-0-0.5	0.0-0.5	2.235	5.811
KKK4	S-10O-C007-0-0.5	0.0-0.5	15.056	39.1456
KHH4	S-10O-C008-0-0.5	0.0-0.5	57.962	150.7012
KII6	S-10O-C011-0-0.5	0.0-0.5	64.597	167.9522
KKK7	S-10O-C013-0-0.5	0.0-0.5	78.229	203.3954
KHH8	S-10O-C012-0-0.5	0.0-0.5	78.259	203.4734
KFF8	S-10O-C010-0-0.5	0.0-0.5	154.943	402.8518
KY7	S-10O-C024-0-0.5	0.0-0.5	158.897	413.1322
KCC6	S-10O-C023-0-0.5	0.0-0.5	238.308	619.6008
KKK9	S-10O-C014-0-0.5	0.0-0.5	12.097	31.4522
KGG11	S-10O-C015-0-0.5	0.0-0.5	74.637	194.0562
KII12	S-10O-C016-0-0.5	0.0-0.5	64.414	167.4764
KKK13	S-10O-C025-0-0.5	0.0-0.5	18.806	48.8956
KKK15	S-10O-C019-0-0.5	0.0-0.5	16.793	43.6618
KII14	S-10O-C017-0-0.5	0.0-0.5	24.128	62.7328
KFF15	S-10O-C018-0-0.5	0.0-0.5	42.812	111.3112
KII17	S-10O-C020-0-0.5	0.0-0.5	15.015	39.039
KJJ19	S-10O-C022-0-0.5	0.0-0.5	147.978	384.7428
KGG19	S-10O-C021-0-0.5	0.0-0.5	77.987	202.7662
KFF4	S-10O-C009-0-0.5	0.0-0.5	94.247	245.0422

[a] Total PCB = Sum NOAA 18 congeners * 2.6

Table 10. Total PCB Concentrations of Area M Post-Dredge Cores

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/kg)	Total PCB (mg/kg)
MB3	S-10O-C038-0-0.5	0.0-0.5	8.7	22.62
ME7	S-10O-C045-0-0.5	0.0-0.5	19.147	49.7822
MB5	S-10O-C040-0-0.5	0.0-0.5	5.073	13.1898
MA7	S-10O-C041-0-0.5	0.0-0.5	32.432	84.3232
MB8	S-10O-C042-0-0.5	0.0-0.5	30.637	79.6562
MB11	S-10O-C044-0-0.5	0.0-0.5	27.322	71.0372
MA9	S-10O-C043-0-0.5	0.0-0.5	223.323	580.6398
MA4	S-10O-C039-0-0.5	0.0-0.5	13.86	36.036

[a] Total PCB = Sum NOAA 18 congeners * 2.6

3.3 BOATHOUSE SEDIMENT SAMPLING

Boathouse sediment samples were collected on October 25, 27, 28, and November 3, 2010. Samples were collected at 51 locations in vicinity of the proposed Boathouse location along the southwest shoreline of OU1 (Figure 20). Forty-five cores were collected using the push coring method, five shoreline soil samples were collected using a hand auger, and one grab sample was collected from the combined sewer outfall (CSO) using a spoon. All sediment cores and shoreline soil samples were split open for internal sediment characterization and analytical sample collection. The CSO grab sample was not characterized, the sediment was immediately containerized for analytical analysis. 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. Ideally, four subsamples were taken from each core or soil sample at intervals of 0.0–1.0ft, 1.0–2.0ft, 2.0–3.0ft, and 3.0–4.0ft. However, the number of subsamples taken was governed by the length of the core. The 0.0–1.0ft and 1.0–2.0ft samples were analyzed immediately, while the 2.0–3.0ft and 3.0–4.0ft samples were archived at AAL. Results from sediment characterizations and PCB congener analysis are summarized below, and presented in Tables 11 through 12 and Figures 20 through 22. Figure 20 was provided by JE.

3.3.1 Push Core Samples

Push core samples from the northern and southern edge of the Boathouse area had an OL layer with a light to heavy sheen and a strong petroleum/H_2S odor present. No sheen or petroleum/H_2S odor was present on the cores from the middle of the Boat House area. The OL thickness throughout the Boat House area ranged from 0.0–3.0 feet, with no discernable distribution pattern. The underlying strata varied greatly throughout the area, ranging from a CL/ML to a SM. The total PCB concentration (mg/kg) of the 0.0–1.0ft samples ranged from 0.12 to 413.89, with a mean of 53.30. The 1.0–2.0ft samples had total PCB concentrations (mg/kg) that ranged from 0.0 to 241.30, with a mean of 20.07.

3.3.2 Shoreline Soil Samples and CSO Grab Sample

Soils samples consisted of a top ML layer with fine sand and gravel transitioning into either a more clayey or sandy underlying layer. The total PCB concentration (mg/kg) of the 0.0–1.0ft samples ranged from 0.38 to 5.69, with a mean of 3.20. The 1.0–2.0ft samples had total PCB concentrations that ranged from 0.0 to 5.53, with a mean of 2.81. The grab sample taken from the CSO consisted of a silty sand, with a PCB concentration (mg/L) of 2.80.

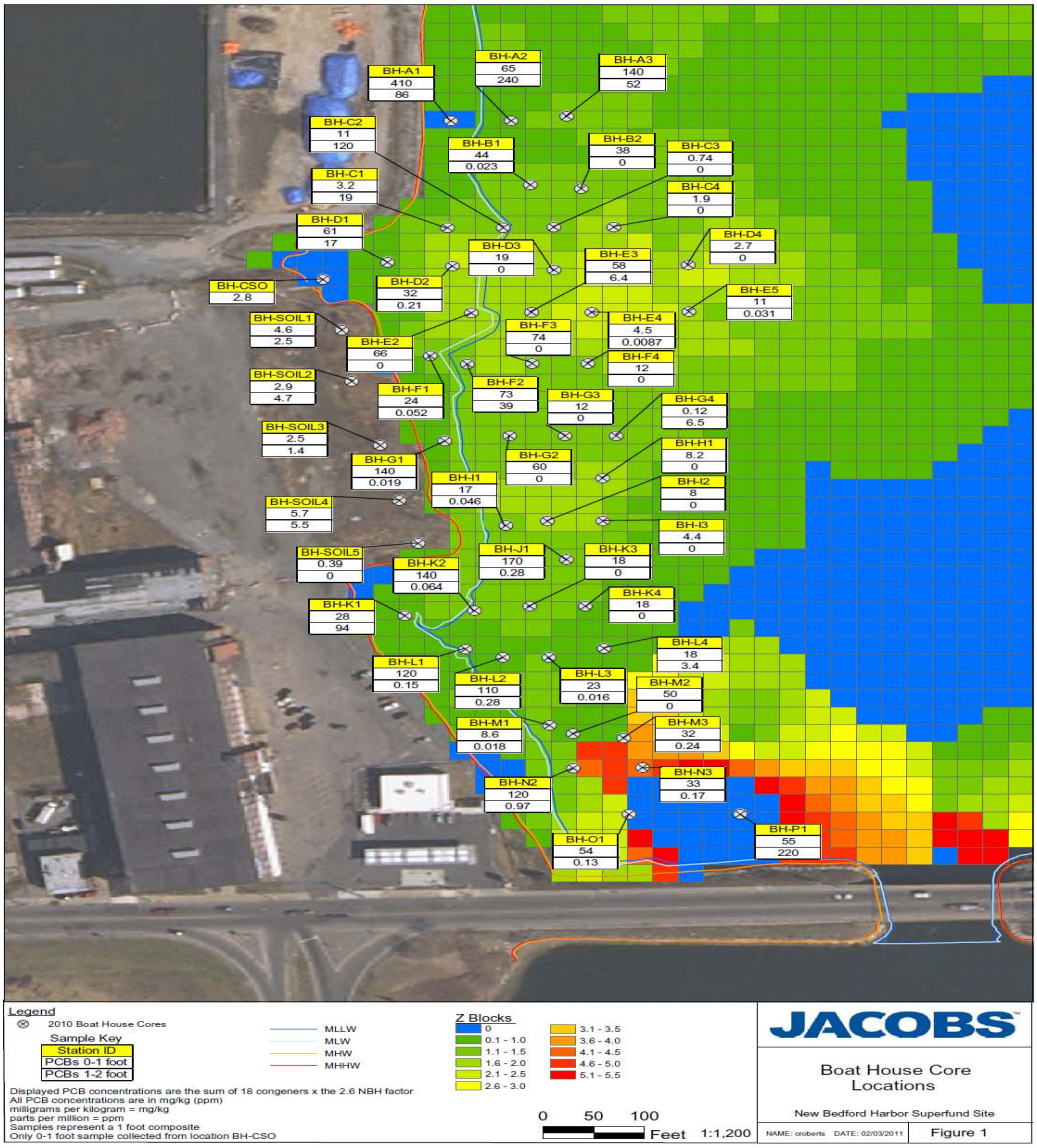

Figure 20. Boat House Total PCB Concentrations for 2010

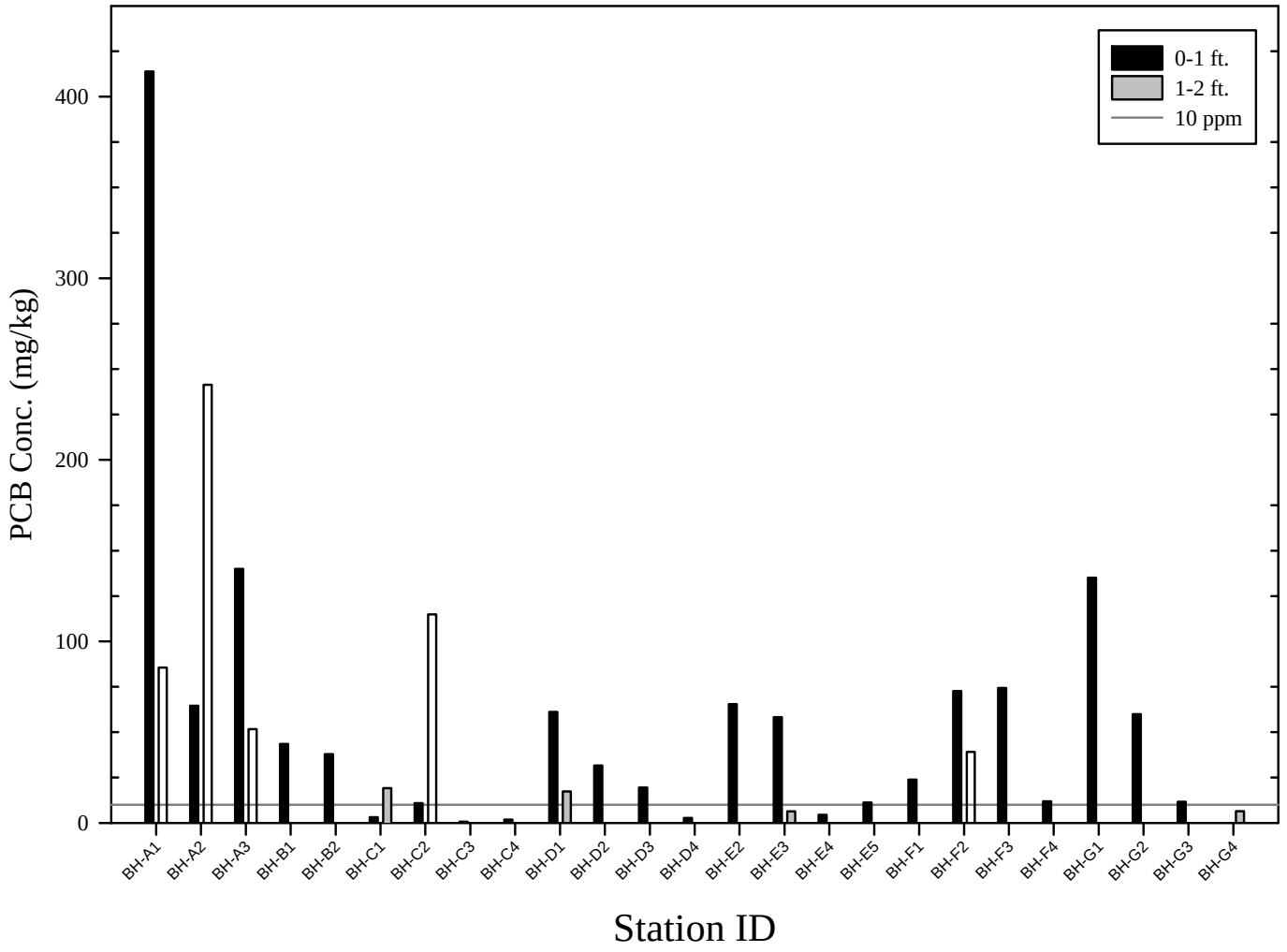

Figure 21. Total PCB Concentration of Northern Boat House Sediment Samples

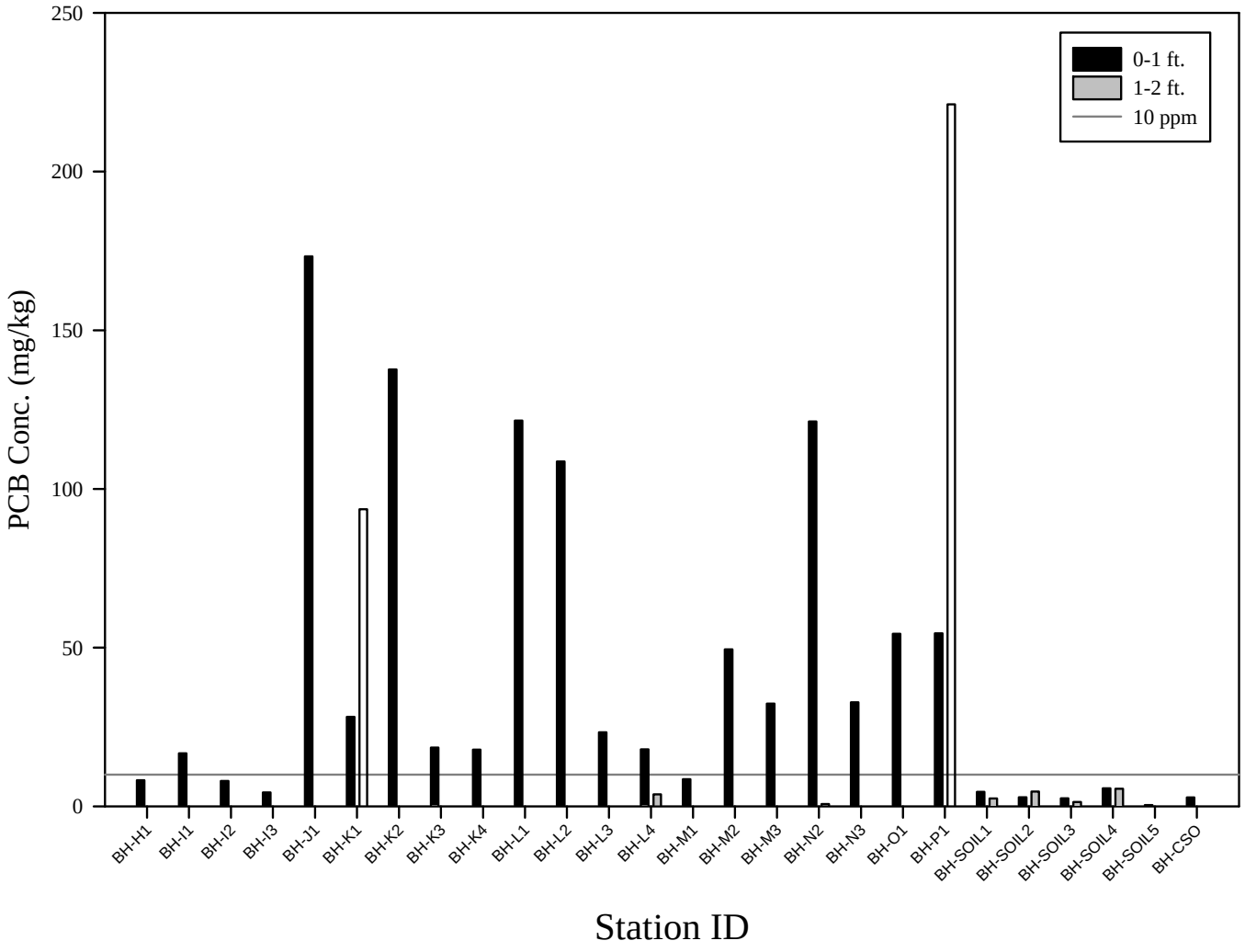

Figure 22. Total PCB Concentration of Southern Boat House Sediment Samples

Table 11. Elevation Data from Boat House Sediment Samples

Station ID	Northing NAD 83 MA, ft	Easting NAD 83 MA, ft	Elevation Measurements (NGVD 29 ft)		Measured Sediment Thickness of 'OL' Layer Remaining (ft)
			Measured Elevation of Sediment Surface	Measured Elevation of Transistion ('OL' to Underlying Strata)	
BH-A1	2701372.895	814938.459	-2.25	-2.25	0
BH-A2	2701373.177	814997.57	-4.15	-4.4	0.25
BH-A3	2701379.744	815052.276	-4.45	-4.65	0.2
BH-B1	2701282.326	815016.503	-3.4	-3.65	0.25
BH-B2	2701276.595	815066.643	-4.6	-4.6	0
BH-C1	2701221.037	814934.938	-1.2	-4.2	3
BH-C2	2701221.409	814989.591	-2.6	-4	1.4
BH-C3	2701221.75	815039.689	-8.1	-8.5	0.4
BH-C4	2701222.154	815098.896	-8.45	-8.65	0.2
BH-CSO	2701147.322	814812.466	N/A	N/A	N/A
BH-D1	2701172.049	814876.062	-2.45	-3.45	1
BH-D2	2701166.41	814939.865	-4.1	-4.7	0.6
BH-D3	2701161.019	815040.103	-9.5	-9.7	0.2
BH-D4	2701167.993	815172.139	-8.7	-8.75	0.05
BH-E1	2701105.338	814890.18	-0.45	-0.45	0
BH-E2	2701099.73	814958.538	-1.7	-2.6	0.9
BH-E3	2701100.133	815017.745	-3	-4.9	1.9
BH-E4	2701100.537	815076.952	-6.1	-6.2	0.1
BH-E5	2701101.189	815172.595	-9.6	-9.8	0.2
BH-F1	2701038.72	814917.962	-2.4	-2.6	0.2
BH-F2	2701026.822	814954.48	-2.7	-4.1	1.4
BH-F3	2701027.256	815018.242	-3.6	-4.5	0.9
BH-F4	2701027.629	815072.895	-4.4	-4.4	0
BH-G1	2700917.351	814932.452	-2.85	-3.3	0.45
BH-G2	2700923.858	814996.173	-3.7	-4.1	0.4
BH-G3	2700924.231	815050.827	-3.8	-4.1	0.3
BH-G4	2700924.572	815100.925	-4.85	-4.95	0.1
BH-H1	2700863.748	815087.676	-4.7	-4.7	0
BH-I1	2700796.292	814992.488	-3.4	-3.45	0.05
BH-I2	2700802.644	815033.437	-4.2	-4.4	0.2
BH-I3	2700803.017	815088.09	-4.2	-4.2	0
BH-J1	2700748.111	815052.027	-4.3	-5.25	0.95
BH-K1	2700668.074	814893.158	-1.25	-1.95	0.7
BH-K2	2700674.613	814961.434	-2.1	-3.3	1.2
BH-K3	2700681.058	815016.047	-2.4	-4	1.6
BH-K4	2700681.431	815070.7	-4.15	-4.25	0.1
BH-L1	2700619.893	814952.697	-1.6	-1.7	0.1
BH-L2	2700607.995	814989.216	-3.2	-3.8	0.6
BH-L3	2700608.305	815034.761	-3.7	-3.9	0.2
BH-L4	2700620.824	815089.332	-3.85	-3.95	0.1
BH-M1	2700511.136	815035.423	-3.65	-3.75	0.1
BH-M2	2700499.145	815058.279	-4	-4.6	0.6
BH-M3	2700493.413	815108.42	-3.55	-4.2	0.65
BH-N2	2700450.56	815058.61	-3.25	-4.25	1
BH-N3	2700451.026	815126.928	-3.75	-4.65	0.9
BH-O1	2700384.128	815113.72	-3.85	-4.55	0.7
BH-P1	2700384.874	815223.029	-8.05	-10.65	2.6
BH-SOIL1	2701074.569	814831.18	N/A	N/A	N/A
BH-SOIL2	2701001.754	814840.785	N/A	N/A	N/A
BH-SOIL3	2700910.843	814868.732	N/A	N/A	N/A
BH-SOIL4	2700832.017	814887.487	N/A	N/A	N/A
BH-SOIL5	2700771.41	814906.118	N/A	N/A	N/A

Table 12. Total PCB Concentrations from Boat House Sediment Samples

Station ID	Core ID	Sample Interval (ft)	Sum of 18 NOAA Congeners (mg/kg)	Total PCB (mg/kg)
BH-A1	S-10O-C047-0-1.0	0.0-1.0	159.188	413.8888
BH-A1	S-10O-C047-1.0-2.0	1.0-2.0	32.9	85.54
BH-A2	S-10O-C071-0-1.0	0.0-1.0	24.823	64.5398
BH-A2	S-10O-C071-1.0-2.0	1.0-2.0	92.809	241.3034
BH-A3	S-10O-C048-0-1.0	0.0-1.0	53.853	140.0178
BH-A3	S-10O-C048-1.0-2.0	1.0-2.0	19.889	51.7114
BH-B1	S-10O-C049-0-1.0	0.0-1.0	16.736	43.5136
BH-B1	S-10O-C049-1.0-2.0	1.0-2.0	0.00873	0.022698
BH-B2	S-10OC050-0-1.0	0.0-1.0	14.575	37.895
BH-B2	S-10O, C050-1.0-2.0	1.0-2.0	0	0
BH-C1	S-10O-C051-0-1.0	0.0-1.0	1.2422	3.22972
BH-C1	S-10O-C051-1.0-2.0	1.0-2.0	7.386	19.2036
BH-C2	S-10N-C001-0-1.0	0.0-1.0	4.2249	10.98474
BH-C2	S-10N-C001-1.0-2.0	1.0-2.0	44.182	114.8732
BH-C3	S-10N-C002-0-1.0	0.0-1.0	0.2836	0.73736
BH-C3	S-10N-C002-1.0-2.0	1.0-2.0	0	0
BH-C4	S-10O-C052-0-1.0	0.0-1.0	0.7218	1.87668
BH-C4	S-10O-C052-1.0-2.0	1.0-2.0	0	0
BH-D1	S-10O-C053-0-1.0	0.0-1.0	23.533	61.1858
BH-D1	S-10O-C053-1.0-2.0	1.0-2.0	6.682	17.3732
BH-D2	S-10N-C003-0-1.0	0.0-1.0	12.162	31.6212
BH-D2	S-10N-C003-1.0-2.0	1.0-2.0	0.07915	0.20579
BH-D3	S-10N-C004-0-1.0	0.0-1.0	7.479	19.4454
BH-D3	S-10N-C004-1.0-2.0	1.0-2.0	0	0
BH-D4	S-10O-C054-0-1.0	0.0-1.0	1.0544	2.74144
BH-D4	S-10O-C054-1.0-2.0	1.0-2.0	0	0
BH-E2	S-10N-C005-0-1.0	0.0-1.0	25.184	65.4784
BH-E2	S-10N-C005-1.0-2.0	1.0-2.0	0	0
BH-E3	S-10N-C006-0-1.0	0.0-1.0	22.431	58.3206
BH-E3	S-10N-C006-1.0-2.0	1.0-2.0	2.472	6.4272
BH-E4	S-10N-C007-0-1.0	0.0-1.0	1.7097	4.44522
BH-E4	S-10N-C007-1.0-2.0	1.0-2.0	0.00335	0.00871
BH-E5	S-10O-C055-0-1.0	0.0-1.0	4.335	11.271
BH-E5	S-10O-C055-1.0-2.0	1.0-2.0	0.01188	0.030888
BH-F1	S-10O-C056-0-1.0	0.0-1.0	9.191	23.8966
BH-F1	S-10O-C056-1.0-2.0	1.0-2.0	0.01988	0.051688
BH-F2	S-10N-C008-0-1.0	0.0-1.0	27.944	72.6544
BH-F2	S010N-C008-1.0-2.0	1.0-2.0	15.051	39.1326
BH-F3	S-10N-C009-0-1.0	0.0-1.0	28.58	74.308
BH-F3	S-10N-C009-1.0-2.0	1.0-2.0	0	0
BH-F4	S-10O-C073-0-1.0	0.0-1.0	4.59	11.934
BH-F4	S-10O-C073-1.0-2.0	1.0-2.0	0	0
BH-G1	S-10O-C057-0-1.0	0.0-1.0	51.952	135.0752
BH-G1	S-10O-C057-1.0-2.0	1.0-2.0	0.00738	0.019188
BH-G2	S-10N-C010-0-1.0	0.0-1.0	23.04	59.904
BH-G2	S-10N-C010-1.0-2.0	1.0-2.0	0	0
BH-G3	S-10N-C011-0-1.0	0.0-1.0	4.505	11.713
BH-G3	S-10N-C011-1.0-2.0	1.0-2.0	0	0
BH-G4	S-10O-C072-0.0-1.0	0.0-1.0	0.04524	0.117624
BH-G4	S-10O-C072-1.0-2.0	1.0-2.0	2.4797	6.44722
BH-H1	S-10O-C074-0-1.0	0.0-1.0	3.171	8.2446
BH-H1	S-10O-C074-1.0-2.0	1.0-2.0	0	0
BH-I1	S-10O-C058-0-1.0	0.0-1.0	6.422	16.6972
BH-I1	S-10O-C058-1.0-2.0	1.0-2.0	0.01786	0.046436
BH-I2	S-10N-C012-0-1.0	0.0-1.0	3.0749	7.99474
BH-I2	S-10N-C012-1.0-2.0	1.0-2.0	0	0
BH-I3	S-10O-C075-0-1.0	0.0-1.0	1.6736	4.35136
BH-I3	S-10O-C075-1.0-2.0	1.0-2.0	0	0
BH-J1	S-10O-C076-0-1.0	0.0-1.0	66.642	173.2692
BH-J1	S-10O-C076-1.0-2.0	1.0-2.0	0.1086	0.28236
BH-K1	S-10O-C059-0-1.0	0.0-1.0	10.855	28.223
BH-K1	S-10O-C059-1.0-2.0	1.0-2.0	35.996	93.5896
BH-K2	S-10N-C013-0-1.0	0.0-1.0	52.942	137.6492
BH-K2	S-10N-C013-1.0-2.0	1.0-2.0	0.02442	0.063492
BH-K3	S-10N-C014-0-1.0	0.0-1.0	7.1248	18.52448
BH-K3	S-10N-C014-1.0-2.0	1.0-2.0	0	0
BH-K4	S-10O-C077-0-1.0	0.0-1.0	6.87	17.862
BH-K4	S-10O-C077-1.0-2.0	1.0-2.0	0	0
BH-L1	S-10O-C060-0-1.0	0.0-1.0	46.739	121.5214
BH-L1	S-10O-C060-1.0-2.0	1.0-2.0	0.05794	0.150644
BH-L2	S-10N-C015-0-1.0	0.0-1.0	41.789	108.6514
BH-L2	S-10N-C015-1.0-2.0	1.0-2.0	0.10749	0.279474
BH-L3	S-10N-C016-0-1.0	0.0-1.0	8.9789	23.34514
BH-L3	S-10N-C016-1.0-2.0	1.0-2.0	0.00626	0.016276
BH-L4	S-10O-C078-0-1.0	0.0-1.0	6.9	17.94
BH-L4	S-10O-C078-1.0-2.0	1.0-2.0	1.4556	3.78456
BH-M1	S-10O-C061-0-1.0	0.0-1.0	3.289	8.5514
BH-M1	S-10O-C061-1.0-2.0	1.0-2.0	0.00672	0.017472
BH-M2	S-10N-C017-0-1.0	0.0-1.0	19.025	49.465
BH-M2	S-10N-C017-1.0-2.0	1.0-2.0	0	0
BH-M3	S-10O-C079-0-1.0	0.0-1.0	12.438	32.3388
BH-M3	S-10O-C079-1.0-2.0	1.0-2.0	0.09284	0.241384
BH-N2	S-10O-C062-0-1.0	0.0-1.0	46.628	121.2328
BH-N2	S-10O-C062-1.0-2.0	1.0-2.0	0.27348	0.711048
BH-N3	S-10O-C080-0-1.0	0.0-1.0	12.597	32.7522
BH-N3	S-10O-C080-1.0-2.0	1.0-2.0	0.06674	0.173524
BH-O1	S-10O-C063-0-1.0	0.0-1.0	20.911	54.3686
BH-O1	S-10O-C063-1.0-2.0	1.0-2.0	0.04736	0.123136
BH-P1	S-10O-C064-0-1.0	0.0-1.0	20.966	54.5116
BH-P1	S-10O-C064-1.0-2.0	1.0-2.0	85.051	221.1326
BH-SOIL1	S-10O-C065-0-1.0	0.0-1.0	1.7558	4.56508
BH-SOIL1	S-10O-C065-1.0-2.0	1.0-2.0	0.9557	2.48482
BH-SOIL2	S-10O-C066-0-1.0	0.0-1.0	1.0989	2.85714
BH-SOIL2	S-10O-C066-1.0-2.0	1.0-2.0	1.7896	4.65296
BH-SOIL3	S-10O-C067-0-1.0	0.0-1.0	0.9641	2.50666
BH-SOIL3	S-10O-C067-1.0-2.0	1.0-2.0	0.539	1.4014
BH-SOIL4	S-10O-C068-0-1.0	0.0-1.0	2.1871	5.68646
BH-SOIL4	S-10O-C068-1.0-2.0	1.0-2.0	2.125	5.525
BH-SOIL5	S-10O-C069-0-1.0	0.0-1.0	0.14806	0.384956
BH-SOIL5	S-10O-C069-1.0-2.0	1.0-2.0	0	0
BH-CSO	S-10O-C070-0-1.0	0.0-1.0	1.0768	2.79968

4.0 DISCUSSION

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

External OL thickness measurements from the Pre-Dredge core samples, which were collected in both active 2009 dredge areas (G, J, L, and M) and non-active 2009 dredge areas (K, N, O, and P) showed no localized patterns in OL thickness. However, the 2009 non-active dredge areas tended to have a greater OL thickness than the active 2009 dredge areas. This was expected because sediment had been previously removed from the active 2009 areas.

Spatially, the PCB concentrations throughout 2010 active dredge Areas G, J, K and M exhibited no clear pattern. Portions of these areas were previously dredged, some multiple times, which may have impacted the spatial distribution of the "OL" layer thickness and corresponding PCB concentrations. Concentrations were uniformly distributed throughout each dredge area with no localized spikes in concentrations (i.e., "Hotspots) (Figure 12 through 15).

At all but a few Post-Dredge core locations, the target dredge elevation (known as "z*") was within the OL layer, and above the elevation of the visual transition. In some locations, the visual transition was observed up to 2.65 feet lower than z*. These types of discrepancies show that sediment core observations of the OL visual transition 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 presence 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, in review).

Boathouse push cores had a significantly higher PCB concentration in the 0.0–1.0 foot samples than the 1.0–2.0 foot samples ($t = 0.0014$). Statistical significance was determined by running a Welch's t-test, and results were deemed significant if t values were equal to or less than 0.05. The significant difference between the upper and lower sampling intervals supports the use of the visual transition between the OL and underlying strata as an adequate method to preliminarily distinguish highly contaminated surface sediment from less contaminated native sediments. Thirty-nine of the forty-six Boathouse cores had PCB concentration greater than 10 ppm, which are above project contamination criterion. The majority of cores that did not contain PCB levels greater than 10 ppm were found farther from the shoreline, in the center of the Boathouse sampling area. There was no significant difference between the PCB concentration between the two shoreline soil sample intervals ($t = 0.78$). The CSO and soil samples had PCB concentrations well below the 10 ppm project criterion.

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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. 2010a. 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 for the U.S. Army Corps of Engineers New England District, Concord, MA.

Woods Hole Group. 2010b. 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 for the U.S. Army Corps of Engineers New England District, Concord, MA.

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APPENDIX A. 2010 CORING PHOTOGRAPHS AND FIELD LOGS (ON CD)

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APPENDIX A: 2010 CORE PHOTOGRAPHS AND FIELD LOGS

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4-14-10
Station: GF28
Length: 1.4

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-14-10	Station ID: GF28	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 2.2	
Collection Mechanism: P.C.	Latitude: 41° 40.563	Length of Push Core Assembly (B): 7.3	
Time on Station: 12:07	Longitude: 70° 54.980	Water Surface to Top of Handle (C): 3.6	
Time of Collection: 12:13	GPS Accuracy: DB 30ft 19ft	Length of Core (from bottom) (D): 1.4	
Time Depart Station: 12:15		Tide Elevation (from tide board) (G): DB ~~-2.~~ -0.8	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-4.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) (3.7)	~~-3.8~~ (?) NA
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.0

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.1)	?	sandy Silt with organics	black (brown)	loose	fine		NA
0.7 (-3.8)	CL/ML	Silty clay with peat	brown gray	firm	fine with peat		
1.4 (-4.5)							

Comments
1st attempt successful

4-14-10
Station: GF31
Length: 1.95

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-14-10	Station ID: GF31	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 1.9	
Collection Mechanism: P.C.	Latitude: 41° 40.551	Length of Push Core Assembly (B): 7.65	
Time on Station: 12:23	Longitude: 70° 54.979	Water Surface to Top of Handle (C): 3.65	
Time of Collection: 12.25	GPS Accuracy: 19ft	Length of Core (from bottom) (D): 7.95	
Time Depart Station: 12:27		Tide Elevation (from tide board) (G): -1.1	

Calculations for Determination of Z^ Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-1.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-5.1
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -1.1-(4)	~~-4.25~~ (?) NA
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.15
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.0

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.15)	?	Sandy Silt	brown & black	loose	medium coarse Sand		NA
1.1 - - (-4.25)	CL/ML	silty clay with sand	Olive grey	firm	fine with shell hash		
1.95 (-5.1)							

Comments
1st attempt succesful

4-14-10
Station: GH34
Length: 1.95

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

Date: 4-14-10	Station ID: GH34	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 1.9	
Collection Mechanism: P.C.	Latitude: 41°40.539	Length of Push Core Assembly (B): 8.2	
Time on Station: 12:31	Longitude: 70°54.969	Water Surface to Top of Handle (C): 3.9	
Time of Collection: 12:34	GPS Accuracy: 19 ft	Length of Core (from bottom) (D): 1.95	
Time Depart Station: 12:36		Tide Elevation (from tide board) (G): -1.2	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.2 - (8.2 - 3.9)	-1.2
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-5.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.05
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.55
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.1

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.55)	OL	Sandy Silt (fine sand)	black	loose	fine		NA
0.5 (-4.05)							
	CL/ML	silty clay	olive grey	firm	fine		
1.95 (-5.5)							

Comments


4-14-10
Station: GJ32
Length: 2.3

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/14/10 Station ID: GJ32 All Measurements are ± 0) feet

Logged By: KGM Core Sample ID: Water Depth (A): 2.ϕ

Collection Mechanism: P.C. Latitude: 41° 4ϕ. 547' Length of Push Core Assembly (B): 13.3

Time on Station: 11:23 Longitude: 7ϕ° 54.957' Water Surface to Top of Handle (C): 8.9

Time of Collection: 11:26 GPS Accuracy: 11 ft. Length of Core (from bottom) (D): 2.3

Time Depart Station: 11:28 Tide Elevation (from tide board) (G): ϕ.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): ϕ.1

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -4.3

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) 0.1 - (4.4) -3.3

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -2.ϕ

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.9

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-2.ϕ)	OL (?) (ML)	sandy silt	brownish black	medium	fine		NA
1.3 (-3.3)	CL/ML	silty clay	olive grey	firm	fine		
2.3 (-4.3)							

Comments

4-14-10
Station: GK37
Length: 1.9

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/14/10
Station ID: GK37
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID:
Water Depth (A): 2.6

Collection Mechanism: P.C.
Latitude: 41°40.526'
Length of Push Core Assembly (B): 9.15

Time on Station: 12:43
Longitude: 70°54.952'
Water Surface to Top of Handle (C): 4.6

Time of Collection: 12:52
GPS Accuracy: 16 ft.
Length of Core (from bottom) (D): 1.9

Time Depart Station: 12:56
Tide Elevation (from tide board) (G): -1.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.3

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -5.85

(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition) -1.3 - (4.55): -5.05

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -3.95

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -3.9

(Note if $I \neq I_2$ within +1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.95)		silty sand with organics	brown/ red	flocky loose	fine		
0.2 (-4.15)							
	OL? (ML)	silt	brown black	Medium ~~to~~	fine		NA
1.1 (-5.05)							
	CL/ML	silty clay	olive grey	firm	fine with shell hash		
1.9 (-5.85)							

Comments: 1st attempt unsuccessful - hit layer of shells

4-14-10
Station: GM22
Length: 1.65

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-14-10	Station ID: GM22	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): a-1	
Collection Mechanism: P.C	Latitude: 41° 40.588	Length of Push Core Assembly (B): 8.2	
Time on Station: 11:59	Longitude: 70° 54.942	Water Surface to Top of Handle (C): 4.1	
Time of Collection: 12:01	GPS Accuracy: 13 ft	Length of Core (from bottom) (D): 1.65	
Time Depart Station: 12:03		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)	-4.7
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -0.6 - (4.1)	-3.55 ✓(?)
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.05
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.7

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.05)	OL?	sandy silt with organics	brown black	loose	fine		NA
0.5	-(-3.55)							
		CL/ML	silty clay with organics	olive grey	firm	fine with shell hash		
1.65	(-4.7)							

Comments
1st attempt succesful

4-14-10
Station: GM25
Length: 1.7

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-14-10	Station ID: GM25	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	3.3
Collection Mechanism: P.C.	Latitude: 41°40.575	Length of Push Core Assembly (B):	8.2
Time on Station: 11:45	Longitude: 70°54.942	Water Surface to Top of Handle (C):	2.95
Time of Collection: 11:49	GPS Accuracy: 18ft	Length of Core (from bottom) (D):	1.7
Time Depart Station: 11:53		Tide Elevation (from tide board) (G):	-0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -0.3-(8.2-2.95)	-5.55
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	~4.65 (?)✓
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	DB ~~#25~~ -3.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.6

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.85)	OV?	Sandy Silt w/ organics and shell hash	brown black	loose	fine		NA
0.8 (-4.65)	CL/ML	Silty clay	olive grey	firm	fine with shell hash		
1.7 (-5.55)							

Comments
1st attempt succesful

4-14-10
Station: GN28
Length: 1.9

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-14-10	Station ID: GN28	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	2.1
Collection Mechanism: P.C.	Latitude: 41°40.563	Length of Push Core Assembly (B):	13.3
Time on Station: 11:32	Longitude: 70°54.936	Water Surface to Top of Handle (C):	8.8
Time of Collection: 11:35	GPS Accuracy: 20ft	Length of Core (from bottom) (D):	1.9
Time Depart Station: 11:38		Tide Elevation (from tide board) (G):	-0.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -0.1-(13.3-8.8)	-4.6
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)	-3.6 -4.0
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-2.7
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.0

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-2.7)	OL? (ML)	sandy silt (very fine sand)	brown black	loose	fine		NA
0.9 (-3.6)	marbled black / brown / grey			transition layer			
1.3 (-4.0)	CL/ML	silty clay	olive grey	firm	fine with shell hash		
1.9 (-4.6)							

Comments: 1st attempt succesful

4-15-10
Station: GQ36
Length: 2.15

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/15/10
Station ID: BQ36
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID:
Water Depth (A): 2.0
Collection Mechanism: P.C.
Latitude: 41° 40.583'
Length of Push Core Assembly (B): 13.3
Time on Station: 11:59
Longitude: 70° 54.920'
Water Surface to Top of Handle (C): 8.9
Time of Collection: 12:03
GPS Accuracy: 18 ft.
Length of Core (from bottom) (D): 2.15
Time Depart Station: 12:07
Tide Elevation (from tide board) (G): 0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -4.2

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition): 0.2 - (4.4) = -3.65

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -2.05

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -1.8

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-2.05)	OL	Silt with fine sand	black	loose	fine same throughout		NA
0.6 (-2.65)	minimal peat						
Streaked/marbled layer	OL over CL/ML	silt and clay	black over olive grey				
1.6 (-3.65)	CL/ML	Silty clay	olive grey	firm	fine		
2.15 (-4.2)							

Comments

4-15-10
Station: GS32
Length: 1.95

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

Date: 4/15/10	Station ID: GS32	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	2.9
Collection Mechanism: P.C.	Latitude: 41° 4ϕ.546'	Length of Push Core Assembly (B):	13.3
Time on Station: 10:54	Longitude: 7ϕ° 54.9ϕ8'	Water Surface to Top of Handle (C):	8.3
Time of Collection: 10:56	GPS Accuracy: 1ϕ ft	Length of Core (from bottom) (D):	1.95
Time Depart Station: 11:00		Tide Elevation (from tide board) (G):	1.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.5
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-3.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) 1.5-(5)	-2.65
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.55
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.4

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-1.55)	OL	Silt with fine sand	black	loose	fine		NA
1.1 (-2.65)	CL/ML	Silty clay with fine sand	olive grey	firm	fine with shell hash		
1.95 (-3.5)							

Comments

4-15-10
Station: GT35
Length: 1.9

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date	4/15/10	Station ID	GT35	All Measurements are ± 0.1 feet	
Logged By	KGM	Core Sample ID		Water Depth (A)	3.0
Collection Mechanism	P.C.	Latitude	41° 40.534'	Length of Push Core Assembly (B)	13.3
Time on Station	11:53	Longitude	70° 54.902'	Water Surface to Top of Handle (C)	8.1
Time of Collection	11:56	GPS Accuracy	14ft.	Length of Core (from bottom) (D)	1.9
Time Depart Station	11:57			Tide Elevation (from tide board) (G)	0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-4.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) 0.3-(5.2)	-3.4
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.0
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.7

(Note if I ≠ I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.0)	OL	Silt	black	loose	fine		NA
0.4	(-3.4)	ML/CL	clayey silt	v. dark grey	firm	fine		
0.8	(-3.8)	CL/ML	silty clay	olive grey	firm	fine with shell hash		
1.9	(-4.9)							

Comments

4-15-10
Station: GU34
Length: 20

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/15/10
Station ID: GU34
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID:
Water Depth (A): 3.8
Collection Mechanism: P.C.
Latitude: 41° 4ϕ. 538'
Length of Push Core Assembly (B): 13.3
Time on Station: 11:04
Longitude: 7ϕ° 54. 897'
Water Surface to Top of Handle (C): 7.25
Time of Collection: 11:07
GPS Accuracy: 14 ft
Length of Core (from bottom) (D): 2.ϕ
Time Depart Station: 11:10
Tide Elevation (from tide board) (G): 1.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.4

(H) Elevation of the bottom of the core (NGVD): G - (B - C) - 4.65

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) 1.4-(6.05) - 3.15

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D - 2.65

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A - 2.4

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-2.65)	OL	Silt with trace amounts of peat	black	loose	fine		NA
ϕ.5 – (-3.15) –	–	–	–	–	–	–	
	ML/CL	clayey silt	very dark grey	firm	fine		
1.15 – (-4.4) –	– –	–	–	–	–	–	
	CL/ML	silty clay	olive grey	firm	fine		
2.ϕ (-4.65)							

Comments

4-15-10
Station: GU36
Length: 1.7

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

Date: 4/15/10	Station ID: GU36	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	2.8
Collection Mechanism: p.c.	Latitude: 41°4ϕ.53ϕ'	Length of Push Core Assembly (B):	13.3
Time on Station: 11:12	Longitude: 7ϕ°54.897'	Water Surface to Top of Handle (C):	8.4
Time of Collection: 11:15	GPS Accuracy: 12 ft.	Length of Core (from bottom) (D):	1.7
Time Depart Station: 11:18		Tide Elevation (from tide board) (G):	1.2

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)	-3.7
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)	~~-2.4~~ (4.9) (-3.2)
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-2.ϕ
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.6

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-2.ϕ)	OL	silt with organics	black	loose	fine		NA
ϕ4 - (-2.4) -	—	—	—	—	—	—	—
marbled / streaking looks like layers were mixed	OL over CL/ML	silt and silty clay	black marbled with dark grey and olive grey	medium firm	fine		
1.2 - (-3.2) -	—	—	—	—	—	—	—
	CL/ML	silty clay	olive grey	firm	fine with shell hash		
1.7 (-3.7)							

Comments: slight sheen on top

4-15-10
Station: GV 35
Length: 1.95

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

Date:	4/15/10	Station ID:	GV35	All Measurements are ± 0.1 feet	
Logged By:	KGM	Core Sample ID:		Water Depth (A):	2.3
Collection Mechanism:	P.C.	Latitude:	41° 40.534'	Length of Push Core Assembly (B):	13.3
Time on Station:	11:41	Longitude:	70° 54.892'	Water Surface to Top of Handle (C):	~~0.0~~ KGM 8.4
Time of Collection:	11:44	GPS Accuracy:	14 ft.	Length of Core (from bottom) (D):	1.95
Time Depart Station:	11:50			Tide Elevation (from tide board) (G):	0.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.5
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-4.4
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) 0.5-(4.9)	-2.95
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-2.45
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.8

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-2.45)	OL	silt	black	loose	fine		NA
0.5	(-2.95)							
	streaking	CL/ML	silty clay	olive gray (streaks of black)	firm	fine		
1.5	(-3.95)							
		CL/ML	silty clay	olive grey	firm	fine with shell hash		
1.95	(-4.4)							

Comments

4-15-10
Station: GW 30
Length: 2.4

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

Date: 4/15/10
Station ID: GW3Φ
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID:
Water Depth (A): 2.9
Collection Mechanism: P.C
Latitude: 41°04Φ.554'
Length of Push Core Assembly (B): 13.3
Time on Station: 10:38
Longitude: 7Φ° 54.887'
Water Surface to Top of Handle (C): 7.5
Time of Collection: 10:41
GPS Accuracy: 12ft.
Length of Core (from bottom) (D): 2.4
Time Depart Station: 10:44
Tide Elevation (from tide board) (G): 1.7

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.7

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -4.1

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) 1.7-(5.8) -2.3

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -1.7

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.2

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
Φ.Φ (-1.7)	OL	Silt	black	loose	fine		NA
Φ.6 - (-2.3)	ML/CL	clayey silt	v. dark grey	medium	fine		
1.4 - (-3.1)	CL/ML	silty clay	olive grey	firm	fine with shell hash		
2.4 (-4.1)							

Comments


4-15-10
Station: GX38
Length: 2.05

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date:	4/15/10	Station ID:	GX38	All Measurements are ± 0.1 feet	
Logged By:	KGM	Core Sample ID:		Water Depth (A):	3.1
Collection Mechanism:	~~[illegible]~~ KGM p.c	Latitude:	41° 40.522'	Length of Push Core Assembly (B):	13.3
Time on Station:	11:34	Longitude:	70° 54.881'	Water Surface to Top of Handle (C):	7.8
Time of Collection:	11:37	GPS Accuracy:	12 ft.	Length of Core (from bottom) (D):	2.05
Time Depart Station:	11:40			Tide Elevation (from tide board) (G):	0.7

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)	-4.8
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) 0.7-(5.5)	-4.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-2.75
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.4

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-2.75)	OL	silt with organics, some v. fine sand	black	loose	fine		NA
1.35	(-4.1)	CL/ML	silty clay	olive grey	firm	fine		
2.05	(-4.8)							

Comments: Shells visable surrounding target location
lost bottom of sample (clay) - piece of bark stuck in bottom fell when sample was brought up


4-15-10
Station: GY36
Length: 2.2

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/15/10	Station ID: GY36	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	2.2
Collection Mechanism: P.C.	Latitude: 41°4ϕ.529'	Length of Push Core Assembly (B):	13.3
Time on Station: 11:22	Longitude: 7ϕ° 54.875'	Water Surface to Top of Handle (C):	~~9.1~~ 8.55
Time of Collection: 11:26	GPS Accuracy: 12 ft.	Length of Core (from bottom) (D):	2.2
Time Depart Station: 11:30		Tide Elevation (from tide board) (G):	1.ϕ

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.ϕ
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-3.75
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) 1.ϕ-(4.75)	~~-1.95~~ (-2.95)
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.55
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.2

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-1.55)	OL (PT)	sandy silt with bits of peat	v. dark grey	loose	fine w/peat		NA
ϕ.4 - (-1.95)							
marbled/ streaking	OL over CL/ML	Silt with silty clay	v. dark grey marked olive grey	firm	fine		
1.4 - (-2.95)							
	CL/ML	Silty clay	olive grey	firm	fine with shell hash		
2.2 (-3.75)							

Comments: 1st attempt unsuccessful – sample too loose, fell out of barrel possibly a rock stuck, – taking second core
2nd attempt
many shells visable surrounding target


4-15-10
Station: GZ28
Length: 2.45

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/15/10 | Station ID: G728 | All Measurements are ± 0.1 feet

Logged By: K6M | Core Sample ID: | Water Depth (A): 27

Collection Mechanism: p.c. | Latitude: 41° 4ϕ. 563' | Length of Push Core Assembly (B): ~~12.3~~ 13.3

Time on Station: 10:12 | Longitude: 7ϕ° 54. 868' | Water Surface to Top of Handle (C): 7.9

Time of Collection: 10:15 | GPS Accuracy: 11 ft. | Length of Core (from bottom) (D): 2.45

Time Depart Station: 10:22 | Tide Elevation (from tide board) (G): 1.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.8

(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): 1.8-(5.4) -1.45

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -1.15

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -ϕ.9

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-1.15)	OL	silt, some fine sand	v. dark grey	loose	fine		NA
ϕ.3 (-1.45)							
	CL/ML	silty clay	dark grey	firm	fine		
1.3 (-2.45)							
	CL/ML	silty clay	olive grey	firm	fine some shell hash		
2.45 (-3.6)							

Comments

NO PHOTO AVAILABLE

JB6
04/12/2010

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: George Hampson
Chief Scientist: K. McCartney

Date: 4/12/10 | Station ID: JB6 | All Measurements are ± 0.1 feet

Logged By: KGM | Core Sample ID: | Water Depth (A): ~~6.6~~ KGM 6.6

Collection Mechanism: p.c. | Latitude: 41° 40.497' | Length of Push Core Assembly (B): ~~14.3~~ KGM 13.3

Time on Station: 10:26 | Longitude: 70° 54.952' | Water Surface to Top of Handle (C): ~~4.8~~ KGM 4.2

Time of Collection: 10:40 | GPS Accuracy: 14 ft. | Length of Core (from bottom) (D): 1.8

Time Depart Station: 10:45 | Tide Elevation (from tide board) (G): 0.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.1

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -9.0

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition): 0.1 − (9.1) ~~-7.4~~ KGM -7.6

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -7.2

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -6.5

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
-7.2 (0) (-7.2)	OL	Silt	black	loose	fine		N/A
-7.6 (0.4) ~~-7.4~~ (-7.6) KGM	—	—	—	—	—	—	—
	ML/CL	Silty Clay	V. dark grey/ olive grey	firm	fine		
-9.0 (1.8) (-9.0)							

Comments: 1st core unacceptable. too much water on top, ~ 0.9 ft too short. 2nd core ok. top very silty, loosing material from surface most likely

4-12-10
Station: JC 24
Length: 1.9

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hampson
Chief Scientist: K. McCartney

Date:	4/12/10	Station ID:	JC24	All Measurements are ± 0.1 feet	
Logged By:	KGM	Core Sample ID:		Water Depth (A):	6.0
Collection Mechanism:	P.C.	Latitude:	41° 40. 423'	Length of Push Core Assembly (B):	13.3
Time on Station:	11:49	Longitude:	70° 54. 947'	Water Surface to Top of Handle (C):	4.6
Time of Collection:	11:55	GPS Accuracy:	15 ft.	Length of Core (from bottom) (D):	1.9
Time Depart Station:	12:00			Tide Elevation (from tide board) (G):	-0.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-9.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) (-0.8) - (8.7)	~~-7~~ KGM -8.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.6
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.8

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-7.6)	OL	silt	black	loose	fine w/shell hash		NA
0.5	(-8.1)							
1.1	streaking of OL (-8.7)	CL/mL	silty clay	olive grey	firm	fine		
1.9	(-9.5)							

Comments

4-12-10
Station: JF 23
Length: 1.3
NON-METALLIC

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hampson
Chief Scientist: K. McCartney

Date: 4/12/10	Station ID: JF23	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	6.1
Collection Mechanism: P.C.	Latitude: 41° 40. 427'	Length of Push Core Assembly (B):	13.3
Time on Station: 11:37	Longitude: 70° 54. 931'	Water Surface to Top of Handle (C):	5.3
Time of Collection: 11:45	GPS Accuracy: 13 ft.	Length of Core (from bottom) (D):	1.3
Time Depart Station: 11:47		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)	-8.6
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -0.6-(8)	-7.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.3
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.7

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-7.3)	OL	silt w/ clay, fine sand shell hash	~~dark~~ brown/ black	loose	fine		N/A
0.3 (-7.6)							
streaking / blurred transition to 1 ft.	CL/ML	silty clay	dark olive grey	firm	fine		
1.3 (-8.6)							

Comments

4-12-10
Station: JH5
Length: 2.2

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V George Hampson
Chief Scientist: K. McCartney

Date: 4/12/10
Station ID: JH5
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID: ~~S-10A-CB22~~ KGM
Water Depth (A): ~~6.0~~ KGM 5.7

Collection Mechanism: P.C.
Latitude: 41° 40.000'
Length of Push Core Assembly (B): ~~16.4~~ KGM ~~14.25~~ KGM 14.

Time on Station: 09:50
Longitude: 70° 54.919'
Water Surface to Top of Handle (C): ~~7.1~~ KGM ~~4.9~~ KGM 5.6

Time of Collection: 10:17
GPS Accuracy: 14 ft.
Length of Core (from bottom) (D): 2.2

Time Depart Station: 10:22
Tide Elevation (from tide board) (G): ~~0.8~~ KGM 0.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): ~~0.8~~ KGM 0.5

(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) 0.5 - (8.6) = -6.7

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D - 5.9

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A - 5.2

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 (-5.9)	OL	silty	black	v.l.m. loose	fine		
0.3 - (-6.2)	—	—	—	—	—	—	N/A
	OL?	silt	black/ v.dark grey	loose	fine		
0.8 - (-6.7)	ML	—	—	—	—	—	↓
	CL/ML	silty clay	olive grey	firm	fine		
2.2 -(-8.1)-							

Comments: 1st core unacceptable. trouble w/ plunger. $I \neq I_2$ within 1ft.
2nd core unacceptable. plunger not sliding thru core barrel - water @ top of sample, less than necessary length. trimmed plunger.
3rd core successful

4-12-10
Station: JI 24
Length: 1.8

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: E/V Hampson
Chief Scientist: K. McCartney

Date: 4/12/10 | Station ID: JI24 | All Measurements are ± 0.1 feet

Logged By: KGM | Core Sample ID: | Water Depth (A): 7.2

Collection Mechanism: p.c. | Latitude: 41° 4ϕ. 423' | Length of Push Core Assembly (B): 13.3

Time on Station: 11:ϕ2 | Longitude: 7ϕ° 54.914' | Water Surface to Top of Handle (C): 3.5

Time of Collection: 11:ϕ8 | GPS Accuracy: 1ϕ ft | Length of Core (from bottom) (D): 1.8

Time Depart Station: 11:13 | Tide Elevation (from tide board) (G): -ϕ.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -ϕ.3

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -1ϕ.1

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) -0.3-(9.8): -8.6

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -8.3

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -7.5

(Note if $I \neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-8.3)	OL (?)	Silt	black/ brown	loose	fine		N/A
ϕ.3 (-8.6)		clayey silt	black	firm	fine		
		Streaking	olive grey				
0.85 (-9.45)							
	CL/ML	silty clay	~20 dark olive grey	firm	fine		
1.8 (-10.1)							

Comments

4-12-10
Station : JK15
Length : 2.1

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V George Hamerson
Chief Scientist: K. McCarthy

Date: 4/12/10	Station ID: JK15	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): 5.5	
Collection Mechanism: V.C	Latitude: 41° 4ϕ 46ϕ'	Length of Push Core Assembly (B): 13.3	
Time on Station: 1ϕ:48	Longitude: 7ϕ°54.908'	Water Surface to Top of Handle (C): ~~4.9~~ ~~5.ϕ~~ 4.9	
Time of Collection: 1ϕ:55	GPS Accuracy: 11 ft.	Length of Core (from bottom) (D): 2.1	
Time Depart Station: 11:ϕϕ		Tide Elevation (from tide board) (G): -ϕ.2	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-ϕ.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) -ϕ.2 - (8.4)	-7.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.5
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.7

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ (-6.5)	OL	Silt	dark brown/ black	loose	fine		N/A
0.8 (-7.3)	CL/ML	silty clay	v. dark olive grey	firm	fine		
1.3 (-7.8)	CL	clay	dark olive grey	firm	fine		
2.1 (-8.6)							

Comments

4-12-10
Station: JM23
Length: 2.8

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hanyson
Chief Scientist: K. McCartney

Date: 4/12/10
Station ID: JM23
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID:
Water Depth (A): 5.7

Collection Mechanism: p.c.
Latitude: 41°04ϕ.427'
Length of Push Core Assembly (B): KGM ~~13.4~~ 13.3

Time on Station: 11:15
Longitude: 7ϕ°54.899'
Water Surface to Top of Handle (C): KGM ~~4.6~~ 4.2

Time of Collection: 11:30
GPS Accuracy: 12 ft.
Length of Core (from bottom) (D): 2.8

Time Depart Station: 11:33
Tide Elevation (from tide board) (G): -ϕ.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -ϕ.5

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -ϕ.5 ~~(-8.8)~~ (-9.1) : -9.6

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) : -7.2

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D : -6.8

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A : -6.2

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ (-6.8)	OL	silt	black	very loose	shell hash w/ fines		N/A
ϕ.4 (-7.2)	ML	clayey silt	v. dark olive gray	loose			
ϕ.8 (-7.6)	ML	clayey silt	dark olive grey	loose			
1.3 (-8.1)	ML/CL	silty clay (mostly clay)	olive grey	firm			
2.8 (-9.6)							

Comments: 1st core potentially over penetrated. taking second core
Keeping 2nd core


4-13-10
Station: KA 23
Length: 2.1

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: KA23	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	4.0
Collection Mechanism: P.C.	Latitude: 41° 40.328	Length of Push Core Assembly (B):	13.3
Time on Station: 10:43	Longitude: 70° 54.948	Water Surface to Top of Handle (C):	7.6
Time of Collection: 10:48	GPS Accuracy: 11 ft	Length of Core (from bottom) (D):	2.1
Time Depart Station: 10:50		Tide Elevation (from tide board) (G):	0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.2
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.1
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.96
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.0
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.8

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.0)	OL	Silt w/ organics	Black mottled Brown	Loose	Fine		
0.95	(-4.95)	-	-	-	-	-	-	- - -
		CL/ML		Olive Grey	Firm	Fine		Streaking down to 1.5
1.9	(-5.9)	-	-	-	-	-	-	- -
2.1	(-6.1)	PT	Peat w/wood	Brown	Loose			

Comments
- 1st attempt succesful

4-12-10
Station: kB 1
Length: 2.0

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hampson
Chief Scientist: K. McCartney

Date: 4/12/10	Station ID: KBB1	All Measurements are ± 0.1 feet: KGM	
Logged By: KGM	Core Sample ID:	Water Depth (A): ~~3.1~~ 3.3	
Collection Mechanism: p.c.	Latitude: 41° 40. 419'	Length of Push Core Assembly (B): 13.3	
Time on Station: 12:10	Longitude: 70° 54.942'	Water Surface to Top of Handle (C): ~~4.2~~ ~~8.1~~ 7.8 KGM 7.	
Time of Collection: 12:26	GPS Accuracy: 14 ft.	Length of Core (from bottom) (D): 2.0	
Time Depart Station: 12:35		Tide Elevation (from tide board) (G): -1.1	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-1.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.2
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -1.1-(6.1)	-6.5
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.4

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0. (-5.2)	OL	silt w/ organics	black	loose to firm	fine		N/A
1.3 -(-6.5)- streaking	CL/ML	silty clay	dark olive gray	firm	fine		
1.8							
2.0 (-7.2)							

Comments: 1st attempt unsuccessful, plunger stuck - refused sediment
2nd attempt unsuccessful, too short.

4-13-10
Station: KE23
Length: 2.4

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: KEE23	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	3.2
Collection Mechanism: P.C.	Latitude: 41°40.328	Length of Push Core Assembly (B):	13.3
Time on Station: 10:55	Longitude: 70° 54.926	Water Surface to Top of Handle (C):	7.3
Time of Collection: 10:57	GPS Accuracy: 17ft	Length of Core (from bottom) (D):	2.4
Time Depart Station: 11:00		Tide Elevation (from tide board) (G):	0.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.0
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.6
(I_s) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.2

(Note if $I \neq I_s$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.6)	OL	Silt	Black	Loose	Fine		
1.05 -(-4.65)	-	-	-	-	-	-	- -
	CL/ML	Silty Clay	Grey	Firm	Fine		
1.4 -(-5.0)	- Peat, Peat/Wood	-	-	-	-	-	- -
	'PT'		Brown	Loose			
2.4 (-6.0)							

Comments
- 1st attempt successful

4-12-10
Station: KG 8
Length: 2.1

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hampson
Chief Scientist: K McCartney

Date: 4/12/10 | Station ID: KG68 | All Measurements are ± 0.1 feet

Logged By: KGM | Core Sample ID: | Water Depth (A): 3.3

Collection Mechanism: p.c. | Latitude: 41° 40.390' | Length of Push Core Assembly (B): 14.3

Time on Station: 12:38 | Longitude: 70° 54.915' | Water Surface to Top of Handle (C): ~~8.0~~ KGM 8.3

Time of Collection: | GPS Accuracy: 17 ft. | Length of Core (from bottom) (D): 2.1

Time Depart Station: | Tide Elevation (from tide board) (G): -1.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.0

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.0

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -1-(6.0) ~~KGM 4.9~~ -5.4

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -4.9

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -4.3

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0. (-4.9)	OL	silt	v. dark grey/ brown	loose	fine		N/A
0.5 - (-5.4) -	- - -	- -	- -	-	-	- -	- -
	CL/ML	silty clay w/ shell hash	olive grey	firm	fine		
2.1 (-7.0)							

Comments: 1st attempt unsuccessful – too much water in sample.

4-12-10
Station: KK 7
Length: 1.95

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hampson
Chief Scientist: K. McCartney

Date: 4/12/10	Station ID: KKK7	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): 3.2	
Collection Mechanism: p.c.	Latitude: 41° 40.395	Length of Push Core Assembly (B): 13.3	
Time on Station: 12:55	Longitude: 70° 54.892	Water Surface to Top of Handle (C): ~~6.9~~ DB 7.6	
Time of Collection: 12:58	GPS Accuracy: 17ft	Length of Core (from bottom) (D): 1.95	
Time Depart Station: 13:18		Tide Elevation (from tide board) (G): -1.0	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-1.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -1.0(13.3-7.6)	-6.7
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-5.25 (-5.65)
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.7 + 1.95	-4.75
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.0 - 3.2	4.2

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0. (-4.75)	OL	silt	black	loose	fine		N/A
0.5 – (-5.25) – streaking	OL (?) ML	silt	v. dark grey	loose to firm	fine		
0.9 – (-5.65) – streaking at top of OL/ML into CL/ML	CL/ML	silty clay	dark olive grey	firm	fine		
1.95 (-6.7)							

Comments
1st attempt unsuccesful - over penetration

4-12-10
Station: KQ 19
Length: 3.3

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hampson
Chief Scientist: K. McCarney

Date: 4/12/10	Station ID: KQ 19	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): DB 3.9 4.3	
Collection Mechanism: P.C.	Latitude: 41°40.345	Length of Push Core Assembly (B): DB 13.3 14.3	
Time on Station: 13:36	Longitude: 70°56.004	Water Surface to Top of Handle (C): DB 6.1 6.4	
Time of Collection: 13:48	GPS Accuracy: 14ft	Length of Core (from bottom) (D): 3.3	
Time Depart Station: 13:51		Tide Elevation (from tide board) (G): -0.7	

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) -0.7-(14.3-6.4)	-8.6
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-6.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.3
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.0

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-5.3)	OL	silt w/ organics	black	loose	fines		N/A
1.5 -(-6.8)							
streaking of OL thru CL/ML							
2.5 -(-7.8)	CL/ML	silty clay	olive grey	firm	fine		
3.3 (-8.6)							

Comments
- Heavy sheen, strong petroleum odor
- 1st attempt unsuccessful - over penetration
- 2nd attempt succesful

4-12-10
Station: KQ23
Length: 2.1

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hampson
Chief Scientist: K. McCarney

Date: 4/12/10	Station ID: KQ23	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	4.9
Collection Mechanism: p.c.	Latitude: 41° 40.329	Length of Push Core Assembly (B):	13.3
Time on Station: 13:59	Longitude: 70° 55.004	Water Surface to Top of Handle (C):	5.6
Time of Collection: 14:11	GPS Accuracy: 15 ft	Length of Core (from bottom) (D):	2.1
Time Depart Station: 14:15		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)	-8.3
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-6.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.5

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0. KGM ~~-8.3~~ (-6.2)	OL	Silt organic	black	loose	fine		NA
0.6 — (-6.8) —	— —	—	—	—	—	—	—
	ML	silt	v. dark grey	loose	fine		
1.2 — (-7.4) —	— —	—	—	—	—	—	—
	CL/ML	silty clay	dark olive grey	firm	fine		
2.1 (-8.3)							

Comments
- Heavy Sheen
- 1st attempt succesful

4-12-10
Station: KU20
Length: 1.8

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V G. Hampson
Chief Scientist: K. McCartney

Date: 4/12/10	Station ID: KM20	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): 4.8	
Collection Mechanism: P.C.	Latitude: 41° 40.341	Length of Push Core Assembly (B): 13.3	
Time on Station: 14:20	Longitude: 70°54.981	Water Surface to Top of Handle (C): DB [redacted] 6.1	
Time of Collection: 14:27	GPS Accuracy: 21 ft	Length of Core (from bottom) (D): 1.8	
Time Depart Station: 14:30		Tide Elevation (from tide board) (G): -0.4	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	~~-7.6~~ KM -0.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.6
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-7.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.8
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.2

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.8)	OL	Silt & KM organics	black	loose	fine		N/A
1.3	(-7.1)	CL/ML	silty clay	olive grey/ brown	firm	fine		
1.8	(-7.6)							

Comments
- Heavy sheen
- 1st attempt succesful

4-13-10
Station: KV 23
Length: 2.3

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: KV23	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 5.3	
Collection Mechanism: P.C.	Latitude: 41° 40.328	Length of Push Core Assembly (B): 13.3	
Time on Station: 10:35	Longitude: 70° 54.977	Water Surface to Top of Handle (C): 5.45	
Time of Collection: 10:39	GPS Accuracy: 12ft	Length of Core (from bottom) (D): 2.3	
Time Depart Station: 10:41		Tide Elevation (from tide board) (G): 0.4	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.45
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-5.75
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.15
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.9

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.15)		Organic Detritus	Brown	Loose			
0.1	(-5.25)	OL	Silt	Black	Loose	Fine		
0.6	(-5.75)	OL? ML/CL	Clayey Silt	Dark Grey	Firm	Fine		
1.0	(-6.15)	CL/ML	Silty Clay w/fine Sand	Dark Grey	Firm	Fine		
2.3	(-7.45)							

Comments
- 1st attempt succesful - slight sheen on top of core

4-12-10
Station: KW 7
Length: 2.05

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V Hampson
Chief Scientist: K. McCarney

Date: 4/12/10	Station ID: KW7	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): 2.5	13.3 − 10.9 = 2.4
Collection Mechanism: p.c.	Latitude: 41°40.394	Length of Push Core Assembly (B): 13.3	
Time on Station: 13:24	Longitude: 70°54.969	Water Surface to Top of Handle (C): 8.4	
Time of Collection: 13:27	GPS Accuracy: 13 ft	Length of Core (from bottom) (D): 2.05	
Time Depart Station: 13:29		Tide Elevation (from tide board) (G): -0.9	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -0.9-(13.3-8.4)	-5.8
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -5.8+2.05	-5.05
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -0.9-2.5	-3.75
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.4

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0. -3.75	brown organic detritis @ top OL	silt	black	loose	fine		N/A
1.3 -(-5.05)	streaking of OL into CL/ML						
1.6 -(-5.35)	CL/ML	silty clay	olive grey	firm	fine		
2.05 -5.8							

Comments
- Heavy sheen on water when pulling core up
- PCP odor
- 1st attempt succesful

4-12-10
Station: KZ 19
Length: 2.4

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/12/10	Station ID: KZ19	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	4.4
Collection Mechanism: P.C.	Latitude: 41° 40.345	Length of Push Core Assembly (B):	13.3
Time on Station: 14:37	Longitude: 70° 54.953	Water Surface to Top of Handle (C):	6.1
Time of Collection: 14:44	GPS Accuracy: 16ft	Length of Core (from bottom) (D):	2.4
Time Depart Station:		Tide Elevation (from tide board) (G):	-0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.3
(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)	-6.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.7

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 (-5.1)	OL	silt	black/ dark brown	loose	fine		N/A
1.2 (-6.3)	CL/ML	silty clay	olive grey	firm	fine		
streaking of OL into CL/ML							
2.0							
2.4 (-7.5)							

Comments
-1st attempt succesful


4-15-10
Station: LC 3
Length: 4.3

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/15/10	Station ID: LC3	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	3.2
Collection Mechanism: P.C.	Latitude: 41°40.039'	Length of Push Core Assembly (B):	16.3
Time on Station: 12:22	Longitude: 70°55.123'	Water Surface to Top of Handle (C):	8.5
Time of Collection: 12:27	GPS Accuracy: 14 ft.	Length of Core (from bottom) (D):	4.3
Time Depart Station: 12:32		Tide Elevation (from tide board) (G):	-0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.3
(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) -0.3-(7.8)	-7.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.8
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.5

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.8)	OL	silt	black	loose	fine		NA
3.3 -(-7.1)-							
4.3 (-8.1)	CL/ML	silty clay	dark olive grey	firm	fine		

Comments: strong petroleum odor

4-13-10
Station: LA 5
Length: 1.3

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

Date: 4-13-10 | Station ID: LAA5 | All Measurements are ± 0.1 feet
Logged By: DB | Core Sample ID: | Water Depth (A): DB ~~1.2~~ 1.1
Collection Mechanism: P.C. | Latitude: 41° 40.028 | Length of Push Core Assembly (B): DB ~~12.35~~ 7.25
Time on Station: 13:12 | Longitude: 70° 54.995 | Water Surface to Top of Handle (C): DB ~~4.25~~ 4.75
Time of Collection: 13:23 | GPS Accuracy: 20 ft | Length of Core (from bottom) (D): DB ~~2~~ 1.3
Time Depart Station: 13:25 | Tide Elevation (from tide board) (G): -1.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C): -3.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition): ~~-3.60~~ -2.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -2.6
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -2.5

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-2.6)		Silt/ Clay/ Sand	Greyish Brown	Firm	Fine		well mixed layer
0.9 -(-3.5)-	-	- Sandy Clay	Olive Grey	Firm	Fine/ Medium	-	-
1.3 (-3.9)							

Comments
- 1st attempt unsuccessful- over penetration
- 2nd attempt successful

4-13-10
Station: LP 1
Length: 2.00

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

Date: 4-13-10
Station ID: LP1
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID:
Water Depth (A): 5.6
Collection Mechanism: P.C.
Latitude: 41°40.045
Length of Push Core Assembly (B): 13.3
Time on Station: 11:25
Longitude: 70°55.055
Water Surface to Top of Handle (C): 5.3
Time of Collection: 11:30
GPS Accuracy: 15ft
Length of Core (from bottom) (D): 2.0
Time Depart Station: 11:35
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) -8.6

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -6.95

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D ~~-6.6~~ ICEM -6.6

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.2

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-6.6)	ML/CL	Clayey Silt	Brown Grey	Firm	Fine		
0.35 (-6.95)	-	-	-	-	-	-	Shell Hash
		Transition		Layer			
1.0 (-7.6)	—	—	—	—		—	—
	CL/ML	Silty Clay	Olive Grey	Firm	Fine		Shell Hash
2.0 (-8.6)							

Comments
1st attempt succesful

4-13-10
Station: LT 4
Length: 1.75

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10
Station ID: LT4
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID:
Water Depth (A): 5.4
Collection Mechanism: P.C.
Latitude: 41° 40.032
Length of Push Core Assembly (B): 13.3
Time on Station: 11:40
Longitude: 70° 55.034
Water Surface to Top of Handle (C): 6
Time of Collection: 11:42
GPS Accuracy: 13ft
Length of Core (from bottom) (D): DB ~~1.85~~ 1.75
Time Depart Station:
Tide Elevation (from tide board) (G): -0.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.8

(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): -6.65

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -6.35

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -6.2

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-6.35)							
		OL	Silt	Black	Loose	Fine		
0.3	-(-6.65)-	-	-	-	-	-	-	- -
		ML/CL	Clayey Silt	Grey/Black	Firm	Fine		Transition Layer
0.8	-(-7.15)	-	-	-	-	-	-	-
		CL/ML	Silty Clay	Olive Grey	Firm	Fine		
1.75	(-8.1)							

Comments: 1st attempt succesful - strong H_2S odor

4-13-10
Station: LX 1
Length: 1.75

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10
Station ID: LX1
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID:
Water Depth (A): 4.4
Collection Mechanism: P.C.
Latitude: 41° 40.044
Length of Push Core Assembly (B): 12.4
Time on Station: 11:50
Longitude: 70° 55.012
Water Surface to Top of Handle (C): 6.1
Time of Collection: 11:54
GPS Accuracy: 15ft
Length of Core (from bottom) (D): ~~1.8~~ DB 1.75
Time Depart Station: 11:55
Tide Elevation (from tide board) (G): -0.9

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.9

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -7.2

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition): -6.05

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -5.45

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -5.3

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
(-5.45)	OL? ML	Sandy Silt	Black	Loose	Fine		
0.6 - (-6.05)	-	-	-	-	-	-	- -
	CL/ML	Silty Cly w/fine Sand	Olive Grey	Firm	Fine		
1.75 (-7.2)							

Comments:
- 1st attempt succesful -

4-13-10
Station: LZ10
Length: 1.4

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

Date: 4-13-10
Station ID: LZ10
All Measurements are ± 0.1 feet

Logged By: DB
Core Sample ID:
Water Depth (A): 0.7

Collection Mechanism: P.C.
Latitude: 41°40.008
Length of Push Core Assembly (B): 7.3

Time on Station: 13:31
Longitude: 70°55.060
Water Surface to Top of Handle (C): 5.1

Time of Collection: 13:36
GPS Accuracy: 15 ft
Length of Core (from bottom) (D): 1.4

Time Depart Station: 13:38
Tide Elevation (from tide board) (G): -1.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.4

(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) -2.2

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -2.2

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -2.1

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-2.2)	ML	Sandy Silt	~~Black~~ Dark Grey	Firm	Fine		
1.4 (-3.6)							

Comments
- 1st attempt successful

4-15-10
Station: MA8
Length: 14

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

Date: ~~4/14/10~~ KGM 4/15/10 | Station ID: MA8 | All Measurements are ± 0.1 feet

Logged By: KGM | Core Sample ID: | Water Depth (A): ~~2.6~~ KGM 3.2

Collection Mechanism: P.C. | Latitude: 41° 4ϕ. 645' | Length of Push Core Assembly (B): 12.25

Time on Station: 08:52 | Longitude: 7ϕ° 55. ϕϕ6' | Water Surface to Top of Handle (C): 7.4

Time of Collection: 08:55 | GPS Accuracy: 14ft | Length of Core (from bottom) (D): 1.4

Time Depart Station: 08:59 | Tide Elevation (from tide board) (G): 2.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	- 2.75
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) - (4.85)	- 1.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	- 1.35
(I_1) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	- 1.1

(Note if $I \neq I_1$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ	(-1.35)	SM	sandy silt	black	loose	fine		
ϕ.1	(-1.45)	OL	silt	black	loose	fine		~~NA~~
ϕ.45	(-1.8)	CL/ML	silty clay	dark grey	firm	fine		
ϕ.85	(-2.2)	CL/ML	silty clay	olive grey	firm	fine		
1.4	(-2.75)							

Comments: moved location slightly east due to rocky bottom at target location

4-15-10
Station: MB 11
Length: 2.15

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/15/10
Station ID: MB11
All Measurements are ± 0.1 feet

Logged By: KoM
Core Sample ID:
Water Depth (A): ~~8.4~~ KoM 8.3

Collection Mechanism: P.C.
Latitude: 41° 40.633'
Length of Push Core Assembly (B): ~~12.3~~ KoM 14.3

Time on Station: 09:41
Longitude: 70° 55.001'
Water Surface to Top of Handle (C): ~~7.0~~ KoM 8.7

Time of Collection: 09:43
GPS Accuracy: 14 ft.
Length of Core (from bottom) (D): ~~6.7~~ KoM 2.15

Time Depart Station: 09:55
Tide Elevation (from tide board) (G): 2.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.0

(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) -3.05

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -1.45

(I_s) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.3

(Note if $I \neq I_s$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-1.45)	OL	sandy silt	black	loose	very fine sand		NA
0.8	(-1.75)							
		OL	silt	black	loose	fine		
1.6	(-3.05)							
2.15	(-3.6)	CL/ML	silty clay	olive grey	firm	fine, with gravel, coarse sand		

Comments: 1st core did not show transition layer clearly - taking second core - strong H_2S odor when dumped
2nd attempt successful, hit refusal, gravel


4-15-10
Station: MB 14
Length: 2.3

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

Date: 4/15/10	Station ID: MB14	All Measurements are ± 0.1 feet	
Logged By: KoM	Core Sample ID:	Water Depth (A): 4.9	
Collection Mechanism: p.c.	Latitude: 41°4ϕ'621'	Length of Push Core Assembly (B): 14.4	
Time on Station: 09:59	Longitude: 7ϕ°55.ϕϕϕ'	Water Surface to Top of Handle (C): 6.9	
Time of Collection: 10:02	GPS Accuracy: 12A.	Length of Core (from bottom) (D): 2.3	
Time Depart Station: 10:05		Tide Elevation (from tide board) (G): 2.ϕ	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.ϕ
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-5.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.ϕ (entire length was marbled)
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.9

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-3.2)	OL	sandy silt	black	loose	fine/ medium grained sand		NA
ϕ.8 (-4.0)	—	—	—	—	—	—	—
	OL over CL/ML	silt over silty clay	black marbled with olive grey	loose and firm	fine		
2.3 (-5.5)							

Comments: strong petroleum odor, moderate sheen.
hit refusal - sandy/gravel layer

4-15-10
Station: MD4
Length: 1.6

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

Date: ~~4/14/10~~ KGM 4/15/10
Station ID: MD4
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID: ~~41°40.661'~~
Water Depth (A): ~~4.2~~ 4.9

Collection Mechanism: P.C.
Latitude: ~~41°40.661'~~
Length of Push Core Assembly (B): ~~12.35~~ 12.4

Time on Station: 09:02
Longitude: ~~70°54.984'~~
Water Surface to Top of Handle (C): 5.5

Time of Collection: 09:14
GPS Accuracy: 15 ft.
Length of Core (from bottom) (D): 1.6

Time Depart Station: 09:20
Tide Elevation (from tide board) (G): 2.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.3

(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) 2.3 − (6.9): NA

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -3.0

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -2.6

(Note if $I \neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.0)	SM	silty sand	brown	loose	coarse to fine sand		NA
0.3 (-3.3)	CL/ML	silty clay	dark olive grey	firm	fine		
0.6 (-3.6)	w/ fine sand						
	CL/ML	silty clay with fine sand and peat	olive grey	firm	fine with some peat		
1.6 (-4.6)							

Comments: Moved location slightly west – too rocky at target location: crushed core barrel at second location: rocks and shells – moved slightly south ~ 20 ft from target 3rd attempt successful

4-15-10
Station: MD6
Length: 1.3

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/15/10	Station ID: MD6	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): 7.9	
Collection Mechanism: P.C.	Latitude: 41° 40. 654'	Length of Push Core Assembly (B): ~~12.4~~ KGM 12.4	
Time on Station: 09:28	Longitude: 70° 54.989'	Water Surface to Top of Handle (C): 2.95	
Time of Collection: 09:32	GPS Accuracy: 17 ft.	Length of Core (from bottom) (D): 1.3	
Time Depart Station: 09:36		Tide Elevation (from tide board) (G): 2.3	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.15
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	NA
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	- 5.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.6

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-5.85)	SM	silty sand	dark grey	loose	gravel, coarse sand		NA
0.1 - - (-5.95)	CL/ML	silty clay	dark grey	firm	fine		
1.3 (-7.15)							

Comments: 1st attempt successful

4-14-10
Station: NC 24
Length: 1.95

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/14/10	Station ID: NBH24	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 1.45	
Collection Mechanism: P.C.	Latitude: 41° 40.579	Length of Push Core Assembly (B): 8.2	
Time on Station: 8:53	Longitude: 70° 54.852	Water Surface to Top of Handle (C): 4.4	
Time of Collection: 8:55	GPS Accuracy: 17ft	Length of Core (from bottom) (D): 1.95	
Time Depart Station: 8:57		Tide Elevation (from tide board) (G): 2.2	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) = 2.2 - (3.8) = -1.6

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) = ~~-0.95~~ KGM -0.65

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D = 0.35

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A = 0.75

(Note if $I \neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (0.35)	PT	leafy peat w/ organic detritus	brown/ red	loose	peat		NA
0.3 -(0.05)-							
-0.65	OL	silt to clayey silt	black	loose to firm	fine		
1.0 (KGM ~~-0.95~~)							
	PT	peat with streaks of silty clay	brown/ red	loose	peat		
1.95 (-1.6)							

Comments
- Strong Petrolium odor, oily sheen on exterior of core barrel
- 1st attempt successful

4-14-10
Station: NC26
Length: 17

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date	4/14/10	Station ID	NCC26	All Measurements are ± 0.1 feet	
Logged By	KGM	Core Sample ID		Water Depth (A)	2.8 ft.
Collection Mechanism	PC	Latitude	41° 40.571'	Length of Push Core Assembly (B)	8.2
Time on Station	09:07	Longitude	70° 54.853'	Water Surface to Top of Handle (C)	3.3
Time of Collection	09:13	GPS Accuracy	14 ft.	Length of Core (from bottom) (D)	1.7
Time Depart Station	09:16			Tide Elevation (from tide board) (G)	2.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-2.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) (4.9)	~~-1.9~~ -2.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-0.8

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-1.2)	OL	silt	black	loose	fine		NA
0.7	(-1.9)		clayey					
	transition layer	~~CL~~ / CL	~~silty~~	v. dark	firm	fine		
0.9	(-2.1)	ML / ~~ML~~	silt ~~clay~~	grey				
		CL/ML	silty clay	olive grey	firm	fine		
1.7	(-2.9)							

Comments
petroleum odor
1st attempt successful

4-14-10
Station: NC 36
Length: 1.8
NC36

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

Date: 4/14/10	Station ID: NCC36	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	3.5
Collection Mechanism: P.C.	Latitude: 41° 40.530'	Length of Push Core Assembly (B):	13.3
Time on Station: 09:19	Longitude: 70° 54.854'	Water Surface to Top of Handle (C):	7.75
Time of Collection: 09:25	GPS Accuracy: 13 ft.	Length of Core (from bottom) (D):	1.8
Time Depart Station: 09:28		Tide Elevation (from tide board) (G):	1.9

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	KGM ~~0~~ 1.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-3.65
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) 1.9-(5.55)	-2.35
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.6

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-1.85)	OL	silty organic detritis	brown/ black	loose			NA
0.2	(-2.05)							
0.5	(-2.35)	OL	silt	black	loose	fine		
0.7	transition layer (-2.55)	ML/CL	clayey silt	v. dark grey	firm	fine		
		CL/ML	silty clay	olive grey	firm	fine with shell hash		
1.8	(-3.65)							

Comments

4-14-10
Station: NC 42
Length: 1.95

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

Date: 4/14/10	Station ID: NC42	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): 3.3	
Collection Mechanism: p.c.	Latitude: 41° 40.585'	Length of Push Core Assembly (B): 13.3	
Time on Station: 09:30	Longitude: 70° 54.853'	Water Surface to Top of Handle (C): 7.5	
Time of Collection: 09:37	GPS Accuracy: 13 ft.	Length of Core (from bottom) (D): 1.95	
Time Depart Station: 09:42		Tide Elevation (from tide board) (G): 1.9	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-3.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) 1.9 − (5.8)	-2.75
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.95
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.4

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-1.95)	OL	silt	v. dark grey	loose	fine		NA
0.3	(-2.25)							
0.8	(-2.75)	OL	Silt	black	loose	fine		
1.95	(-3.9)	CL/ML	silty clay	olive grey	firm	fine		

Comments

4-14-10
Station: NC46
Length: 2.05

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

Date: 4/14/10 Station ID: NBH6 All Measurements are ± 0.1 feet

Logged By: KCM Core Sample ID: Water Depth (A): 3.2

Collection Mechanism: P.C. Latitude: 41° 40.488' Length of Push Core Assembly (B): 13.3

Time on Station: 09:44 Longitude: 70° 54.853' Water Surface to Top of Handle (C): 7.7

Time of Collection: 09:47 GPS Accuracy: 14 ft. Length of Core (from bottom) (D): 2.05

Time Depart Station: 09:51 Tide Elevation (from tide board) (G): 1.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.8

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -3.8

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) 1.8-(5.6) -3.05

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -1.75

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.4

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (+1.75)	OL	silty organic detritis	brown/ black	loose	fine		NA
(0.2) (-1.95)							
	OL	silt	black	loose	fine		
1.3 (-3.05)							
	CL/ML	silty clay	olive grey	firm	fine		
2.05 (-3.8)							

Comments

4-14-10
Station: NI 41
Length: 1.95

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/14/10	Station ID: NH41	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): 2.1	
Collection Mechanism: P.C.	Latitude: 41° 40. 505'	Length of Push Core Assembly (B): 13.3	
Time on Station: 10:41	Longitude: 70° 54. 820'	Water Surface to Top of Handle (C): 9.1	
Time of Collection: 10:44	GPS Accuracy: 10 ft.	Length of Core (from bottom) (D): 1.95	
Time Depart Station: 10:48		Tide Elevation (from tide board) (G): 0.9	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-3.3
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) 0.9 - (4.2)	-2.15
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.35
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.2

(Note if $I \neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.9 (-1.35)	OL	silty organic debris	brown black	loose			
0.1 (-1.45)	OL? ML	clayey silt w/ fin sand	v. dark grey	medium	fine		NA
0.8 (-2.15)	CL	clay	grey	firm	fine		
1.5 (-2.85)							
1.7 (-3.05)	Shell layer with silty clay						
1.95 (-3.3)	CL	clay	olive grey	firm	fine		

Comments

4-14-10
Station: NI 43
Length: 1.95

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/14/10	Station ID: NII43	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A): 2.6	
Collection Mechanism: p.c.	Latitude: 41° 4ϕ. 5ϕϕ'	Length of Push Core Assembly (B): 12.55	
Time on Station: 09:53	Longitude: 7ϕ° 54. 82ϕ'	Water Surface to Top of Handle (C): 7.9	
Time of Collection: 09:57	GPS Accuracy: 15 ft.	Length of Core (from bottom) (D): 1.95	
Time Depart Station: 10:01		Tide Elevation (from tide board) (G): 1.7	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.7
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-2.95
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) 1.7-(4.65)	-2.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.ϕ
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-ϕ.9

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-1.ϕ)	OL	Silt	black	loose	fine		NA
1.1 - - (-2.1) -	CL/ML	silty clay	v. dark olive gray	firm	fine		
1.95 (-2.95)							

Comments

4-14-10
Station: NK41
Length: 2.3

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

Date 4/14/10 | Station ID NK41 + REP | All Measurements are ± 0.1 feet
Logged By KCM | Core Sample ID $ | Water Depth (A) 2.4 // 2.0
Collection Mechanism p.c. | Latitude ~~40~~ KM 41°40.509' // 41°40.508' | Length of Push Core Assembly (B) 12.6 // 13.2
Time on Station 10:16 | Longitude 70°54.809' // 70°54.809' | Water Surface to Top of Handle (C) 8.65 // 8.6
Time of Collection 10:23 // 10:35 | Accuracy 16 ft. // 17 ft. | Length of Core (from bottom) (D) 1.5 // 2.3
Time Depart Station 10:39 | Tide Elevation (from tide board) (G) 1.4 // ~~1.2~~ 1.1 KCM

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.1 - (4.6)	1.4 // ~~1.2~~ 1.1 KCM
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-2.55 // -3.5
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) 1.4 - (3.95)	— // -2.5
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.05 // -1.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.0 // -0.9

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

DESCRIBED LONGER (SECOND) CORE

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-1.2)	OL	silty organic debris	brownish black	very loose	fine		N/A
0.1 (-1.3)							
	OL	silt	black	loose	fine		
1.3 (-2.6)							
	CL/ML	silty clay	dark olive grey gradually gets lighter in color	firm	fine w/ shell hash		
2.3 (-3.5)							

Comments: 1st core acceptable but transition layer isn't completely clear - taking replicate sample, sheen on exterior of core barrel

1st core = NK41 REP 2nd core = NK41

4-14-10
Station: NK43
Length: 1.55

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

Date: 4/14/10	Station ID: NN443	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	2.2
Collection Mechanism: p.c.	Latitude: 41° 4ϕ.5ϕϕ'	Length of Push Core Assembly (B):	12.3
Time on Station: 10:02	Longitude: 7ϕ° 54.8ϕ9'	Water Surface to Top of Handle (C):	8.4
Time of Collection: 1ϕ:07	GPS Accuracy: 12 ft.	Length of Core (from bottom) (D):	1.55
Time Depart Station: 10:10		Tide Elevation (from tide board) (G):	1.6

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)	-2.3
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) 1.6-(3.9)	-1.65
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-ϕ.75
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-ϕ.6

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
ϕ.ϕ (-ϕ.75)	OL	silt w/ minimal fine sand	black	loose	fine		NA
ϕ.9 (-1.65)	CL/ML	silty clay	dark olive grey	firm	fine		
1.55 (-2.3)			(-2.2) olive grey				

Comments

4-14-10
Station: NL32
Length: 2.2

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

Date: 4/14/10	Station ID: NH32	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	1.4
Collection Mechanism: P.C.	Latitude: 41°40.546'	Length of Push Core Assembly (B):	13.3
Time on Station: 10:50	Longitude: 70°54.804'	Water Surface to Top of Handle (C):	9.5
Time of Collection: 10:52	GPS Accuracy: 10 ft.	Length of Core (from bottom) (D):	2.2
Time Depart Station: 10:53		Tide Elevation (from tide board) (G):	0.7

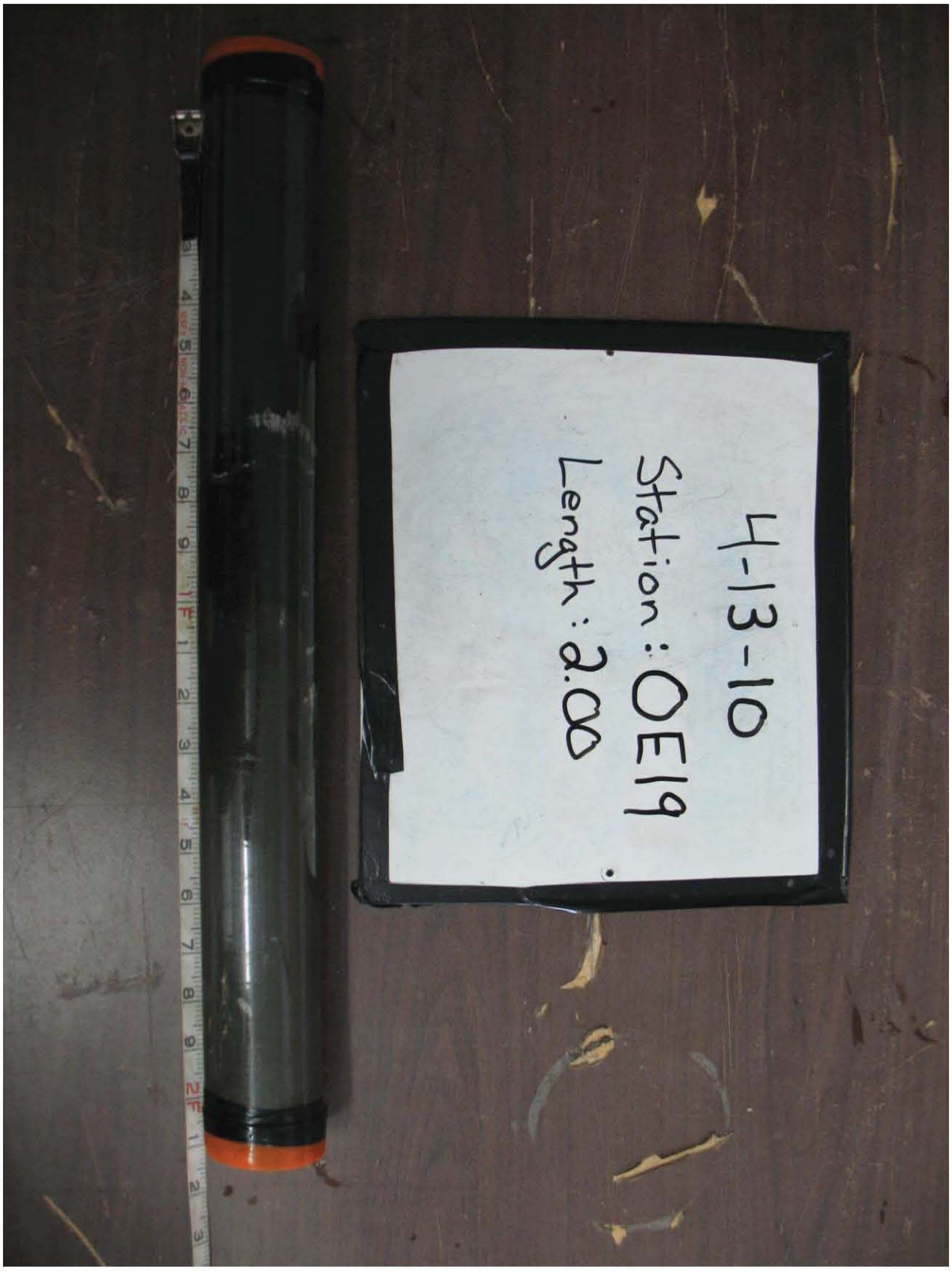
Calculations for Determination of Z* Elevation

(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)	-3.1
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-1.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD). H + D	-0.9
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-0.7

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = ID)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-0.9)	OL	Silt	black	loose	fine		NA
0.9 (-1.8)							
	streaking						
1.3 (-2.2)	CL/ML	silty clay	olive grey	firm	fine		
2.2 (-3.1)							

Comments


4-13-10
Station: OE19
Length: 2.00

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/13/10	Station ID: OE19	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 3.8	
Collection Mechanism: P.C.	Latitude: 41° 40.345	Length of Push Core Assembly (B): 13.3	
Time on Station: 08:39	Longitude: 70° 54. 894	Water Surface to Top of Handle (C): 7.2	
Time of Collection: 08:51	GPS Accuracy: 22ft	Length of Core (from bottom) (D): 2.0	
Time Depart Station: 08:54		Tide Elevation (from tide board) (G): 2.0	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-4.1
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-3.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-2.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.8

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-2.1)	OL	Silt w/organics at the surface	Black/ Dark Grey	Loose	Fine		
1.0	(-3.1)	CL/ML	Silty Clay	Olive Grey	Firm	Fine		-Shell Hash at bottom
2.0	(-4.1)							

Comments: 1st attempt - successful

4-13-10
Station: OJ 8
Length: 2.00

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: OS 8	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	2.3
Collection Mechanism: P.C	Latitude: 41°40.390	Length of Push Core Assembly (B):	13.3
Time on Station: 10:18	Longitude: 70°54.865	Water Surface to Top of Handle (C):	8.6
Time of Collection: 10:19	GPS Accuracy: 11 ft	Length of Core (from bottom) (D):	2.0
Time Depart Station: 10:25		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)	-4.1
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-3.0
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-2.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.7

(Note if $I \neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-2.1)	OL	Silt	Black	Loose	Fine		
0.9 (-3.0)	CL/ML	Silty Clay	Olive Grey	Firm	Fine		Stretching from 0.9-1.1
2.0 (-4.1)							

Comments
1st attempt successful : Heavy sheen on core barrel

4-13-10
Station: OL17
Length: 2.00

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: OL17	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	2.5
Collection Mechanism: P.C.	Latitude: 41° 40.353	Length of Push Core Assembly (B):	13.3
Time on Station: 09:51	Longitude: 70° 54.855	Water Surface to Top of Handle (C):	8.5
Time of Collection: 09:58	GPS Accuracy: 13ft	Length of Core (from bottom) (D):	2.0
Time Depart Station: 09:59		Tide Elevation (from tide board) (G):	1.2

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)	-3.6
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-2.05
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.6
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.3

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-1.6)			Dark Grey to Black				
0.45 (-2.05)	OL	Silt		Loose	Fine		
0.9 (-2.5)	-	-	-	-	-	-	-
	ML/CL	Clayey Silt	Brownish Grey	Firm	Fine		
1.35 (-2.95)	-	-	-	-	-	-	-
	CL/ML	Silty Clay	Olive Grey	Firm	Fine		
2.0 (-3.6)							

Slight Transition layer, better on bottom layer

Comments: 1st attempt succesful

4-13-10
Station: 0024
Length: 1.8

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/13/10
Station ID: 0024
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID:
Water Depth (A): 2.1
Collection Mechanism: P.C.
Latitude: 41° 40. 324
Length of Push Core Assembly (B): DB ~~12.5~~ 12.45
Time on Station: 09:03
Longitude: 70° 54. 838
Water Surface to Top of Handle (C): DB 8.0 8.35
Time of Collection: 09:10
GPS Accuracy: 21 ft
Length of Core (from bottom) (D): 1.8
Time Depart Station: 09:12
Tide Elevation (from tide board) (G): 1.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): ~~1.8~~ KGM 1.8

(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) −1.8

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D −0.5

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A −0.3

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(0.5)	OL	Silt	Black	Loose	Fine		
0.45	(0.95)	Transition Layer	Silt Sand Clay	Black/ Grey	Firm	Fine		-High amount of organic detritus
1.3	(-1.8)	CL	Clay with fine sand	Olive Grey	Firm	Fine		
1.8	(-2.3)							

Comments
1st attempt unsuccessful - hit rock left down, heavy sheen when dumping sediment
2nd attempt unsuccesful - bent bracket

3rd attempt succesful

4-13-10
Station: OP10
Length: 2.15

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

Date: 4-13-10	Station ID: OP10	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 1.9	
Collection Mechanism: P.C.	Latitude: 41°40.381	Length of Push Core Assembly (B): 13.3	
Time on Station: 10:06	Longitude: 70°54.833	Water Surface to Top of Handle (C): 8.9	
Time of Collection: 10:12	GPS Accuracy: 19ft	Length of Core (from bottom) (D): 2.15	
Time Depart Station: 10:16		Tide Elevation (from tide board) (G): 0.8	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.8
(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)	-2.55
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.45
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.1

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-1.45)	OL	Silt with small amount of fine sand	Black	Loose	Fine		-Heavy sheen
1.1 (-2.55)	-	-	-	-	-	-	-
	CL/ML	Silty Cky	Olive Grey	Firm	Fine		
2.15 (-3.6)							

Comments: 1st attempt succesful - Heavy sheen on core barrel

4-13-10
Station: OP18
Length: 2.3

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4/13/10	Station ID: OP18	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 2.3	
Collection Mechanism: P.C.	Latitude: 41°40.348	Length of Push Core Assembly (B): 13.3	
Time on Station: 09:39	Longitude: 70° 54.833	Water Surface to Top of Handle (C): 8.3	
Time of Collection: 09:42	GPS Accuracy: 15ft	Length of Core (from bottom) (D): 2.3	
Time Depart Station: 09:46		Tide Elevation (from tide board) (G): 1.4	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.4
(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)	-2.4
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.3
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-0.9

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-1.3)							
0.0 -(-1.4)-	-	Organic Detritus	Grey	Loose	—	—	— —
	OL	Silt	Black	Loose	Fine		
1.1 -(-2.4)-	-	-	-		-	—	— —
	CL/ML	Silty Clay	Olive Grey	Firm	Fine		
2.3 (-3.6)							

Comments: 1st attempt succesful

4-13-10
Station: OS16
Length: 1.95

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: 0516	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 2.1	
Collection Mechanism: P.C.	Latitude: 41° 40.357	Length of Push Core Assembly (B): 13.3	
Time on Station: 09:22	Longitude: 70° 54.816	Water Surface to Top of Handle (C): 8.8	
Time of Collection: 09:28	GPS Accuracy: 16 ft	Length of Core (from bottom) (D): 1.95	
Time Depart Station: 09:30		Tide Elevation (from tide board) (G): 1.6	

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)	-2.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-1.95
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-0.95
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-0.5

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-0.95)	OL	Silt	Black	Loose	Fine		Slight layer of organic detritus at the top
1.0	(-1.95)	CL/ML	Silty Clay	Olive Gray	Firm	Fine		
1.95	(-2.9)							

Comments
1st attempt successful

4-13-10
Station: PP15
Length: 4.2

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10
Station ID: PP15
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID:
Water Depth (A): 6.6
Collection Mechanism: P.C.
Latitude: 41°39.906
Length of Push Core Assembly (B): DB 13.3 15.3
Time on Station: 12:06
Longitude: 70° 55.034
Water Surface to Top of Handle (C): DB 3.9 4.2
Time of Collection: 12:20
GPS Accuracy: 21 ft
Length of Core (from bottom) (D): 4.2
Time Depart Station: 12:25
Tide Elevation (from tide board) (G): -1.2

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) -12.3

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -11.15

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -8.1

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -7.8

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-8.1)	OL	Silt	Black	Loose to Moderate	Fine		
3.05	-(-11.15)-	-	-	- -	-	-	-	- — -
		CL/ML	Silty Clay	Brownish Grey	Firm	Fine		-Shell Hash
4.2	(-12.3)							

Comments
1st attempt unsuccessful - did not reach visual transition layer, need to use bigger barrel
2nd attempt successful

4-13-10
Station: PR10
Length: 3.05

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: PR10	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	4.4
Collection Mechanism: P.C.	Latitude: 41°39.925	Length of Push Core Assembly (B):	15.3
Time on Station: 12:28	Longitude: 70°55.023	Water Surface to Top of Handle (C):	7.9
Time of Collection: 12:30	GPS Accuracy: 15ft	Length of Core (from bottom) (D):	3.05
Time Depart Station: 12:35		Tide Elevation (from tide board) (G):	-1.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-1.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.7
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-7.05
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.65
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.7

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.65)	OL	Silt	Black	Loose to Firm	Fine		
1.4	(-7.05)	-	-	-	-	-	-	Streaking down to 1.7
		CL/ML	Silty Clay	Olive Grey	Firm	Fine		
3.05	(-8.7)							

Comments
- 1st attempt successful

4-13-10
Station: PU9
Length: 2.15

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: PU9	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 3.0	
Collection Mechanism: P.C.	Latitude: 41°39.929	Length of Push Core Assembly (B): 13.3	
Time on Station: 12:41	Longitude: 70° 55.007	Water Surface to Top of Handle (C): DB 8.6 7.7	
Time of Collection: 12:43	GPS Accuracy: 17ft	Length of Core (from bottom) (D): 2.15	
Time Depart Station: 12:53		Tide Elevation (from tide board) (G): -1.3	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-1.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-5.85
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.75
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.3

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-4.75)	OL	Silt &	Black	Loose	Fine		-Shell hash
1.1 -(-5.85)	-	-	-	-	-	-	-
	CL/ML	Silty Clay	Olive Grey	Firm	Fine		Streaking down to 1.35
2.15 (-6.9)							

Comments
- 1st attempt unsuccesful - too much water between plunger and sediment
- 2nd attempt succesful

4-13-10
Station: PU 19
Length: 2.3

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 4-13-10	Station ID: PU19	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	4.6
Collection Mechanism: P.C.	Latitude: 41°39.888	Length of Push Core Assembly (B):	13.3
Time on Station: 12:59	Longitude: 70° 55.008	Water Surface to Top of Handle (C):	6.2
Time of Collection: 13:01	GPS Accuracy: 22 ft	Length of Core (from bottom) (D):	2.3
Time Depart Station: 13:05		Tide Elevation (from tide board) (G):	-1.2

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)	~~-7.9~~ KGM -8.3
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-7.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	~~-5.6~~ KGM -6.0
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	~~-8.~~ KGM -5.8

(Note if $I \neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 ~~(-5.6)~~ KGM -6.0	OL	Silt	Black	Loose	Fine		
1.6 ~~(-7.2)~~ -7.6 KGM	-	-	-	-	-	-	-
	CL/ML	Silty Clay	Olive Grey	Firm	Fine		Streaking down to 1.9
2.3 ~~(-7.9)~~ -8.3 KGM							

Comments
-1st attempt succesful


9/15/10
JB3
0' - 1.35'

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10 | Station ID: JB3 | All Measurements are ± 0.1 feet
Logged By: KGM | Core Sample ID: S-1ΦS-CΦΦ3 | Water Depth (A): 7.4
Collection Mechanism: PC | Latitude: 41°40.510 | Length of Push Core Assembly (B): 12.3
Time on Station: 09:37 | Longitude: 70°54.952 | Water Surface to Top of Handle (C): 3.3
Time of Collection: 09:44 | GPS Accuracy: 15ft | Length of Core (from bottom) (D): 1.35
Time Depart Station: — | Tide Elevation (from tide board) (G): 0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0
(H) Elevation of the bottom of the core (NGVD): G - (B - C): -9.0
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition): -8.15
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -7.65
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -7.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-7.65	OL/ML/CL mottled	Silt marbled with silty clay some fine sand	5Y 3/1 and 5Y 2.5/1	loose	fine	H_2S	S-1ΦS - CΦΦ3 - Φ - Φ.5
0.5	-8.15	— — —	—	—	—	—	—	—
		KGM ML/CL CL/ML	silty clay	5Y 3/1	firm	fine	none	
1.35	-9.0							

+ MS/MSD sample S-1ΦS-CΦΦ3-Φ-Φ.5 MSMSD

Comments


9/15/10
JB13
0'-1.25'

Final

Woods Hole Group

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Logged By: KGM
Collection Mechanism: pc
Time on Station: ~~—~~ 14:01
Time of Collection: ~~—~~ 14:06
Time Depart Station: —

Station ID: JB13
Core Sample ID: S-1ΦS-CΦ12
Latitude: 41°40.468
Longitude: 70°54.953
GPS Accuracy: ±13

All Measurements are ± 0.1 feet
Water Depth (A): 9.9
Length of Push Core Assembly (B): 17.25
Water Surface to Top of Handle (C): 5.95
Length of Core (from bottom) (D): 1.25
Tide Elevation (from tide board) (G): 2.6

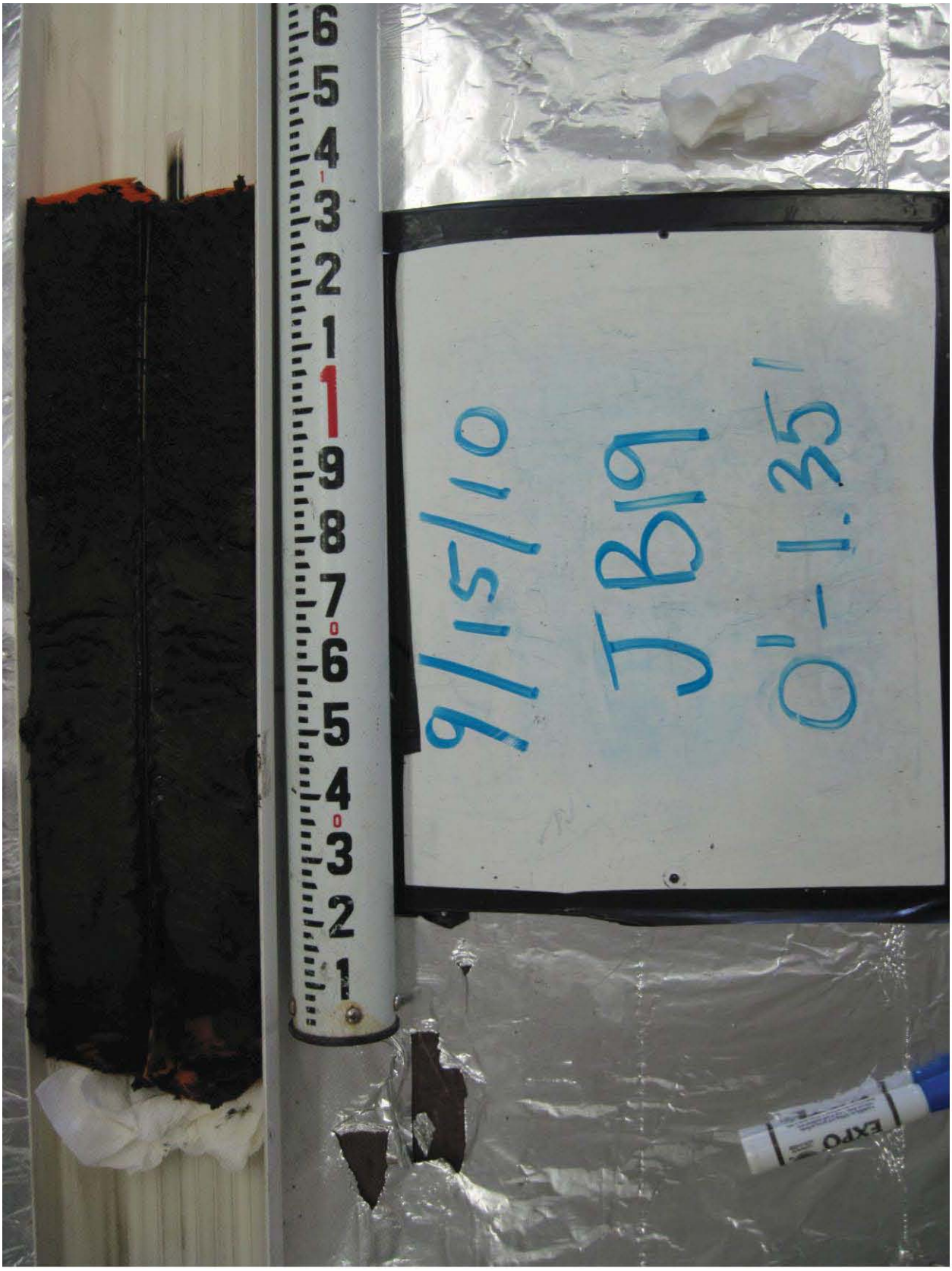
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.6
(H) Elevation of the bottom of the core (NGVD): G - (B - C): -8.7
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition): —
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -7.45
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -7.3

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-7.45	OL/ML	silt, fine to coarse sand w/ gravel	5y 3/1 (very dark grey)	loose	(coarse gravel ~1cm)		S-1ΦS-CΦ12-Φ-Φ.5
0.2	-7.65	— — —	— — —	—	—	—	—	
		SC/SM	sand with silt and clay gravel, shell hash	2.5y 3/1 (very dark grey)	firm	coarse (gravel ~2cm)		
0.75	-8.2	— —	— — — —	—	—	—	— —	
		SP/SM	poorly graded poorly sorted sand with silt	10y 4/2 (dark greyish brown)	firm	coarse (gravel ~2cm)		
1.25	-8.7							

Comments


9/15/10
JB19
0'-1.35'

Final

Woods Hole Group

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Station ID: JB19
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦS-CΦ16
Water Depth (A): 7.4
Collection Mechanism: pc
Latitude: 41°40.444
Length of Push Core Assembly (B): 12.25
Time on Station: —09:39
Longitude: 70°54.953
Water Surface to Top of Handle (C): 3.35
Time of Collection: —09:41
GPS Accuracy: ±12ft
Length of Core (from bottom) (D): 1.35
Time Depart Station: —09:49
Tide Elevation (from tide board) (G): 0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -9.1

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -7.75

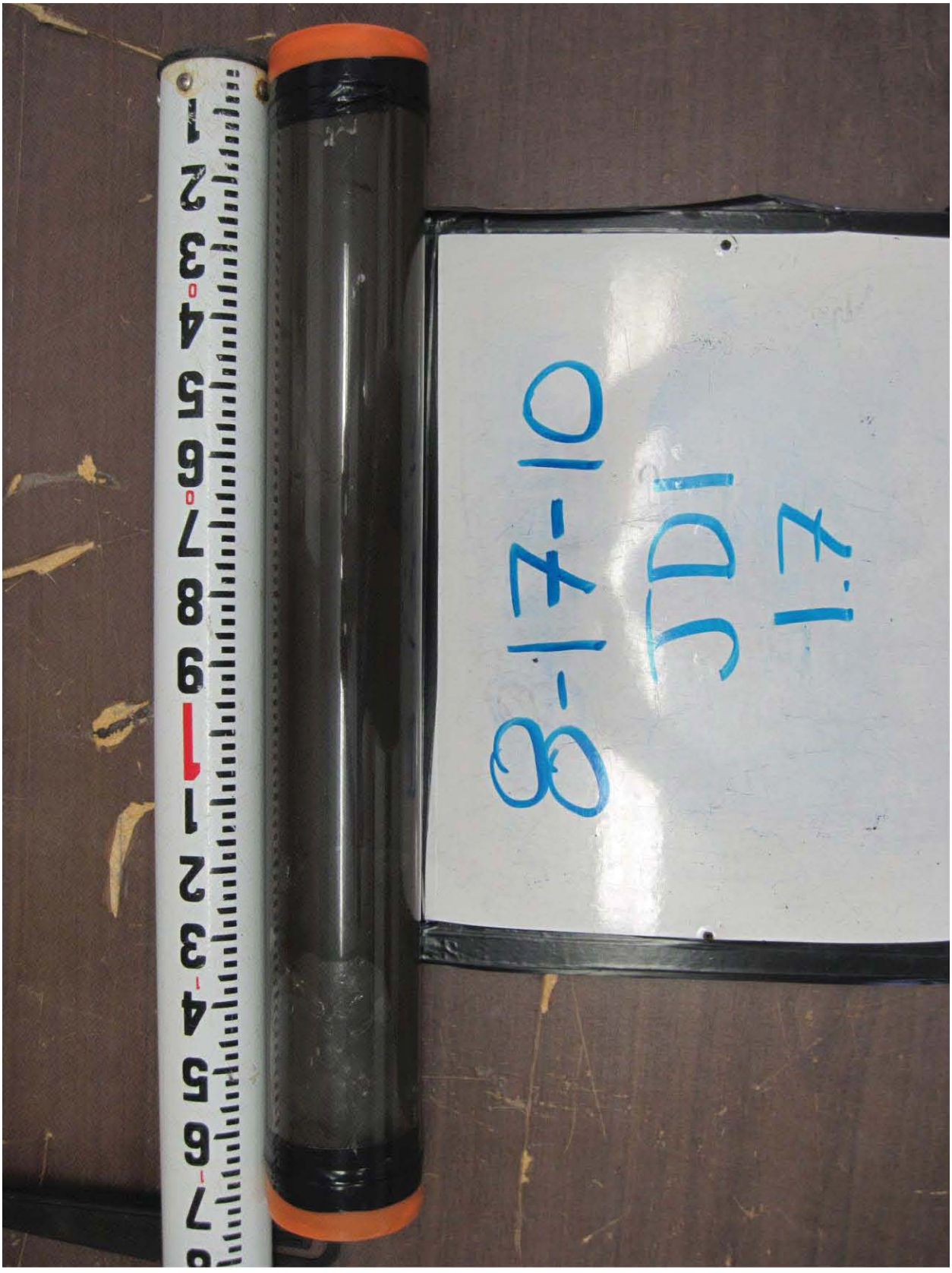
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -7.75

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -7.6

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-7.75	OL/ML	silty clay with fine sand	5Y 2.5/1	firm	fine	none	S-1ΦS-CΦ16-Φ-Φ.5
0.2	-7.95							
		OL/ML	silty clay with fine sand	5Y 3/1	firm	fine	none	
0.85	-8.6							
		PT	peat with clay	2.5Y 3/3	firm	fine	none	
1.35	-9.1							

Comments


8-17-10
JDI
17

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

Date: 8/17/10	Station ID: JD1	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A): 8.0	
Collection Mechanism: P.C.	Latitude: 41°40.517	Length of Push Core Assembly (B): 12.3	
Time on Station: 9:55	Longitude: 70°54.942	Water Surface to Top of Handle (C): ~~8.1~~ 2.4	
Time of Collection: 10:02	GPS Accuracy: ±11	Length of Core (from bottom) (D): 1.7	
Time Depart Station: 10:08		Tide Elevation (from tide board) (G): 0.3	

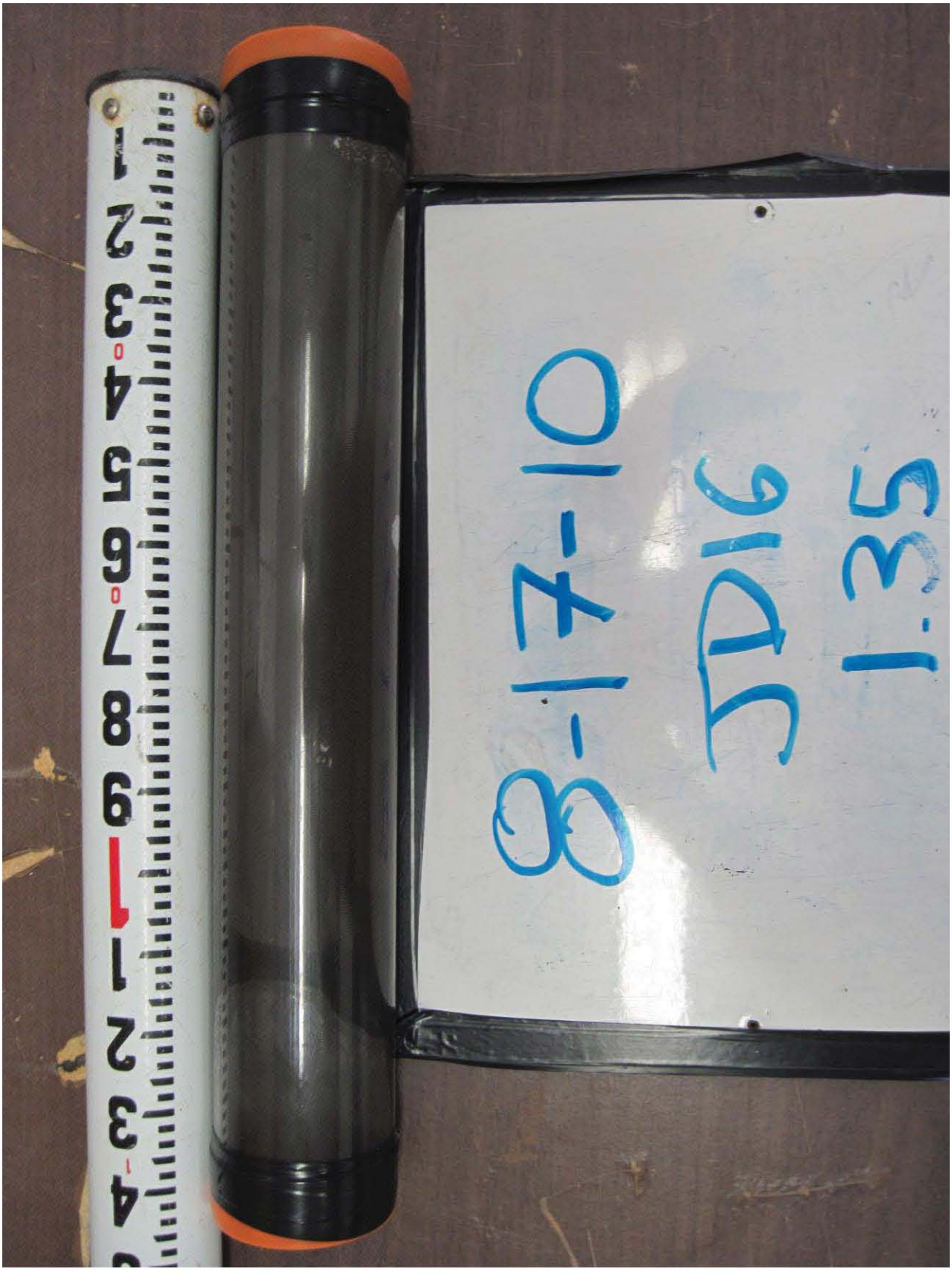
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.3
(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)	—
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.9
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-7.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NOVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0		ML	5Y 3/1 Very dark Grey				
0.9		Streaking					
1.15		CL/ML	5Y 4/1 Dark Grey				
1.7							

Comments: 1st attempt unsuccessful rock stuck in core barrel


8-17-10
SD16
1:35

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

Date: 8-17-10	Station ID: JD16	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	9.8
Collection Mechanism: PC	Latitude: 41°40.458	Length of Push Core Assembly (B):	17.3
Time on Station: 14:14	Longitude: 70°54.942	Water Surface to Top of Handle (C):	5.45
Time of Collection: 14:17	GPS Accuracy: ±9	Length of Core (from bottom) (D):	1.35
Time Depart Station: 14:25		Tide Elevation (from tide board) (G):	2.8

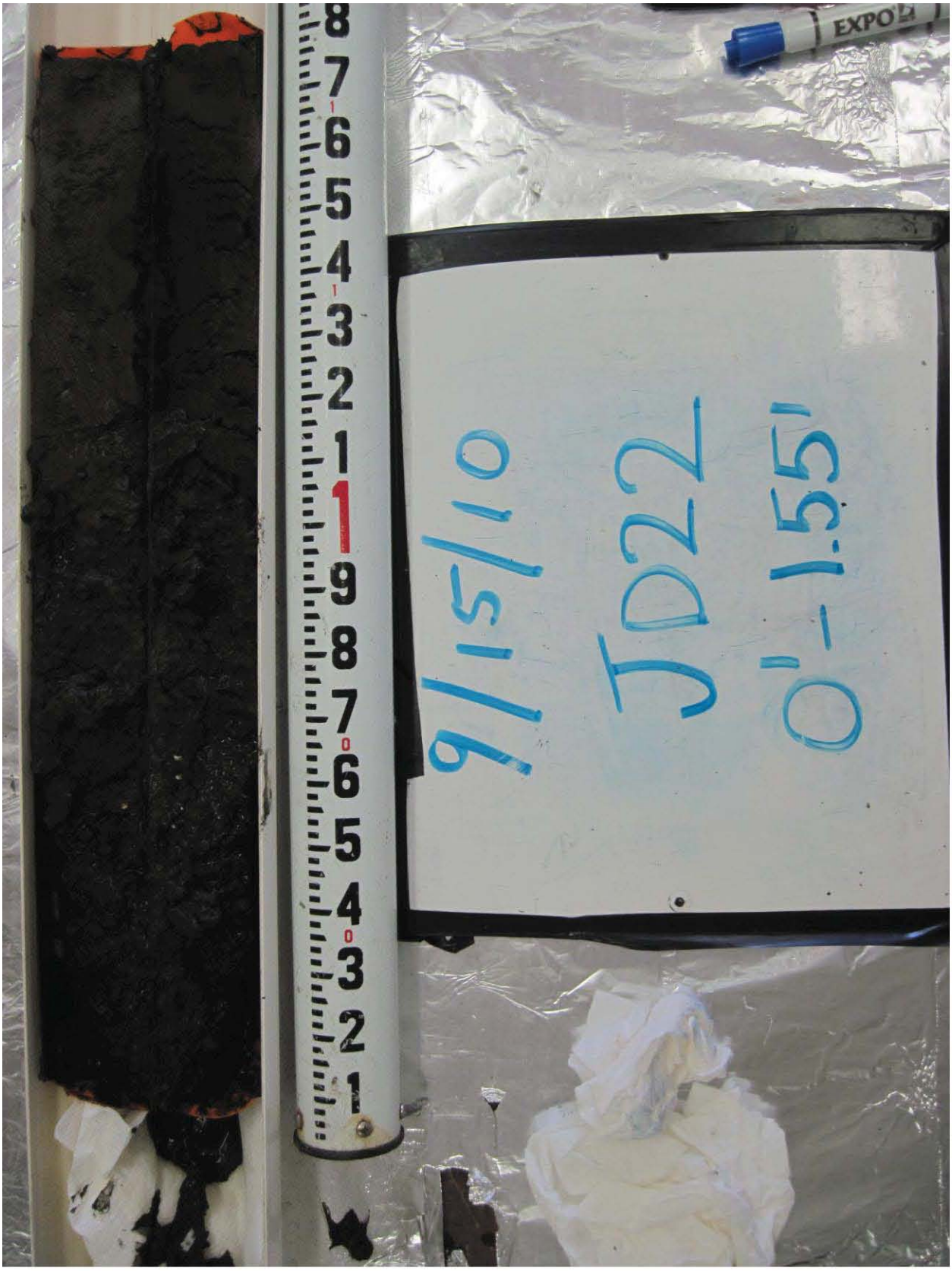
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-9.05
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-8.0
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.7
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-7.0

(Note if I * I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0		OH/CL	5y 2.5/1				
0.3		CL/ML	5y 3/1 Very Dark Grey				
1.35							

Comments


9/15/10
JD22
0'-1.55'

Final

Woods Hole Group

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Station ID: JD22
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦS-CΦ19
Water Depth (A): 7.0
Collection Mechanism: PC
Latitude: 41°40.431
Length of Push Core Assembly (B): 12.3
Time on Station: 09:55
Longitude: 70°54.942
Water Surface to Top of Handle (C): 3.6
Time of Collection: 09:57
GPS Accuracy: ±12ft
Length of Core (from bottom) (D): 1.55
Time Depart Station: 10:03
Tide Elevation (from tide board) (G): 0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(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) -7.85

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -7.35

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -7.3

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-7.35	OL	silt, shell hash, some clay	5y 2.5/1	loose	fine	H_2S slight chemical	S-1ΦS-CΦ19-Φ-Φ.5
0.5	-7.85	ML/CL						
		CL/ML	silty clay, some fine to medium sand	5y 3/1	firm	fine	none	
1.55	-8.9							

Comments

9/15/10
JD24
0'-1.55'

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Station ID: JD24
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦS-CΦ2Φ
Water Depth (A): 7.8
Collection Mechanism: PC
Latitude: 41°40.423
Length of Push Core Assembly (B): 12.3
Time on Station: ~10:19
Longitude: 70°54.941
Water Surface to Top of Handle (C): 2.65
Time of Collection: ~10:23
GPS Accuracy: ±10ft
Length of Core (from bottom) (D): 1.55
Time Depart Station: ~10:30
Tide Elevation (from tide board) (G): -0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.3

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -9.95

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) -8.5

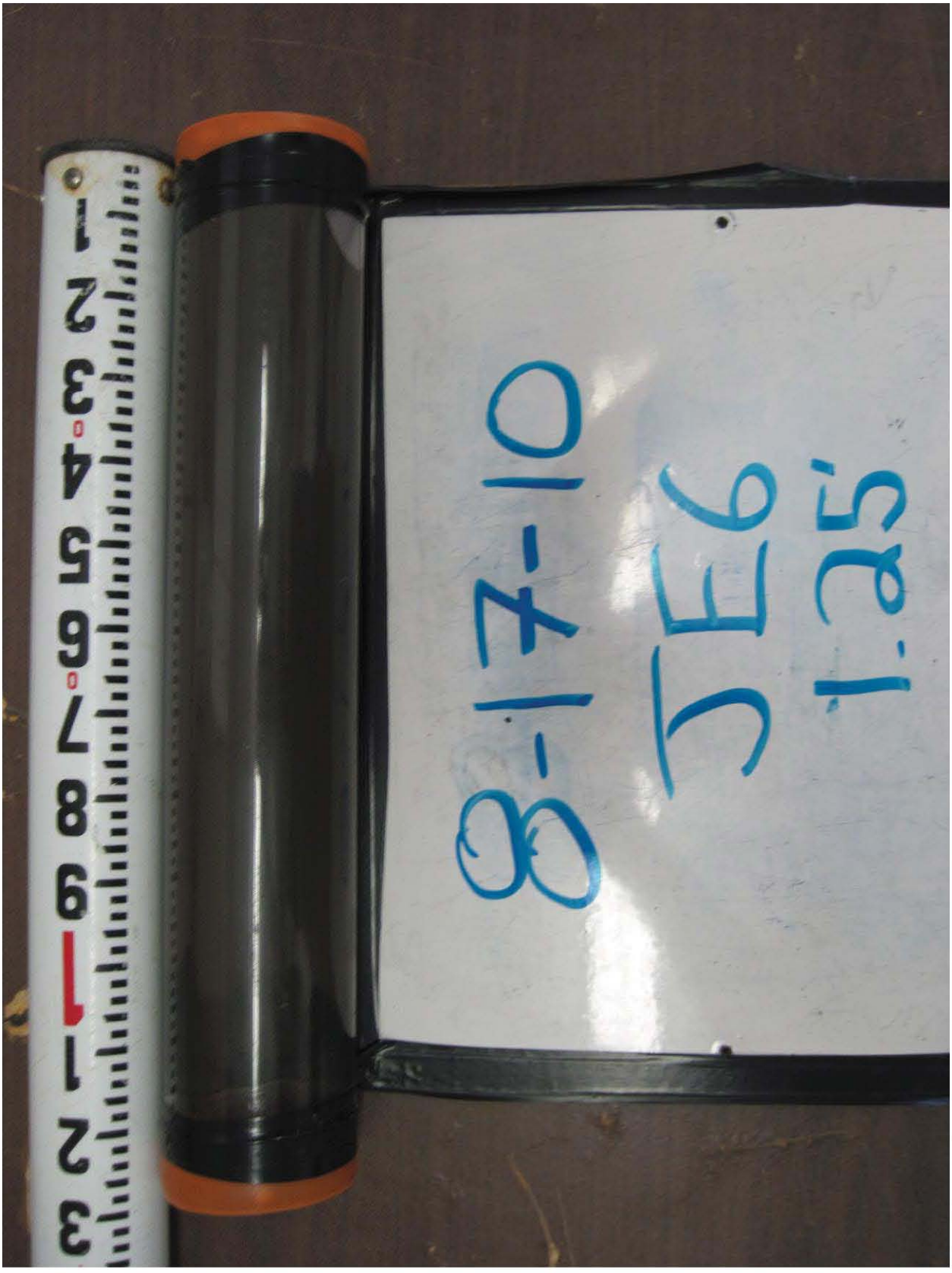
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -8.4

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -8.1

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Oder	Sample IDs
0.0	-8.4	OL	Silt, some fine sand	5y 2.5/1	loose	fine	H_2S (slight chemical?)	S-1ΦS-CΦ2Φ-Φ-Φ.5
0.1	-8.5							
		ML/CL	clayey silt with fine sand	5y 3/1	moderately firm	fine		
0.5	-8.9							
		CL/ML	silty clay with fine sand	5y 3/1	firm	fine	none	
1.55	-9.95							

Comments


8-17-10
TE6
1.25

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Station ID: JE6
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦS-CΦΦS
Water Depth (A): 8.1
Collection Mechanism: PC
Latitude: — 41°40.497
Length of Push Core Assembly (B): 12.3
Time on Station: — 11:17
Longitude: — 70°54.937
Water Surface to Top of Handle (C): 2.4
Time of Collection: — 11:23
GPS Accuracy: — ±12
Length of Core (from bottom) (D): 1.25
Time Depart Station: — 11:25
Tide Elevation (from tide board) (G): 0.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.8

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -9.1

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition): -7.95

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -7.85

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -7.3

(Note if I - I_2 within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-7.85	OL	Silt with sand	5y (black) 2.5/1	loose	fine/ medium	H_2S	S-1ΦS - CΦΦS - Φ - Φ.5 ↓
0.1	-7.95	CL/ML	Silty clay with shell hash, some fine sand	5y 3/1 (very dark grey)	firm	fine	none	
1.25	-9.1							

Comments


8-17-10
JF3
1:15

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 8-17-10
Station ID: JF3
All Measurements are ± 0.1 feet

Logged By: DB
Core Sample ID:
Water Depth (A): 6.9

Collection Mechanism: P.C.
Latitude: 41°40.509
Length of Push Core Assembly (B): [illegible] 12.25

Time on Station: 10:14
Longitude: 70° 54.929
Water Surface to Top of Handle (C): 3.25

Time of Collection: 10:18
GPS Accuracy: ±11
Length of Core (from bottom) (D): 1.75

Time Depart Station: 10:21
Tide Elevation (from tide board) (G): 0.35

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.35

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -8.65

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -7.1

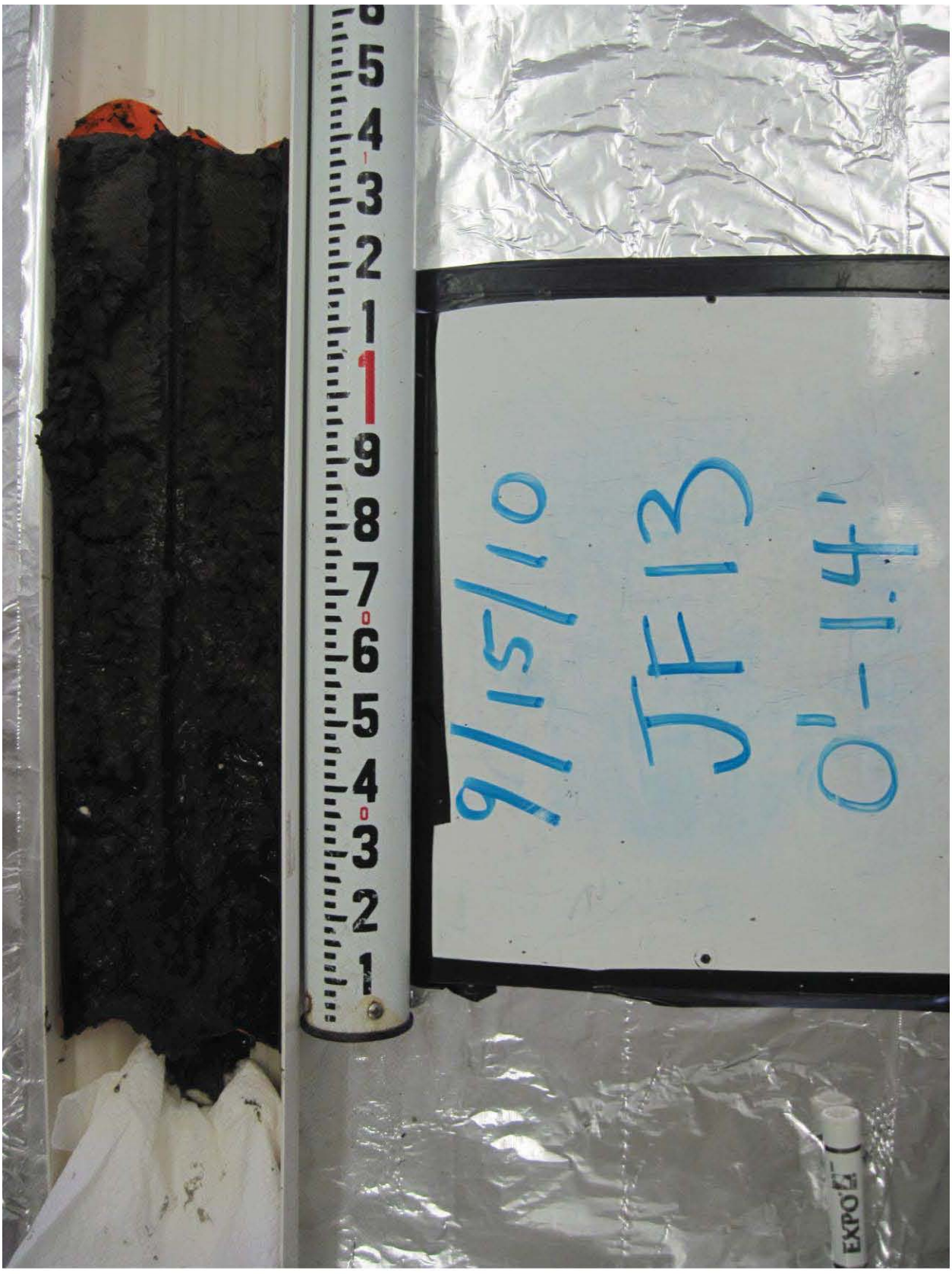
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.9

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.55

(Note if I - I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample ID#
0		OL/CL	5y 2.5/1 Black				
0.2		Stretching					
0.4		CL/ML	5y 3/1 Very Dark Grey				-Shell Hash
1.75							

Comments


9/15/10
JF13
0'-1.4'

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10	Station ID: JF13	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦS-CΦ11	Water Depth (A):	8.7
Collection Mechanism: PC	Latitude: 41°40.468	Length of Push Core Assembly (B):	12.2
Time on Station: 13:47	Longitude: 70°54.930	Water Surface to Top of Handle (C):	1.85
Time of Collection: 13:53	GPS Accuracy: ±13	Length of Core (from bottom) (D):	1.4
Time Depart Station: —		Tide Elevation (from tide board) (G):	2.3

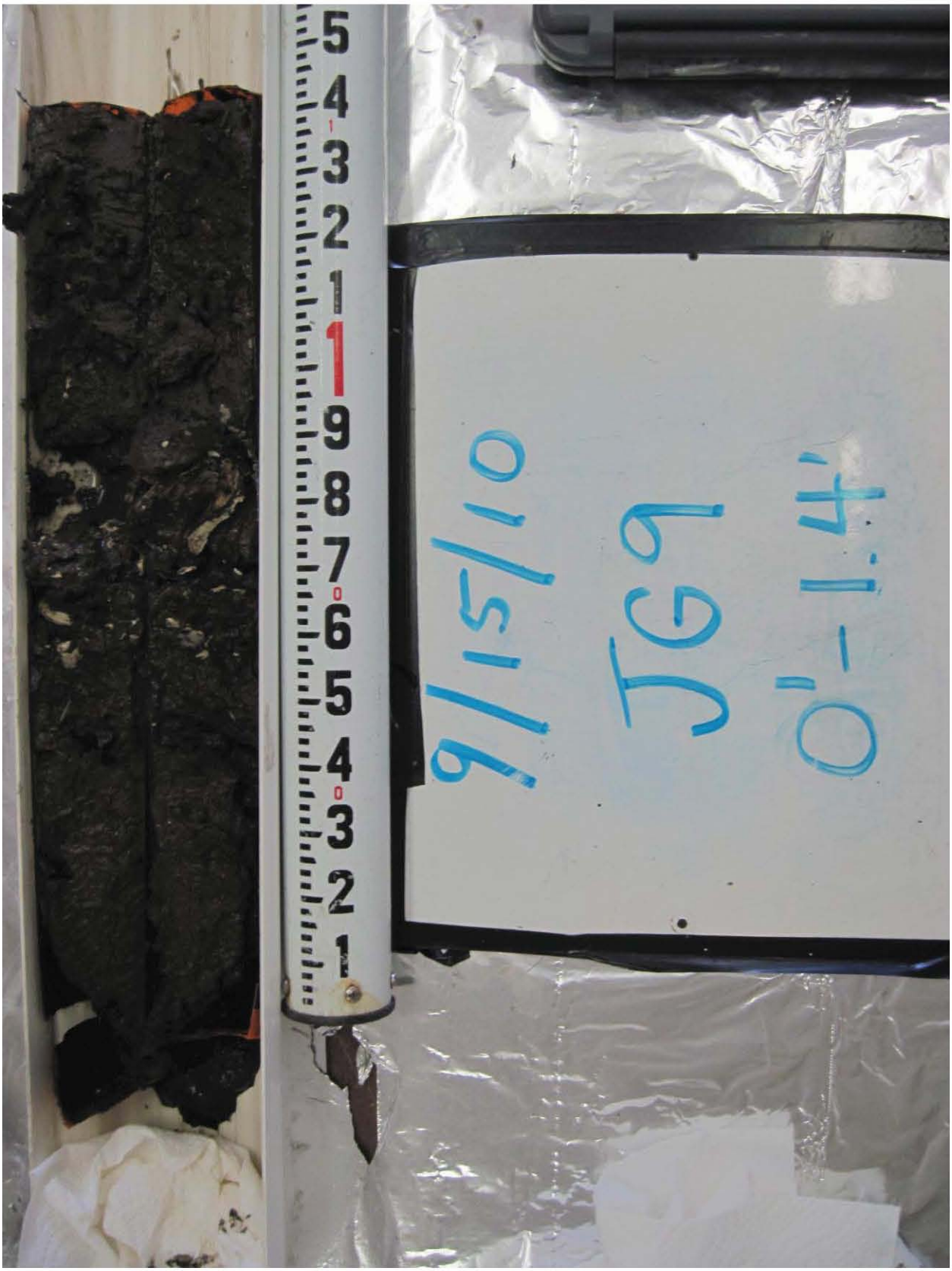
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.05
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)	-7.15
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.65
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom - H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-6.65	OL	Silt with very fine sand	5Y 2.5/1	loose	fine	Strong H_2S	S-1ΦS-CΦ11-Φ-Φ.5
0.2	-6.85	OL smudged ML/CL	clayey silt with very fine sand	5Y 3/1	loose	fine	H_2S	
0.5	-7.15	OL/ML	Silty clay, some very fine sand	5Y 3/1	firm	fine	none	
1.4	-8.05							

Comments


9/15/10
JG9
0'-1.4'

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10	Station ID: JG9	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦS-CΦΦ8	Water Depth (A):	7.3
Collection Mechanism: PC	Latitude: 41°40.485	Length of Push Core Assembly (B):	12.3
Time on Station: ~11:57	Longitude: 70°54.925	Water Surface to Top of Handle (C):	3.0
Time of Collection: ~12:03	GPS Accuracy: ±18	Length of Core (from bottom) (D):	1.4
Time Depart Station: ~12:06		Tide Elevation (from tide board) (G):	1.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.3
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-6.9
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.9
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.3

(Note if I • I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 -6.9	ML (OL?) / CL	clayey silt with fine sand	5Y ~~2.5/1~~ (black)	loose gradually more firm	fine	H_2S	S-1ΦS-CΦΦ8-Φ-Φ.5
0.4 -7.3	CL/ML	silty clay shell hash from 0.6-0.9 some fine sand	5Y 3/1 very dark grey	firm	fine	none	
1.4 -8.3							

Comments

9/15/10
JG16
0'-1.45'

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10	Station ID: JG16	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦS-CΦ15	Water Depth (A):	6.2
Collection Mechanism: PC	Latitude: 41°40.456	Length of Push Core Assembly (B):	12.3
Time on Station: 08:43	Longitude: 70°54.925	Water Surface to Top of Handle (C):	4.3
Time of Collection: 08:47	GPS Accuracy: ± 13 ft	Length of Core (from bottom) (D):	1.45
Time Depart Station: 08:52		Tide Elevation (from tide board) (G):	-0.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.5
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-7.35
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.05
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-7.05	OL	silt with fine sand	5Y 2.5/1	loose	fine	strong H_2S	S-1ΦS-CΦ15-Φ-Φ.5
0.3	-7.35	ML/CL	clayey silt with fine sand	5Y 3/1	moderately firm	fine	H_2S	
0.6	-7.65	CL/ML	silty clay with fine sand	5Y 3/1	firm	fine	none	
1.45	-8.5							

Comments


8/18/10
JG19
1:20 #

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 8/18/10	Station ID: JG19	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID:	Water Depth (A):	5.8
Collection Mechanism: PC	Latitude: 41° 40.443'	Length of Push Core Assembly (B):	12.3
Time on Station: 08:55	Longitude: 70° 54.926'	Water Surface to Top of Handle (C):	4.9
Time of Collection: 08:58	GPS Accuracy: ± 12 ft.	Length of Core (from bottom) (D):	1.2
Time Depart Station: 09:02		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)	-8.0
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-7.05
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.8
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.25 -	-	-	OL/ML —	5y 3/1 Very Dark Grey	—	—	—
		CL/ML	5y 3/2 Dark olive Grey				- Slight streaking throughout layer
1.2							

Comments


8/18/10
JH23
1.70 ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 8-18-16	Station ID: JH23	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID:	Water Depth (A):	8.6
Collection Mechanism: P.C.	Latitude: 41° 40.428'	Length of Push Core Assembly (B):	12.25
Time on Station: 08:26	Longitude: 70° 54.920'	Water Surface to Top of Handle (C):	1.5
Time of Collection: 08:29	GPS Accuracy: ± 14 ft.	Length of Core (from bottom) (D):	1.7
Time Depart Station: 08:33		Tide Elevation (from tide board) (G):	-0.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-11.15
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-9.65
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-9.45
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-9.0

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Includs USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.16		OL	5Y 2.5/1 Black				
0.5		OL	5Y 2.5/2 Black				
		CL/ML	5Y 3/1 Very Dark Grey				Shell Hash w/ Peat
1.7							

Comments


8-17-10
JT6
1145

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10	Station ID: JI6	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦS-CΦΦ6	Water Depth (A): 7.1	
Collection Mechanism: pc	Latitude: 41°40.497	Length of Push Core Assembly (B): 12.3	
Time on Station: ~11:36	Longitude: 70°54.915	Water Surface to Top of Handle (C): 3.45	
Time of Collection: ~11:40	GPS Accuracy: ±13 ft	Length of Core (from bottom) (D): 1.45	
Time Depart Station: ~11:50		Tide Elevation (from tide board) (G): 0.8	

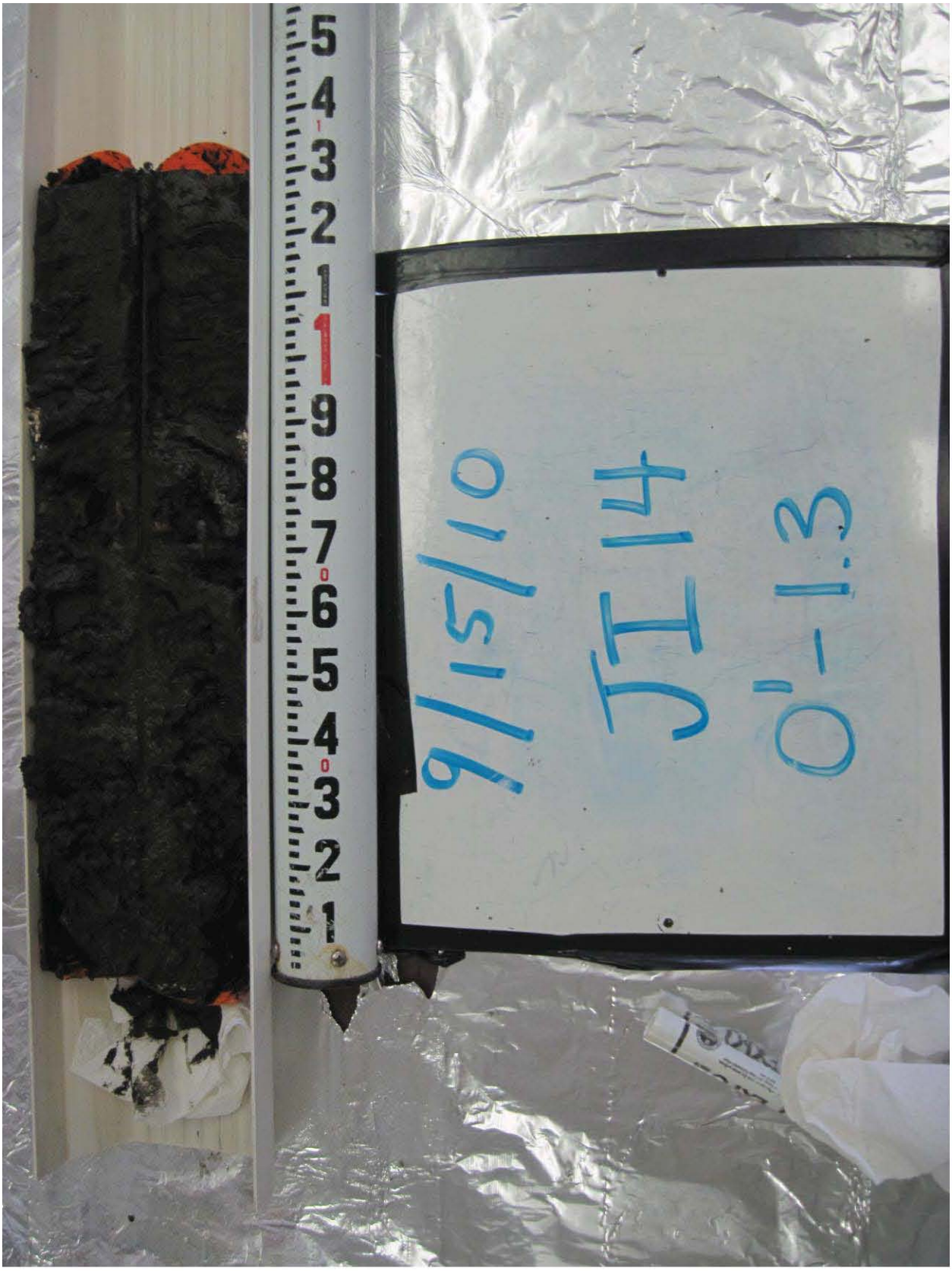
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.05
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-7.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.6
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.3

(Note if I - I_2 within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-6.6	OL/ML/CL mottled	Silt & clayey & silt with fine sand	5Y 2.5/1 (black)	loose gradually more firm	fine	Strong H_2S	S-1ΦS-CΦΦ6-Φ-Φ.5
0.5	-7.1							
		CL/ML	Silty clay, some fine sand, shell hash throughout	5Y 3/1 (very dark grey)	firm	fine	none	
1.45	-8.05							

Comments


9/15/10
JT14
0'-1.3

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10 | Station ID: JI14 | All Measurements are ± 0.1 feet
Logged By: KGM | Core Sample ID: S-1ΦS-CΦ13 | Water Depth (A): 8.6
Collection Mechanism: PC | Latitude: 41°40.464 | Length of Push Core Assembly (B): 12.4
Time on Station: 13:33 | Longitude: 70°54.914 | Water Surface to Top of Handle (C): 2.35
Time of Collection: 13:35 | GPS Accuracy: ±12ft | Length of Core (from bottom) (D): 1.3
Time Depart Station: — | Tide Elevation (from tide board) (G): 2.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.85

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -6.55

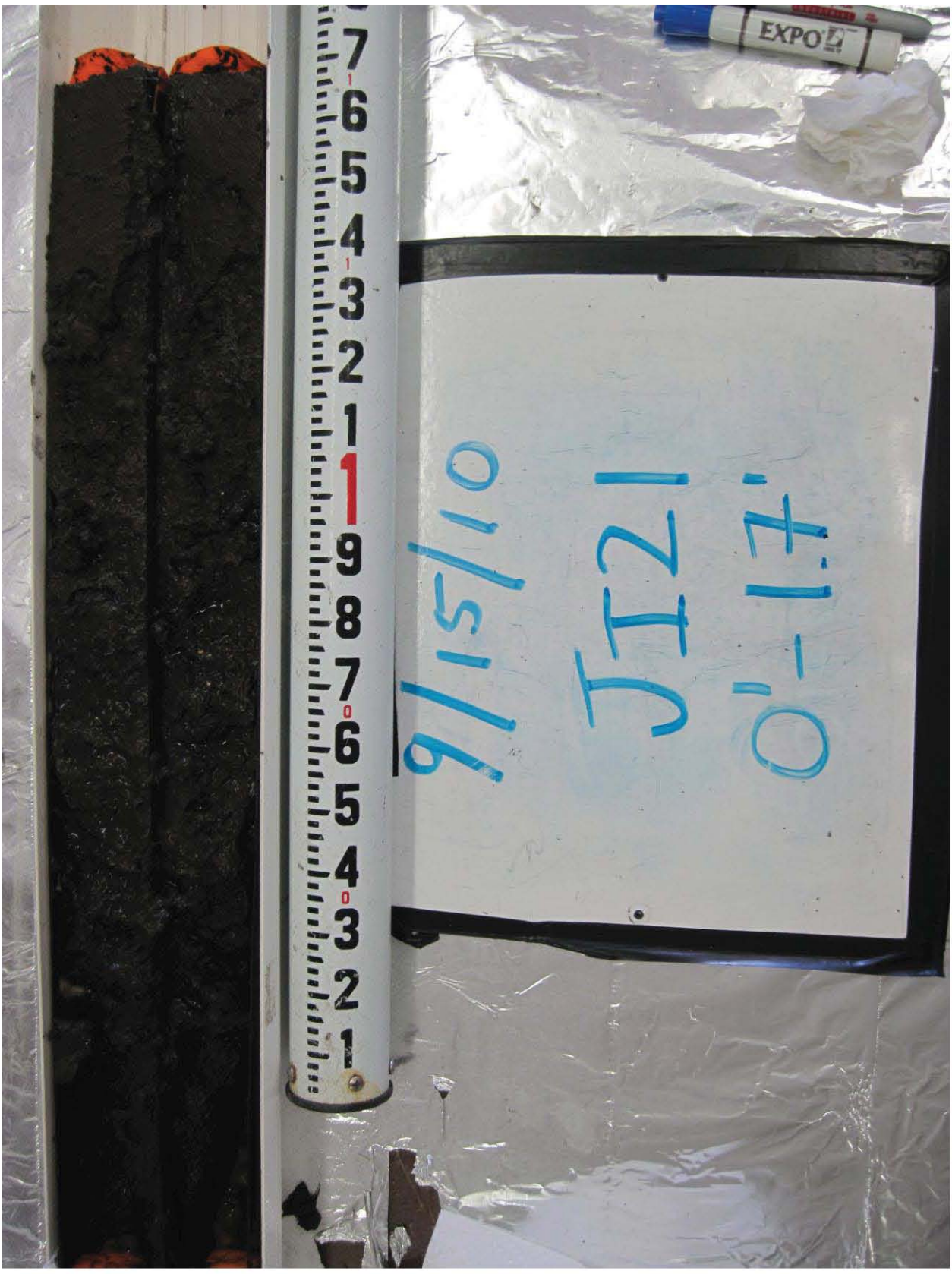
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.55

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-6.55	ML/CL	clayey silt with fine sand	5Y 3/1 (v. dark grey)	moderately firm	fine	H_2S	S-1ΦS-CΦ13-Φ-Φ.5
0.4	-6.95		shell hash					
		CL/ML	silty clay with fine sand	5Y 3/1 (v. dark grey)	firm	fine	none	
1.3	-7.85							

Comments


EXPO
9/15/10
JT21
0'-1'

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Station ID: JI21
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦS-CΦ18
Water Depth (A): 7.0
Collection Mechanism: PC
Latitude: 41040.435
Length of Push Core Assembly (B): 12.3
Time on Station: 09:26
Longitude: 70°54.914
Water Surface to Top of Handle (C): 2.95
Time of Collection: 09:28
GPS Accuracy: ±13ft
Length of Core (from bottom) (D): 1.7
Time Depart Station: 09:37
Tide Elevation (from tide board) (G): -0.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.4

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -9.75

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) -8.55

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -8.05

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -7.4

(Note if I - I_2 within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-8.05	OL	Silt with very little fine sand	5Y 2.5/1	loose	fine	chemical	S-1ΦS-CΦ18-Φ-Φ.5
0.5	-8.55	ML/CL	clayey silt with fine sand	5Y 3/1	moderately firm	fine	H_2S	
1.05	-9.1	CL/ML	silty clay with fine sand	5Y 3/1	firm	fine	none	
1.7	-9.75							

Comments


8-17-10
TK3
1.5

Final

Woods Hole Group

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Station ID: JK3
All Measurements are ±0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦS-CΦΦ4
Water Depth (A): 6.5
Collection Mechanism: PC
Latitude: 41°40.510
Length of Push Core Assembly (B): 12.3
Time on Station: ~~—~~ 10:28
Longitude: 70°54.908
Water Surface to Top of Handle (C): 3.9
Time of Collection: ~~—~~ 10:32
GPS Accuracy: ±11ft
Length of Core (from bottom) (D): 1.5
Time Depart Station: ~~—~~ 10:36
Tide Elevation (from tide board) (G): 0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.3

(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) -6.6

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.6

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.2

(Note if I - I_2 within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-6.6	~~OH~~ KGM ~~ML~~ ML/CL	clayey silt	(blade) 5Y 2.5/1	firm	fine	slight H_2S	S-1ΦS-CΦΦ4-Φ-Φ.5
0.45	-7.05	KGM ~~ML~~ CL ~~CL~~ ML	layer of organics silty clay with shell hash and some fine sand	5Y 3/1 very dark grey	firm	fine	none	
1.5	-8.1							

Comments


8-17-10
TK9
1.25'

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Station ID: JK9
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦS-CΦΦ7
Water Depth (A): 7.3
Collection Mechanism: PC
Latitude: 41°40.485
Length of Push Core Assembly (B): 12.3
Time on Station: ~~12:10~~
Longitude: 70°54.908
Water Surface to Top of Handle (C): 2.95
Time of Collection: ~~12:38~~
GPS Accuracy: ±15ft
Length of Core (from bottom) (D): 1.25
Time Depart Station: ~~12:40~~
Tide Elevation (from tide board) (G): 1.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.4

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.95

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -6.7

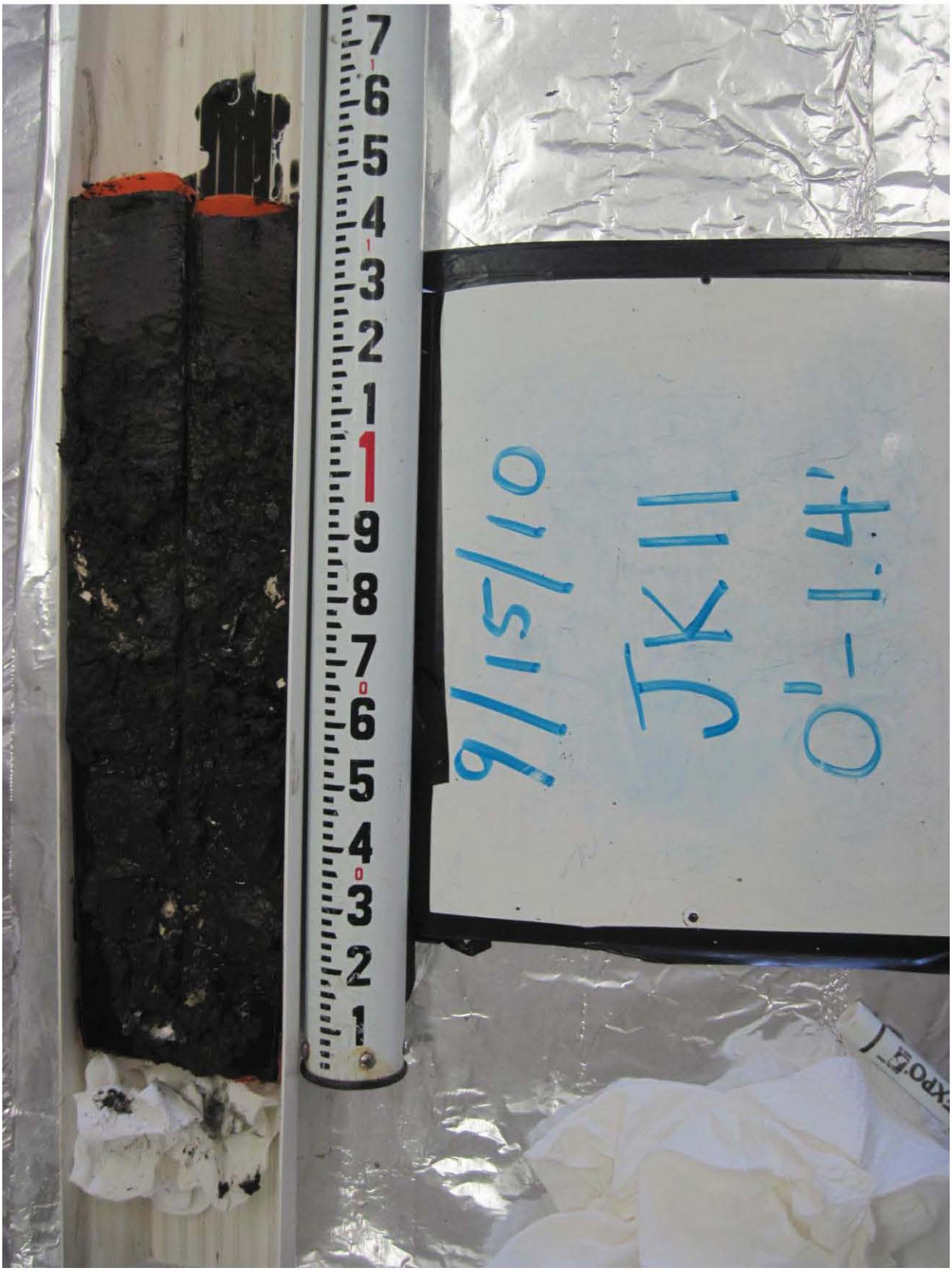
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.7

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.9

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-6.7	ML/CL	clayey silt with fine sand	5Y 2.5/1	moderately firm	fine	H_2S	S-1ΦS-CΦΦ7-ΦΦ.5 ↓
0.25	-6.95	- - -	Shell hash	(black)	- - -	-	-	
		CL/ML	silty clay (high water content) Shell hash	5Y 3/1 (very dark grey)	moderately firm	fine	H_2S	
1.25	-7.95							

Comments


9/15/10
JK11
0'-1.4'

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10
Station ID: JK11
All Measurements are ± 0.1 feet
Logged By: KBM
Core Sample ID: S-1ΦS-CΦΦ9
Water Depth (A): 7.5
Collection Mechanism: PC
Latitude: 41°40.476
Length of Push Core Assembly (B): 12.25
Time on Station: ~12:44
Longitude: 70°54.908
Water Surface to Top of Handle (C): 2.9
Time of Collection: ~12:50
GPS Accuracy: ±19ft
Length of Core (from bottom) (D): 1.4
Time Depart Station: —
Tide Elevation (from tide board) (G): 1.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.4

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -7.95

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition): -6.55

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -6.55

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -6.1

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-6.55	ML/CL	clayey silt, some fine sand	5y 3/1	loose	fine	slight H_2S	S-1ΦS-CΦΦ9-Φ-Φ.5
0.5	-7.05	CL/ML	Silty clay shell hash some fine sand	5y 3/1 (very dark grey)	firm	fine	slight H_2S	
1.4	-7.95							

Comments


9/15/10
JK12
0'-1.9'

Final

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

Date: 9/15/10	Station ID: JK12	All Measurements are ± 0.1 feet	
Logged By: KEM	Core Sample ID: S-1ΦS-CΦ1Φ	Water Depth (A):	8.4
Collection Mechanism: PC	Latitude: 41°40.472	Length of Push Core Assembly (B):	12.3
Time on Station: 13:07	Longitude: 70° 54.908	Water Surface to Top of Handle (C):	2.0
Time of Collection: —	GPS Accuracy: ±9ft	Length of Core (from bottom) (D):	1.6
Time Depart Station: —		Tide Elevation (from tide board) (G):	1.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.5
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)	-7.5
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.9
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.6

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = 1f)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-6.9	OL	Silt, organics	5Y 2.5/1	loose	fine	very slight H_2S	S-1ΦS-CΦ1Φ-Φ-Φ.5
0.1	-7.0	OL/MH/CL	mottled clayey silt with fine to coarse sand	5Y 2.5/1 / 5Y 3/1	loose	coarse		
0.6	-7.5	CL/ML	Silty clay with fine to coarse Sand, shell hash	5Y 3/1 (very dark grey)	firm	coarse	none	
1.6	-8.5							

Comments


8/18/10
JL18
1.80 ft.

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 8/18/10
Station ID: JL18
All Measurements are ± 0.1 feet KGM 8/18/10

Logged By: KGM
Core Sample ID:
Water Depth (A): ~~4.3~~ 5.3

Collection Mechanism: PC
Latitude: 41° 40.448'
Length of Push Core Assembly (B): 12.3

Time on Station: 09:07
Longitude: 70° 54.903'
Water Surface to Top of Handle (C): 4.9

Time of Collection: 09:10
GPS Accuracy: ± 12 ft
Length of Core (from bottom) (D): 1.8

Time Depart Station: 09:14
Tide Elevation (from tide board) (G): -0.7

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) -8.1

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) —

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.3

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.0

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.3		ML	5y 3/1 Very Dark Grey				
		CL/ML	5y 3/2 Dark olive Grey				Variable streaks throughout
1.8							

Comments

10/21/10
JL24
1.50'
bottom
top

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/21/10	Station ID: JL24	All Measurements are ±0.1 feet	
Logged By: KGM	Core Sample ID: S-100-C046	Water Depth (A):	8.2
Collection Mechanism: PC	Latitude: 41°40.423	Length of Push Core Assembly (B):	12.3
Time on Station: 08:14	Longitude: 70°54.904	Water Surface to Top of Handle (C):	2.15
Time of Collection: 08:20	GPS Accuracy: ±17ft	Length of Core (from bottom) (D):	1.55
Time Depart Station: 08:24		Tide Elevation (from tide board) (G):	-0.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-10.55
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-9.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-9.0
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-8.0

(Note if I + I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	OL / ML/CL	OL marbled with clayey silt	5y 2.5/1	loose	fine		S-100-C046-0-0.5
0.6	CL/ML	Silty clay, fine to medium grain sand	5y 3/2	firm	medium sand		S-100-C046-0.5-1.0
1.5							

Comments

8-17-10
JM2
1.2

Final

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

Date: 9/15/10	Station ID: JM2	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-10S-C001 ~~-0-0.5~~	Water Depth (A):	6.5
Collection Mechanism: PC	Latitude: — 41°40.513	Length of Push Core Assembly (I):	12.35
Time on Station: — 10:45	Longitude: — 70°54.897	Water Surface to Top of Handle (C):	4.35
Time of Collection: — 10:50	GPS Accuracy: — ±11ft	Length of Core (from bottom) (D):	1.2
Time Depart Station: — 10:52		Tide Elevation (from tide board) (G):	0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.7
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)	-6.65
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.5
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.2

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
(0.0) -6.5	OL	Silt w/ fine sand, shell hash	(black) 5Y 2.5/1	loose	fine	Slight H_2S & chemical	S-10S-C00[illegible] -0-0.5 ↓
(0.15) -6.65	CL/ML	Silty clay	5Y 3/1 (very dark grey)	firm	fine	none	
(1.2) -7.7							

Comments

9/15/10
JN20
0'-1.7'

Final

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

Date: 9/15/10	Station ID: JN20	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦS - CΦ17	Water Depth (A):	6.0
Collection Mechanism: pc	Latitude: 41°40.439	Length of Push Core Assembly (B):	12.3
Time on Station: -09:17	Longitude: 70°54.893	Water Surface to Top of Handle (C):	4.35
Time of Collection: -09:20	GPS Accuracy: ±11ft	Length of Core (from bottom) (D):	1.7
Time Depart Station: -09:23		Tide Elevation (from tide board) (G):	-0.6

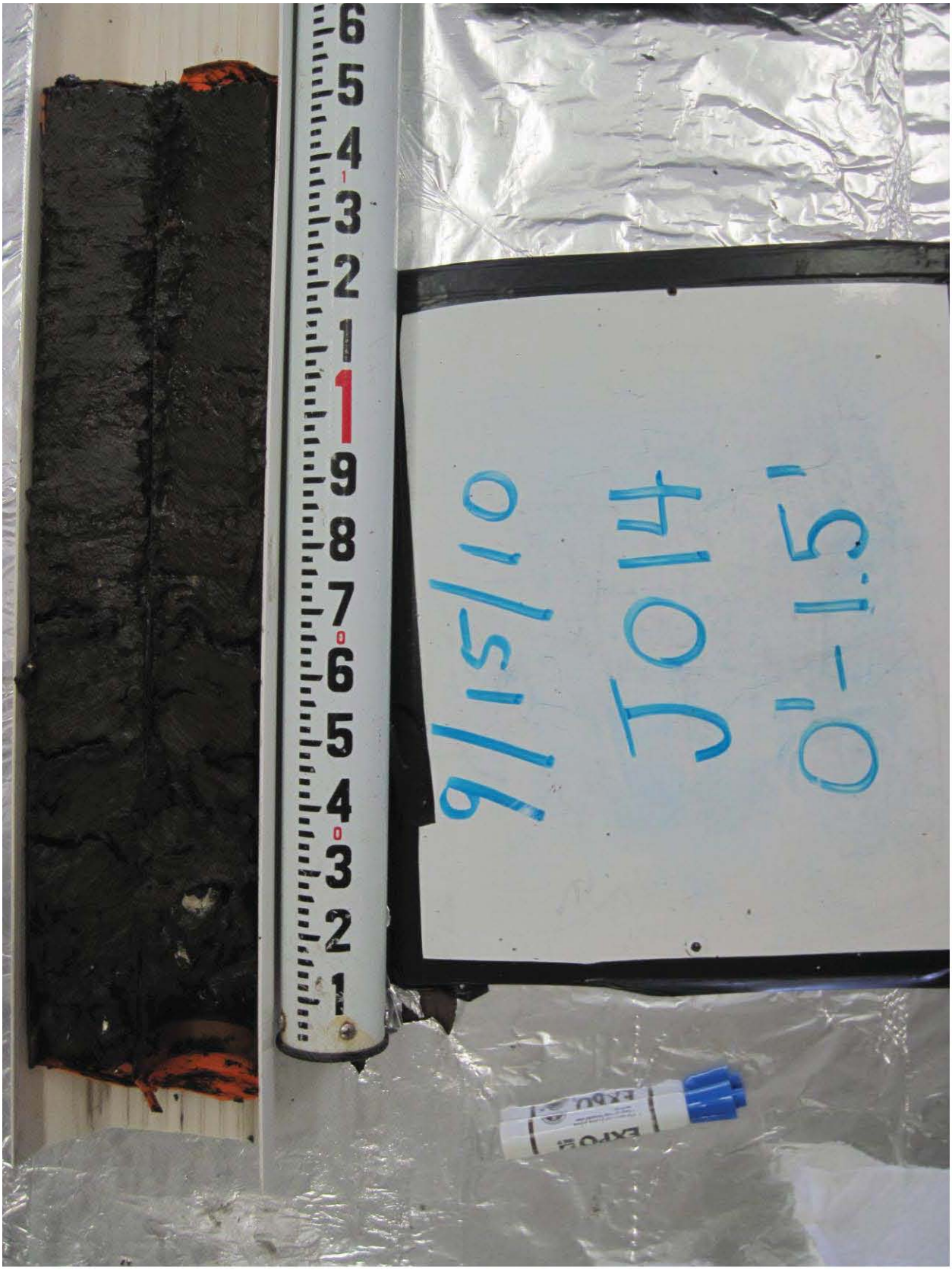
Calculations for Determination of Z* Elevation

(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)	-8.55
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-7.75
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.6

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom – H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	-6.85	OL (marked) / ML / CL	clayey silt w/ fine sand	5Y 2.5/1 (black)	loose	fine	chemical	S-1ΦS - CΦ17 - Φ-Φ.5
0.9	-7.75	CL/ML	silty clay w/ fine to medium sand	5Y 3/1 (v. dark grey)	firm	medium	H_2S	
1.7	-8.55							

Comments


9/15/10
JOH
0'-1.5'

Final

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

Date: 9/15/10	Station ID: J014	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦS-CΦ14	Water Depth (A):	8.3
Collection Mechanism: PC	Latitude: 41°40.464	Length of Push Core Assembly (B):	12.25
Time on Station: ~13:19	Longitude: 70° 54.887	Water Surface to Top of Handle (C):	2.05
Time of Collection: ~13:24	GPS Accuracy: ±10ft	Length of Core (from bottom) (D):	1.5
Time Depart Station: 13:27		Tide Elevation (from tide board) (G):	2.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.0
(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)	-6.7
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.7
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.3

(Note if I - I_2 within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Oder	Sample IDs
0.0	-6.7	ML/CL (OL?)	clayey silt with fine sand	marbled 5Y 2.5/1	moderately firm	fine	H_2S	S-1ΦS-CΦ14-Φ-Φ.5
0.3	-7.0	- -	- Shell hash -	5Y 3/1	- -	-	- -	
		CL/ML	Silty clay with fine sand	5Y 3/1	moderately firm	fine	none/ slight H_2S	
1.2	-7.9	- -	- -	- -	- -	- -	- -	
1.5	-8.2	CL/ML	silty clay with fine sand	5Y 3/1	firm	fine		

Comments


8-17-10
3002
19.5

Final

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 9/15/10	Station ID: JQ2	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-10S-C00Z	Water Depth (A):	5.7
Collection Mechanism: PC	Latitude: 41°40.513	Length of Push Core Assembly (B):	12.3
Time on Station: 11:00	Longitude: 70°54.875	Water Surface to Top of Handle (C):	4.45
Time of Collection: 11:05	GPS Accuracy: ± 11ft	Length of Core (from bottom) (D):	1.65
Time Depart Station: 11:07		Tide Elevation (from tide board) (G):	0.7

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)	-7.15
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-5.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.5
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.0

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
(0.0) -5.5	OL	Silt w/ clay	5Y 2.5/1 (black)	loose	fine	H_2S	S-10S-C00Z
(0.1) -5.6							-0- 0.5
	CL/ML	Silty clay	5Y 3/1 (very dark grey)	firm	fine	none	↓
(1.65) -7.15							

Comments


10/20/10
GD30
1.65'
top
bottom

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10 | Station ID: GD30 | All Measurements are ± 0.1 feet

Logged By: KGM | Core Sample ID: S-1Φ0-CΦ26 | Water Depth (A): 4.2

Collection Mechanism: PC. | Latitude: 41° 40.554' | Length of Push Core Assembly (B): 12.3

Time on Station: 09:33 | Longitude: 70° 54.989' | Water Surface to Top of Handle (C): 6.1

Time of Collection: 09:36 | GPS Accuracy: 11 ft. | Length of Core (from bottom) (D): 1.65

Time Depart Station: 09:39 | Tide Elevation (from tide board) (G): 1.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.5

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -4.7

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition): -3.35

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -3.05

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -2.7

(Note if I - I_2 within + L0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.05)	OL	organic silt	5y 2.5/1		loose ← fine	Strong H_2S	S-1Φ0-CΦ26-Φ-Φ.5 + MS MSD
0.3 (-3.35)	ML/CL	clayey silt	5y 2.5/2		moderately firm ← fine		S-1Φ0-CΦ26-Φ.5-1.Φ
0.7 (-3.75)	CL/ML	silty clay, well graded fine to medium sand, poorly sorted (veins of sand unevenly distributed)	5y 3/1	firm	firm		
1.65 (-4.7)							

Comments

10/20/10
GD34
1.50'
← bottom
top →
EXPO

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10	Station ID: GD34	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ27	Water Depth (A): ~~5.4~~ KGM 5.6	
Collection Mechanism: PC	Latitude: 41° 40.538'	Length of Push Core Assembly (B): 12.35	
Time on Station: 09:24	Longitude: 70° 54.989'	Water Surface to Top of Handle (C): 4.85	
Time of Collection: 09:27	GPS Accuracy: 10 ft.	Length of Core (from bottom) (D): 1.5	
Time Depart Station: 09:30		Tide Elevation (from tide board) (G): 1.7	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.7
(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)	-4.5
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.3
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.9

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.3)	OL	organic silt	5Y 2.5/1	loose	fine		S-1Φ0-CΦ27-Φ-Φ.5
0.2	(-4.5)	MY/CL	clayey silt	5Y 2.5/2	loose	fine		S-1Φ0-CΦ27-Φ.5-1.Φ
0.6	(-4.9)	thin layer of medium to coarse sand with small gravel						
		CL/MC	silty clay	5Y 3/1	firm	fine		
1.5	(-5.8)							

Comments

10/20/10
GH34
1.70'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10	Station ID: GH34	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ29	Water Depth (A):	6.3
Collection Mechanism: PC	Latitude: 41° 40.538'	Length of Push Core Assembly (B):	12.35
Time on Station: 09:15	Longitude: 70° 54.969'	Water Surface to Top of Handle (C):	4.2
Time of Collection: 09:18	GPS Accuracy: 12 ft.	Length of Core (from bottom) (D):	1.7
Time Depart Station: 09:21		Tide Elevation (from tide board) (G):	1.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.35
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-5.25
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.65
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.5

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-4.65)	OL	organic silt	5Y 2.5/1	loose	fine	strong H_2S	S-1Φ0-CΦ29-Φ-Φ.5
0.6 (-5.25)	ML/CL	clayey silt, fine sand	5Y 3/1	moderately firm	fine		S-1Φ0-CΦ29-Φ.5-1.Φ
Φ.D (-5.65)	CL/ML	silty clay, some fine sand	5Y 3/1	firm	fine		
1.7 (-6.35)							

Comments

10/20/10
GI36
1.25"
←bottom
top →

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10
Station ID: GI36
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1Φ0-CΦ3Φ
Water Depth (A): 7.2
Collection Mechanism: pc.
Latitude: 41° 40.529'
Length of Push Core Assembly (B): 12.35
Time on Station: 09:03
Longitude: 70° 54.962'
Water Surface to Top of Handle (C): 3.55
Time of Collection: 09:07
GPS Accuracy: 14ft.
Length of Core (from bottom) (D): 1.25
Time Depart Station: 09:12
Tide Elevation (from tide board) (G): 2.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.0

(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))

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -7.35

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -7.0

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-7.35)	OL	organic silt	5y 2.5/1	loose	fine		S-1Φ0-CΦ3Φ-Φ-Φ.5
0.1	(-7.45)	ML/CL	clayey silt	5y 3/1	moderately firm	fine		S-1Φ0-CΦ3Φ-Φ.5-1.Φ
0.6	(-7.95)	CL/ML	silty clay	5y 3/1	firm			
1.25	(-8.6)							

Comments

10/20/10
GJ29
1.50'
bottom
top
EXPO

WOODS HOLE OCEANOGRAPHIC

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10
Station ID: GS29
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID: S-1Φ0-CΦ28
Water Depth (A): 5.4

Collection Mechanism: P.C.
Latitude: 41°40.558'
Length of Push Core Assembly (B): 12.3

Time on Station: 09:45
Longitude: 70°54.957'
Water Surface to Top of Handle (C): 5.1

Time of Collection: 09:47
GPS Accuracy: 15 ft.
Length of Core (from bottom) (D): 1.5

Time Depart Station: 09:52
Tide Elevation (from tide board) (G): KGM +4 1.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): KGM +4 1.3

(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) -4.9

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -4.4

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -4.1

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.4)	OL	organic silt, oyster shells	5Y 2.5/2	loose	fine		S-1Φ0-CΦ28-Φ-Φ.5
0.5	(-4.9)	CL/ML	silty clay	5Y 3/1	firm	fine		S-1Φ0-CΦ28-Φ.5-1.0
0.8	(-5.2)	layer of dense oyster shell hash						
1.1	(-5.5)	CL/ML	silty clay	5Y 3/1	firm	fine		
1.5	(-5.9)							

Comments

10/20/10
GM37
1.65'
bottom
top
EXPO

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10	Station ID: GM37	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ32	Water Depth (A): 5.4	
Collection Mechanism: pc	Latitude: 41°40.528'	Length of Push Core Assembly (B): 12.25	
Time on Station: 11:00	Longitude: 70°54.940'	Water Surface to Top of Handle (C): 5.05	
Time of Collection: 11:03	GPS Accuracy: 13 ft.	Length of Core (from bottom) (D): 1.65	
Time Depart Station: 11:10		Tide Elevation (from tide board) (G): 0.3	

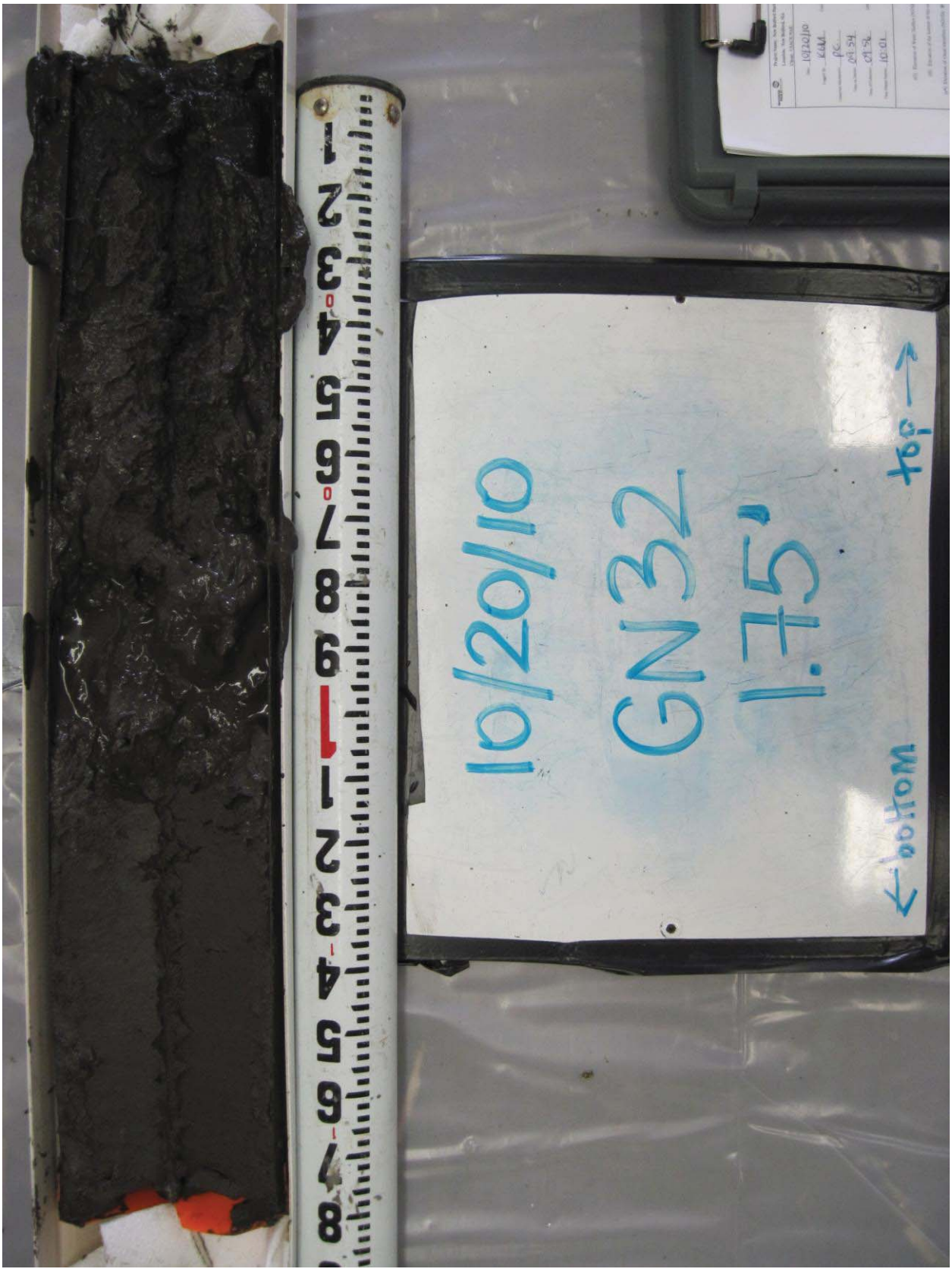
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	(-5.95)
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.25
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.1

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.25)	OL	organic silt	5Y 2.5/1	loose	fine		S-1Φ0-CΦ32-Φ-Φ.5
0.7	(-5.95)	ML/CL	clayey silt	5Y 3/1	moderately firm	fine		S-1Φ0-CΦ32-Φ.5-1.Φ
1.0	(-6.25)	CL/ML	silty clay	5Y 3/1		fine		
1.65	(-6.9)							

Comments


10/20/10
GN32
1.75'
top
bottom

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10	Station ID: GN32	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ31	Water Depth (A):	4.8
Collection Mechanism: pc.	Latitude: 41° 40.546'	Length of Push Core Assembly (B):	12.35
Time on Station: 09:54	Longitude: 70° 54.935'	Water Surface to Top of Handle (C):	3.5
Time of Collection: 09:56	GPS Accuracy: 15 ft.	Length of Core (from bottom) (D):	1.75
Time Depart Station: 10:01		Tide Elevation (from tide board) (G):	1.2

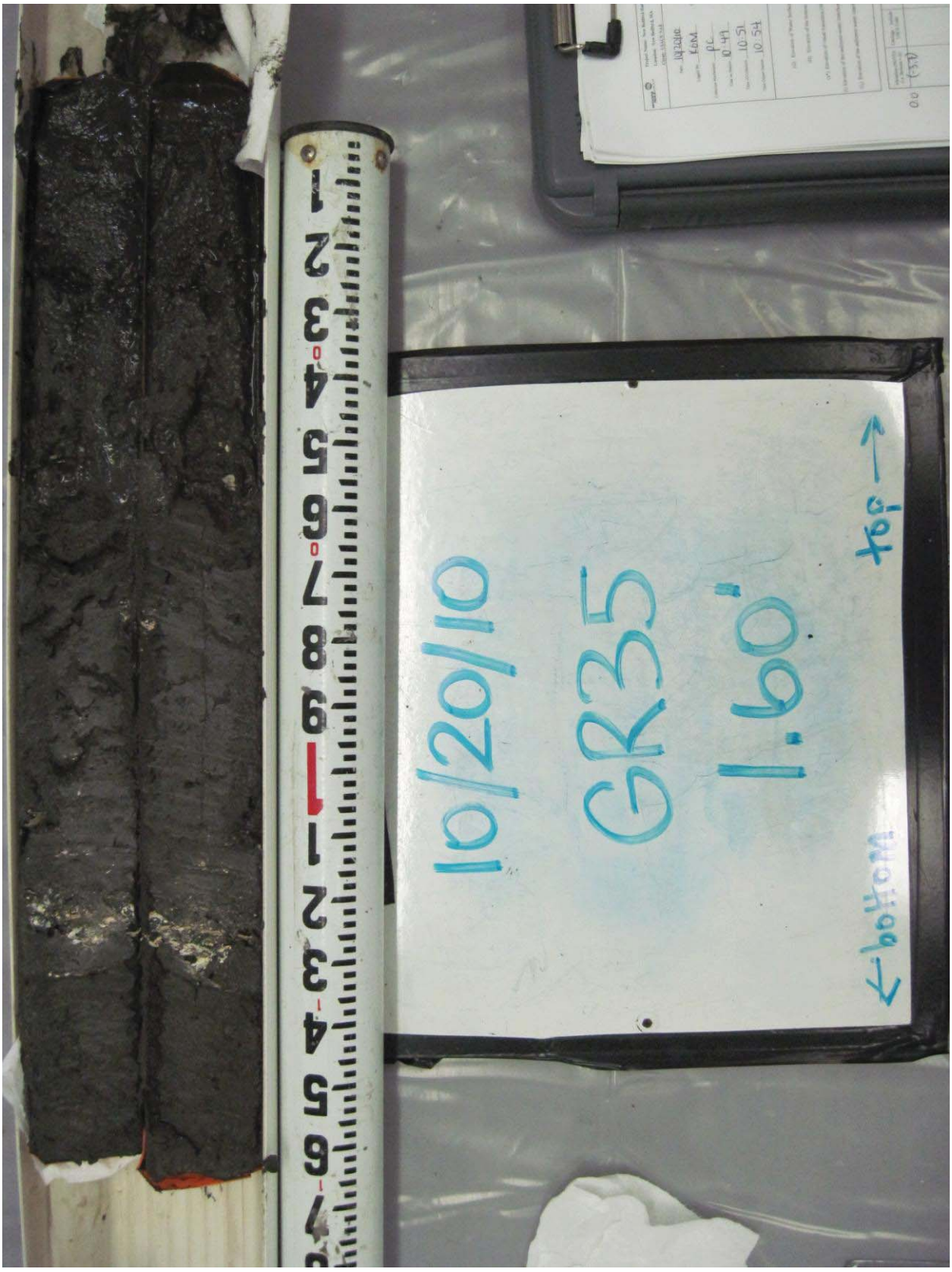
Calculations for Determination of Z* Elevation

(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)	-5.65
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.9
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.6

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.9)	OL	organic silt	5Y 2.5/1	loose	fine	H_2S	S-1Φ0-CΦ31-Φ-Φ.5
0.2	(-4.1)	OL/ML/CL	organic silt marbled clayey silt, fine sand	5Y 2.5/1 / 5Y 3/1	moderately loose	fine		S-1Φ0-CΦ31-Φ.5-1.Φ
0.7	(-4.6)	ML/CL	clayey silt, high water content shell hash	5Y 3/1	loose	fine		
1.1	(-5.0)	CL/ML	silty clay	5Y 3/1	firm	fine		
1.75	(-5.65)							

Comments


10/20/10
GR35
1.90'
bottom
top

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

Date: 10/20/10	Station ID: GR35	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ34	Water Depth (A): 3.8	
Collection Mechanism: pc	Latitude: 41° 40.533'	Length of Push Core Assembly (B): 12.3	
Time on Station: 10:49	Longitude: 70° 54.907'	Water Surface to Top of Handle (C): 6.6	
Time of Collection: 10:51	GPS Accuracy: 12 ft.	Length of Core (from bottom) (D): 1.6	
Time Depart Station: 10:54		Tide Elevation (from tide board) (G): 0.4	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-5.3
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.0
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.7
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.4

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.7)	OL	organic silt	5Y 2.5/2	loose	fine		S-1Φ0-CΦ34-Φ-Φ.5
0.3 (-4.0)	– –	wood chips & fine sand	– –	–	–	– – –	
0.6 (-4.3)	ML/CL	clayey silt, some fine sand	5Y 3/1	loose	fine		S-1Φ0-CΦ34-Φ.5-1.Φ
1.2 (-4.9)	CL/ML	silty clay	5Y 3/1	firm	fine		
1.3 (-5.0)	layer of dense shell hash (oyster)					– –	
1.6 (-5.3)	CL/ML	silty clay	5Y 3/1	firm	fine		

Comments

10/20/10
GS29
1.70'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10
Station ID: GS29
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1Φ0-CΦ33
Water Depth (A): 3.9
Collection Mechanism: P.C.
Latitude: 41°40.558'
Length of Push Core Assembly (B): 12.3
Time on Station: 10:06
Longitude: 70°54.907'
Water Surface to Top of Handle (C): 6.35
Time of Collection: 10:09
GPS Accuracy: 10 ft.
Length of Core (from bottom) (D): 1.7
Time Depart Station: 10:13
Tide Elevation (from tide board) (G): 1.0

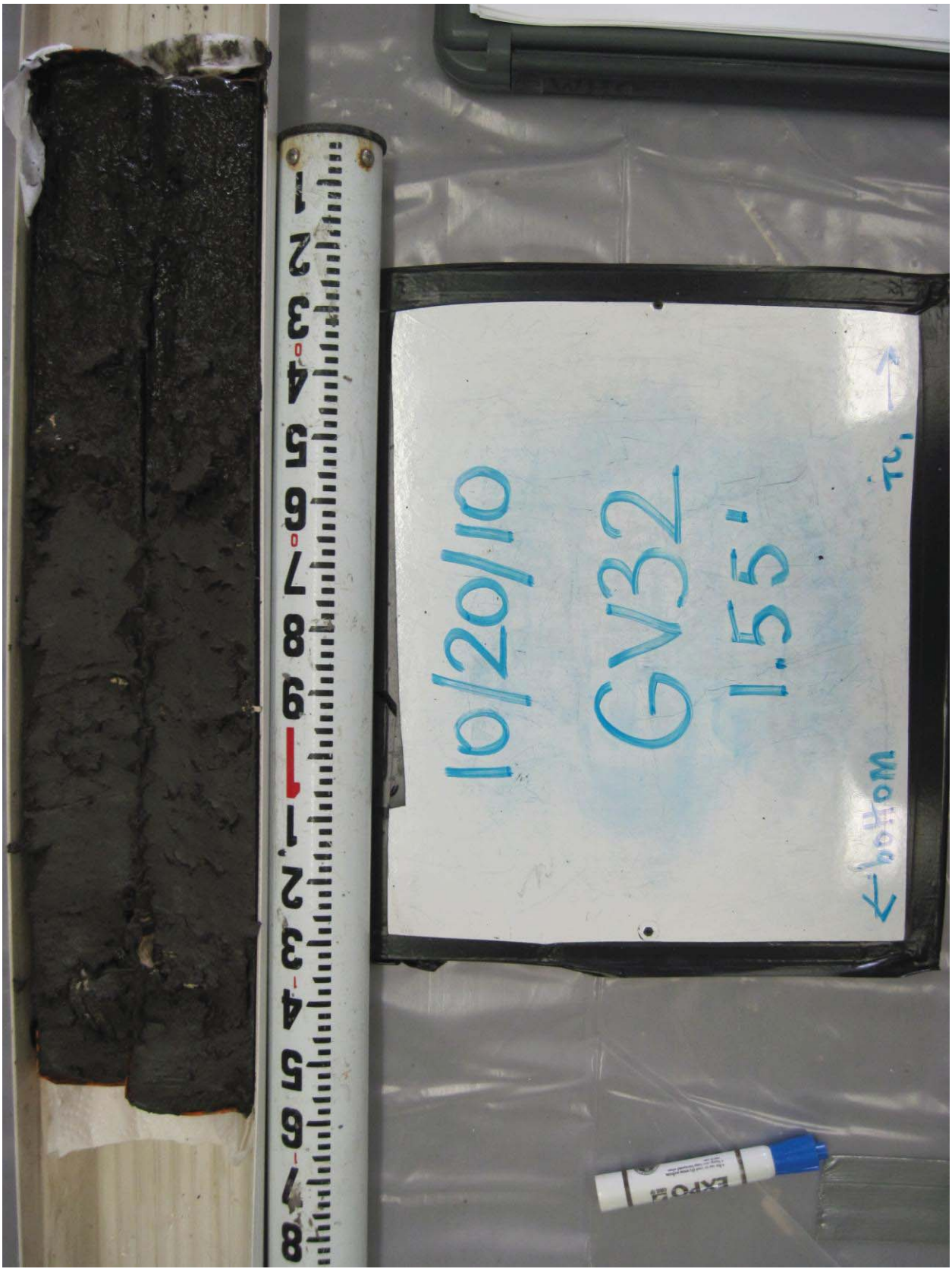
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C) ~~-4.25~~ KGM -4.95
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.35
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.25
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -2.9

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.25)	OL	organic silt	5Y 2.5/2	loose	fine	strong H_2S	S-1Φ0 – CΦ33 – Φ-Φ.5
0.1	(-3.35)	OL/ML	OL marked with clayey silt, fine sand	5Y 2.5/1	moderately loose	fine		
0.5	(-3.75)	CL/ML	silty clay with ample oyster shells	5Y 3/1	firm	fine, shells		S-1Φ0 – CΦ33 – Φ.5-1.Φ
Φ.0	(4.25)	CL/ML	silty clay	5Y 3/1	firm	fine		
1.7	(-4.95)							

Comments


10/20/10
GV32
1.5'
Top
bottom

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

Date: 10/20/10	Station ID: GV32	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ35	Water Depth (A): 3.5	
Collection Mechanism: P.C.	Latitude: 41° 40.545'	Length of Push Core Assembly (B): 12.3	
Time on Station: 10:27	Longitude: 70° 54.891'	Water Surface to Top of Handle (C): 6.95	
Time of Collection: 10:31	GPS Accuracy: 10 ft.	Length of Core (from bottom) (D): 1.55	
Time Depart Station: 10:34		Tide Elevation (from tide board) (G): 0.6	

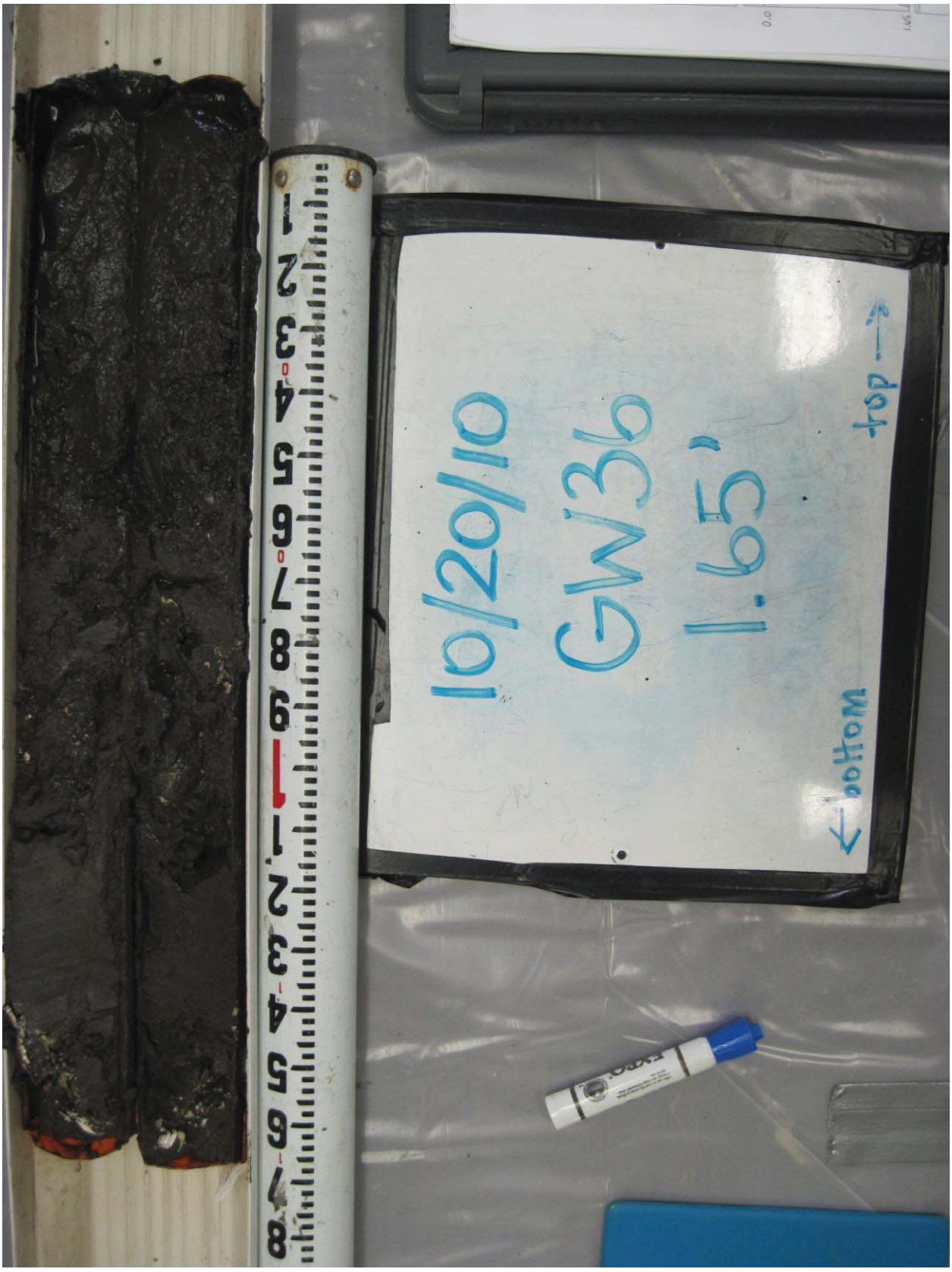
Calculations for Determination of Z* Elevation

(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)	-4.75
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-3.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.9

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = 11)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.2)	OL	organic silt	5y 2.5/1	loose	fine		S-1Φ0-CΦ35-Φ-Φ.5
0.1	(-3.3)	OL/ML	OL mixed with silt, fine sand wood chips	5y 2.5/2	loose	fine	strong H_2S	
0.6	(-3.8)	CL/ML	silty clay, shell hash	5y 3/1	firm	fine		S-1Φ0-CΦ35-Φ.5-1.Φ
1.55	(-4.75)							

Comments


10/20/10
GW36
1.65'
top
bottom

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/20/10
Logged By: KGM
Collection Mechanism: pc
Time on Station: 10:36
Time of Collection: 10:39
Time Depart Station: 10:45

Station ID: GW36
Core Sample ID: S-1Φ0-CΦ37
Latitude: 41°40.529'
Longitude: 70°54.885'
GPS Accuracy: 10ft.

All Measurements are ± 0.1 feet
Water Depth (A): 4.6
Length of Push Core Assembly (B): 12.3
Water Surface to Top of Handle (C): 6.1
Length of Core (from bottom) (D): 1.65
Tide Elevation (from tide board) (G): 0.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.5

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -5.7

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -4.05

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -4.1

(Note if $I \cdot I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.05)	ML (OL?)	~~Small layer of OL-type silt at surface.~~ Silt, wood chips, some fine sand	5Y 2.5/2	loose	fine	H_2S	S-1Φ0-CΦ37-Φ-Φ.5
0.6	(-4.65)	CL/ML	silty clay, oystershell hash	5Y 3/1	firm	fine		S-1Φ0-CΦ37-Φ.5-1.Φ
1.65	(-5.7)							

Comments

10/20/10
GY29
1.30'
bottom

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

Date: 10/20/10	Station ID: GY29	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ36	Water Depth (A):	3.2
Collection Mechanism: PC	Latitude: 41° 40. 558'	Length of Push Core Assembly (B):	12.15
Time on Station: 10:15	Longitude: 70° 54. 874'	Water Surface to Top of Handle (C):	7.35
Time of Collection: 10:19	GPS Accuracy: 13 ft.	Length of Core (from bottom) (D):	1.3
Time Depart Station: 10:23		Tide Elevation (from tide board) (G):	0.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-4.0
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-2.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-2.7
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-2.7)							
0.1	(-2.8)	OL	Organic silt	5Y 2.5/1	loose	fine		S-1Φ0-CΦ36-Φ-Φ.5
		OL/ML	OL (slight) with clayey silt, fine sand	5Y 2.5/2	loose	fine		
0.4	(-3.1)							S-1Φ0-CΦ36-Φ.5-1.Φ
		CL/ML	silty clay, layers of shell hash at -3.1 → -3.2 and -3.5	5Y 3/1	firm	fine		
1.3	(-4.0)							

Comments

10/18/10
KBB4
1.35'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Logged By: KGM
Collection Mechanism: pc
Time on Station: 09:45
Time of Collection: 09:48
Time Depart Station: 09:53

Station ID: KBB4
Core Sample ID: S-1Φ0-CΦΦ3
Latitude: 41°40.406'
Longitude: 70°54.942'
GPS Accuracy: 12ft.

All Measurements are ± 0.1 feet
Water Depth (A): 6.9
Length of Push Core Assembly (B): 11.75
Water Surface to Top of Handle (C): 3.55
Length of Core (from bottom) (D): 1.35
Tide Elevation (from tide board) (G): 0.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.0

(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) -7.45

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D ~~-7.05~~ -6.85

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.9

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 ~~(-7.05)~~ -6.85	OL	organic silt	5Y 2.5/1 black	loose	fine		S-1Φ0-CΦΦ3-Φ-Φ.5
0.6 (-7.45)	OL	organic silt marbled with	5Y 2.5/1	loose	fine		S-1Φ0-CΦΦ3-Φ.5-1.Φ
	ML/CL	clayey silt. fine sand throughout	5Y 3/1				
1.1 (-7.95)							
	CL/ML	silty clay fine sand	5Y 3/1	firm	fine		
1.35 ~~1.15~~ KGM (-8.2)							

Comments

10/19/10
KCC6
1.60'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10	Station ID: KCC6	All Measurements are ± 0.1 feet	
Logged By: KCM	Core Sample ID: S-1Φ0-CΦ23	Water Depth (A):	7.6
Collection Mechanism: PC	Latitude: 41° 40.398'	Length of Push Core Assembly (B):	12.3
Time on Station: 09:29	Longitude: 70° 54.938'	Water Surface to Top of Handle (C):	2.8
Time of Collection: 09:31	GPS Accuracy: 10 ft.	Length of Core (from bottom) (D):	1.6
Time Depart Station: 09:40		Tide Elevation (from tide board) (G):	0.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.7
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-8.2
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.8

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-7.1)	OL	organic silt	5Y 2.5/1	loose	fine	H_2S & petroi odor	S-1Φ0-CΦ23-Φ-Φ.5
0.6 (-7.7)							
	OL	organic silt with fibers (wood?) and fine sand	5Y 2.5/1	loose	fine		S-1Φ0-CΦ23-Φ.5-1.Φ
1.1 (-8.2)							
	CL/ML	silty clay with fine to medium sand	5Y 3/1	firm	medium sand		
1.6 (-8.7)							

Comments

10/18/10
KDD2
1.60'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Station ID: KDD2
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID: S-1ΦO-CΦΦ4
Water Depth (A): 6.1

Collection Mechanism: pc.
Latitude: 41° 40.414'
Length of Push Core Assembly (B): 13.35

Time on Station: 09:56
Longitude: 70° 54.931'
Water Surface to Top of Handle (C): 5.25

Time of Collection: 10:00
GPS Accuracy: 13 A.
Length of Core (from bottom) (D): 1.6

Time Depart Station: 10:06
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -5.3

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) ——

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.7

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.3

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-6.7)	ML/CL	clayey silt poorly sorted fine to coarse sand	5Y 2.5/2	loose	coarse sand		S-1ΦO-CΦΦ4-Φ-Φ.5
0.3	(-7.0)	CL/ML	silty clay poorly sorted fine sand to gravel	5Y 3/1	firm	gravel 1-2cm	H_2S	S-1ΦO-CΦΦ4-Φ.5-1.Φ
1.6	(-8.3)							

Comments

10/19/10
KFF15
1.55'
bottom
top
EXPO

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10
Station ID: KFF15
All Measurements are ± 0.1 feet
Logged By: K6M
Core Sample ID: S-1Φ0-CΦ18
Water Depth (A): 5.2
Collection Mechanism: PC
Latitude: 41° 40.361'
Length of Push Core Assembly (B): 12.2
Time on Station: 10:52
Longitude: 70° 54.920'
Water Surface to Top of Handle (C): 5.4
Time of Collection: 10:55
GPS Accuracy: 12ft.
Length of Core (from bottom) (D): 1.55
Time Depart Station: 10:57
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.0

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -5.65

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -5.45

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.45)	OL	organic silt	Sy 2.5/1	loose	fine	H_2S	S-1Φ0-CΦ18-Φ-Φ.5
0.2	(-5.65)	ML/CL	clayey silt, some fine sand	Sy 3/1	loose	fine	H_2S	
0.5	(-5.95)	CL/ML	silty clay, fine to medium grain sand	Sy 3/1	firm	Medium Sand		S-1Φ0-CΦ18-Φ.5-1.Φ
1.55	(-7.0)							

Comments

10/18/10
KFF 4
1.65'
bottom
top
EXPO

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10	Station ID: KFF4	All Measurements are ± 0.1 feet	
Logged By: RGM	Core Sample ID: S-1Φ0-CΦΦ9	Water Depth (A): 6.4	
Collection Mechanism: P.C.	Latitude: 41° 40.406'	Length of Push Core Assembly (B): 12.3	
Time on Station: 11:02	Longitude: 70° 54.920'	Water Surface to Top of Handle (C): 3.95	
Time of Collection: 11:06	GPS Accuracy: 12 ft.	Length of Core (from bottom) (D): 1.65	
Time Depart Station: 11:11		Tide Elevation (from tide board) (G): -0.2	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.2
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.55
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-7.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.9
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.6

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-6.9)	OL	organic silt	5Y 2.5/1	loose	fine	H_2S ? petrol odor	S-1Φ0-CΦΦ9-Φ-Φ.5
0.7 (-7.6)							
	ML	silt with clay and fine sand	5Y 3/1	loose	fine		S-1Φ0-CΦΦ9-Φ.5-1.Φ
1.1 (-8.0)	~~oysterhash~~						
	CL/ML	silty clay	5Y 3/1	firm	fine		
1.65 (-8.55)							

Comments

10/18/10
KFF8
1.70'
bottom
top

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Station ID: KFE8
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID: S-1Φ0-CΦ10
Water Depth (A): 5.8

Collection Mechanism: P.C.
Latitude: 41° 40.390'
Length of Push Core Assembly (B): 12.25

Time on Station: 11:53
Longitude: 70° 54.921'
Water Surface to Top of Handle (C): 4.4

Time of Collection: 11:57
GPS Accuracy: 12 feet.
Length of Core (from bottom) (D): 1.7

Time Depart Station: 12:00
Tide Elevation (from tide board) (G): 0.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.0

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.85

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -6.75

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.15

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.8

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-6.15)	OL	organic silt	5Y 2.5/1	loose	fine	H_2S	S-1Φ0-CΦ1Φ-Φ-Φ5
0.6 (-6.75)							
0.8 (-6.95)	CL/ML	silty clay, some fine sand	5Y 3/1	firm	fine		
				loose			S-1Φ0-CΦ1Φ-Φ.5-1.Φ
1.4 (-7.55)							
1.7 (-7.85)							

Comments

10/19/10
KGG11
1.50'
bottom
top

Woods Hole Group

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10	Station ID: KGG11	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ15	Water Depth (A):	6.4
Collection Mechanism: P.C.	Latitude: 41°40.377'	Length of Push Core Assembly (B):	12.3
Time on Station: 09:59	Longitude: 70°57.914'	Water Surface to Top of Handle (C):	4.4
Time of Collection: 10:02	GPS Accuracy: 14 ft.	Length of Core (from bottom) (D):	1.5
Time Depart Station: 10:07		Tide Elevation (from tide board) (G):	0.4

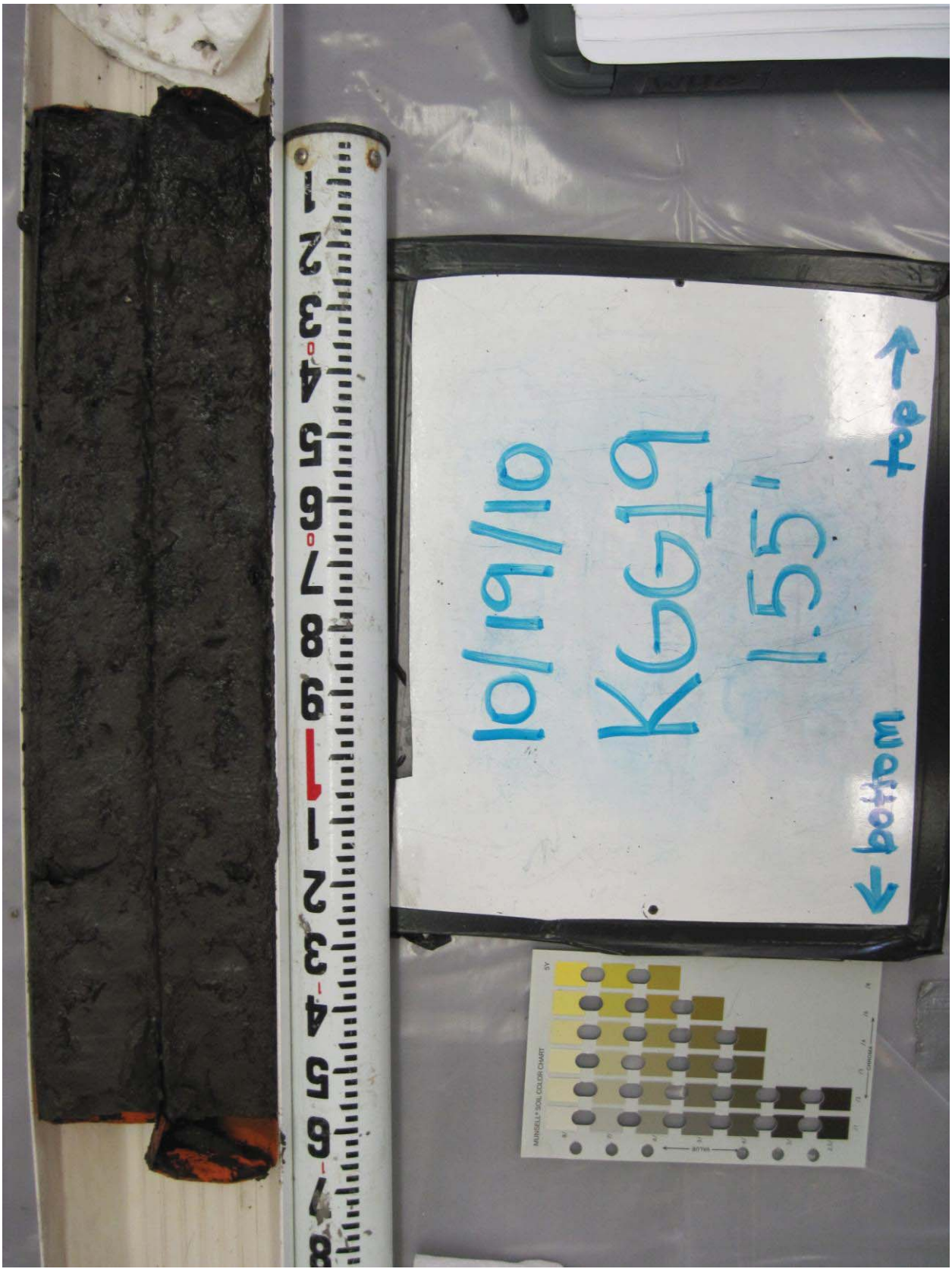
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.4
(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)	-6.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.0
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.0

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-6.0)	OL	Organic silt, some fine sand	5y 2.5/1	loose	fine	strong H_2S	S-1Φ0-CΦ15-Φ-Φ.5
0.3	(-6.3)	ML/CL ~ OL	Clayey silt marbled w/ silt (OL?), fine sand	5y 2.5/1 ~ 5y 3/1	loose	fine		S-1Φ0-CΦ1.5-Φ.5-1.Φ
0.8	(-6.8)	CL/ML	Silty clay, some fine sand	5y 3/1	firm	fine		
1.5	(-7.5)							

Comments


top
bottom
10/19/10
K6G19
155

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10	Station ID: KGG19	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ21	Water Depth (A):	4.5
Collection Mechanism: PC.	Latitude: 41° 40.344'	Length of Push Core Assembly (B):	12.3
Time on Station: 11:23	Longitude: 70° 54.916'	Water Surface to Top of Handle (C):	5.85
Time of Collection: 11:27	GPS Accuracy: 16 ft.	Length of Core (from bottom) (D):	1.55
Time Depart Station: 11:32		Tide Elevation (from tide board) (G):	-0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.2
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.65
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.1)	OL	organic silt, fine sand	5Y 2.5/1	loose	fine	H_2S	S-1Φ0-CΦ21-Φ-Φ.5
0.2	(-5.3)							
		OL/ML/CL	OL marbled with clayey silt, well ~~sorted~~ graded fine sand to gravel	5Y 2.5/1 / 5Y 3/1	moderately firm	1-2 cm gravel	H_2S	S-1Φ0-CΦ21-Φ.5-1.Φ
1.0	(-6.1)							
		CL/ML	silty clay with well ~~sorted~~ graded fine sand to gravel	5Y 3/1	firm	1-2 cm gravel		
1.55	(-6.65)							

Comments


top
bottom
10/18/10
KH-2
2.10'

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Station ID: KHH2
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID: ~~KH~~-S-1Φ0-CΦΦ5
Water Depth (A): 6.9

Collection Mechanism: PC.
Latitude: 41° 40.414'
Length of Push Core Assembly (B): 13.3

Time on Station: 10:12
Longitude: 70° 54.910'
Water Surface to Top of Handle (C): 4.05

Time of Collection: 10:16
GPS Accuracy: 13ft.
Length of Core (from bottom) (D): 2.1

Time Depart Station: 10:23
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -9.45

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -7.55

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -7.35

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -7.1

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-7.35)	OL w/ ML	silt	5Y 2.5/1	loose	fine	H_2S	S-1Φ0-CΦΦ5-Φ-Φ.5
0.2	(-7.55)							
0.5	(-7.85)	ML	Silt	5Y 3/1	loose	fine		S-1Φ0-CΦΦ5-Φ.5-1.Φ
		CL/ML	Silty clay with fine sand	5Y 3/1	firm	Coarse gravel		
1.8	(-9.15)	coarse gravel band, 1-2 cm, with clay						
2.1	(-9.45)							

Comments

10/18/10
KHH 4
1.7'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Station ID: KHH4
All Measurements are ± 0.1 feet
Logged By: KbM
Core Sample ID: S-1Φ0-CΦΦ8
Water Depth (A): ~~7.3~~ KbM 6.5
Collection Mechanism: P.C.
Latitude: 41° 40.406'
Length of Push Core Assembly (B): 12.3
Time on Station: 10:50
Longitude: 70° 54.909'
Water Surface to Top of Handle (C): 3.75
Time of Collection: 10:55
GPS Accuracy: 10 ft.
Length of Core (from bottom) (D): 1.7
Time Depart Station: 10:59
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -8.75

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -7.35

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -7.05

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.7

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-7.05)	OL/ML	Silt	5y 2.5/1	loose	fine	strong H_2S, possibly chemical	S-1Φ0-CΦΦ8-Φ-Φ.5
0.3	(-7.35)	ML/CL	clayey silt	5y 3/1	loose	coarse sand		S-1Φ0-CΦΦ8-Φ.5-1.Φ
1.0	(-8.05)	CL/ML	silty clay	5y 3/1	firm	fine		
1.7	(-8.75)							

Comments

10/18/10
KHH8
1.70'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10	Station ID: KHH8	All Measurements are ± 0.1 feet: 1
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ12	Water Depth (A): 6.4
Collection Mechanism: P.C.	Latitude: 41° 40.390'	Length of Push Core Assembly (B): 12.3
Time on Station: 11:42	Longitude: 70° 54.909'	Water Surface to Top of Handle (C): 3.9
Time of Collection: 11:46	GPS Accuracy: 12 ft.	Length of Core (from bottom) (D): 1.7
Time Depart Station: 11:50		Tide Elevation (from tide board) (G): -0.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.8
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.5

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-6.8)	OL	organic silt	5Y 2.5/1	loose	fine	H_2S's petrol odor	S-1Φ0-CΦ12-Φ-Φ.5
0.7 (-7.5)	ML/CL	clayey silt, fine to med. sand	5Y 2.5/2 with marbled 2.5/1	mostly loose slightly firm	medium sand	petrol odor	S1Φ0-CΦ12-Φ.5-1.Φ
1.2 (-8.0)	CL/ML	silty clay, fine sand	5Y 3/1 marbled w/ 5Y 2.5/1	firm			
1.7 (-8.5)							

Comments

10/19/10
KII12
1.55'
bottom
top
MUNSELL® SOIL COLOR CHART

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10
Station ID: KII12
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1Φ0 - CΦ16
Water Depth (A): 5.9
Collection Mechanism: P.C.
Latitude: 41°40.373'
Length of Push Core Assembly (B): 12.3
Time on Station: 10:08
Longitude: 70°54.904'
Water Surface to Top of Handle (C): 4.65
Time of Collection: 10:12
GPS Accuracy: 11 ft.
Length of Core (from bottom) (D): 1.55
Time Depart Station: 10:16
Tide Elevation (from tide board) (G): 0.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.3

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -7.35

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition): -6.2

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -5.8

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -5.6

(Note if I ≠ I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-5.8)	OL	organic silt, some fine sand	5Y 2.5/1	loose	fine	H_2S	S-1Φ0-CΦ16-Φ-Φ5
0.4 (-6.2)							
	CL/ML	Silty clay, fine sand, varying pockets of water content (some looser, some more dense)	5Y 3/1	mostly firm, some loose spots	fine		S-1Φ0-CΦ16-Φ5-1.Φ
1.55 (-7.35)							

Comments

10/19/10
KII14
1.55'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10	Station ID: KII14	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ17	Water Depth (A):	4.8
Collection Mechanism: PC	Latitude: 41° 40.365'	Length of Push Core Assembly (B):	12.3
Time on Station: 10:40	Longitude: 70° 54.904'	Water Surface to Top of Handle (C):	5.6
Time of Collection: 10:44	GPS Accuracy: 16 ft.	Length of Core (from bottom) (D):	1.55
Time Depart Station: 10:50		Tide Elevation (from tide board) (G):	-0.1

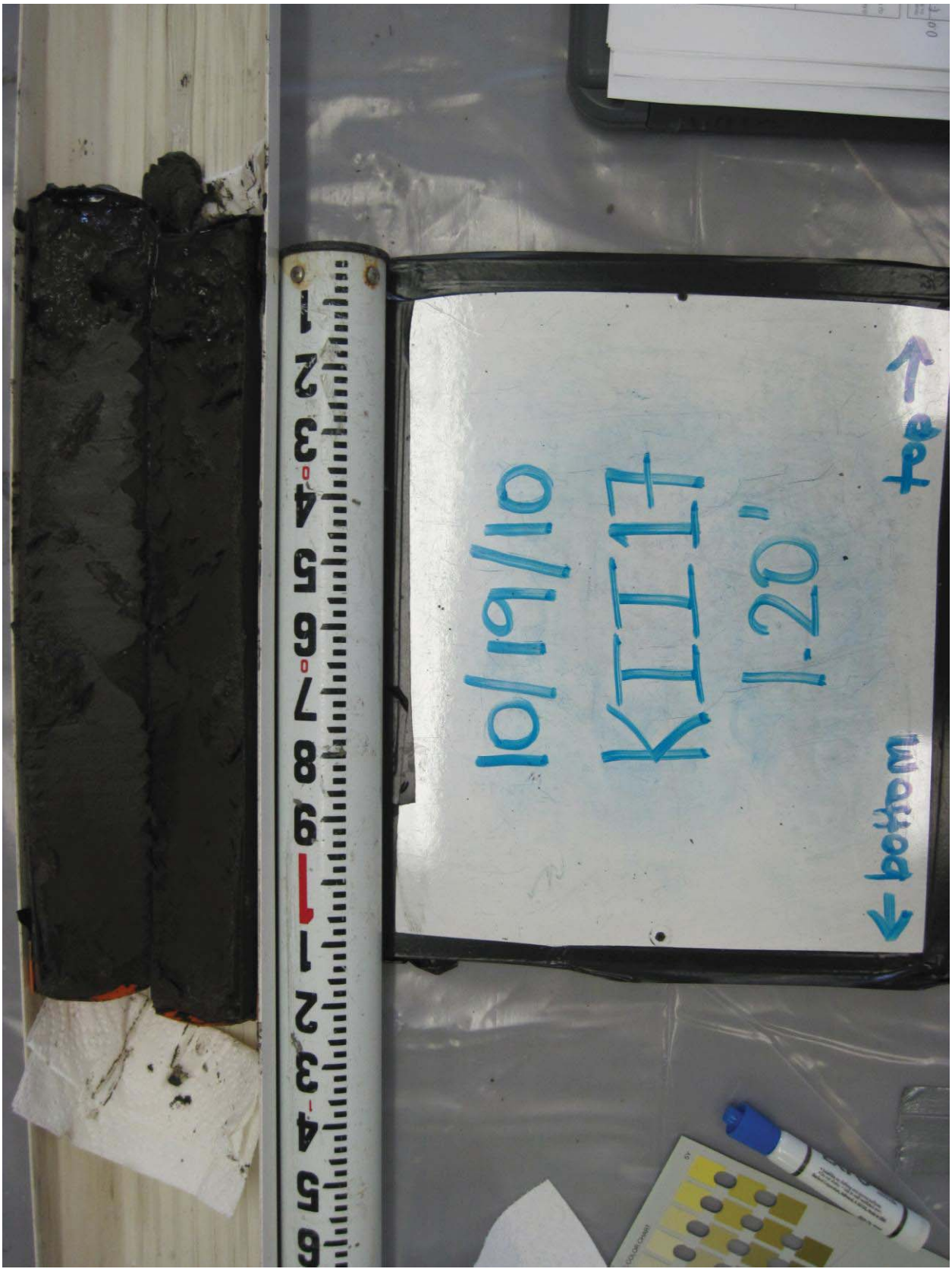
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.8
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-5.55
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.25
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.9

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.25)	OL	Silt, clayey Silt	5Y 2.5/1	loose	fine	H_2S	S-1Φ0-CΦ17-Φ-Φ.5
0.3	(-5.55)	OL/ML/CL						
		CL/ML	Silty clay, fine sand	5Y 3/1	almost firm (moderate)	fine		S-1Φ0-CΦ17-Φ5-1.Φ
1.4	(-6.65)		Silt	5Y 2.5/1				packet of black OL type sediment
1.55	(-6.8)							

Comments


10/19/10
KIT17
1.20"
top
bottom

WOOD HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10	Station ID: KII7	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ2Φ	Water Depth (A):	4.8
Collection Mechanism: PC.	Latitude: 41° 40.352'	Length of Push Core Assembly (B):	12.3
Time on Station: 11:01	Longitude: 70° 54.904'	Water Surface to Top of Handle (C):	5.9
Time of Collection: 11:05	GPS Accuracy: 10A.	Length of Core (from bottom) (D):	1.2
Time Depart Station: 11:09		Tide Elevation (from tide board) (G):	-0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.2
(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)	—
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-5.4
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.0

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-5.4)	ML/CL	clayey silt, fine to medium sand	5Y 3/1	moderately firm to loose	fine	H_2S	S-1Φ0-CΦ20-Φ-Φ.5
0.2 (-5.6)	CL/ML	silty clay, fine to coarse sand	5Y 3/1	firm	fine		S-1Φ0-CΦ20-0.5-1.Φ
1.2 (-6.6)							

top <Φ.1 is black (5Y 2.5/1)

Comments

10/18/10
KII6
1.65'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Logged By: KGM
Collection Mechanism: p.c.
Time on Station: 11:13
Time of Collection: 11:20
Time Depart Station: 11:24

Station ID: KIJ6
Core Sample ID: S-1Φ0-CΦ11
Latitude: 41° 40.398'
Longitude: 70° 54.903'
GPS Accuracy: 12 ft.

All Measurements are ± 0.1 feet
Water Depth (A): ~~6.0~~ KGM 6.3
Length of Push Core Assembly (B): 12.3
Water Surface to Top of Handle (C): 4.15
Length of Core (from bottom) (D): 1.65
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -8.35

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -7.2

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.7

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A ~~-6.5~~ KGM -6.5

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-6.7)	OL	Organic silt fine sand	5Y 2.5/1	loose	fine	H_2S & petrol odor	S-1Φ0-CΦ11-Φ-Φ5
0.5 (-7.2)	ML/CL	clayey silt fine sand	↑	slightly firm	fine		S-1Φ0-CΦ11-Φ.5-1.Φ
1.0 (-7.7)	CL/ML	silty clay, oyster shell hash	5Y 3/1 ↓	firm	fine		
1.65 (-8.35)							

Comments


10/19/10
KJT19
1.50'
top
bottom

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10
Station ID: KJJ19
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1Φ0-CΦ22
Water Depth (A): ~~3.8~~ 3.9
Collection Mechanism: PC.
Latitude: 41°40.344'
Length of Push Core Assembly (B): 12.35
Time on Station: 11:12
Longitude: 70°54.898'
Water Surface to Top of Handle (C): 6.5
Time of Collection: 11:15
GPS Accuracy: 12 ft.
Length of Core (from bottom) (D): 1.5
Time Depart Station: 11:20
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C): -6.05

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition): -4.75

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -4.55

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -4.1

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.55)	OL	organic silty	5y ~~2.5~~ 3/1	loose	fine		S-1Φ0-CΦ22-Φ-Φ5
0.2	(-4.75)	ML/CL	clayey silt	5y 3/1	loose	fine		
0.5	(-5.05)	SC/SM	clayey silty sand	5y 3/1	firm	medium		S-1Φ0-CΦ22-Φ.5-1.Φ
0.6	(-5.15)	CG/CS	sandy clay with gravel	5y 3/1	firm	~~2~~ 1cm gravel		
1.3	(-5.85)	SM/SC	silty, clayey Sand ~~with gr~~	2.5y 3/2	firm	fine		
1.5	(-6.05)							

Comments

10/19/10
KKK13
1.40'
← bottom
top →

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

Date: 10/19/10 | Station ID: KKK13 | All Measurements are ± 0.1 feet
Logged By: KGM | Core Sample ID: S-1Φ0-CΦ25 | Water Depth (A): 5.0
Collection Mechanism: PC | Latitude: 41° 40.369' | Length of Push Core Assembly (B): ~~12.3~~ KGM 12.2
Time on Station: 10:17 | Longitude: 70° 54.893' | Water Surface to Top of Handle (C): 5.2
Time of Collection: 10:20 | GPS Accuracy: 12 ft. | Length of Core (from bottom) (D): 1.4 KGM
Time Depart Station: 10:27 | Tide Elevation (from tide board) (G): 0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.2
(H) Elevation of the bottom of the core (NGVD): G - (B - C): -6.8
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition): -5.7
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -5.4
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -4.8

(Note if I - I_2 within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.4)	thin layer of black (5y 2.5/1) OL on surface						
		OL SML CL	OL marbled w/ clayey silt	5y 3/1	loose	fine	H_2S	S-1Φ0-CΦ25-Φ-Φ.5
0.3	(-5.7)							
		CL/ML	Silty Clay	5y 3/1	firm	fine		S-1Φ0-CΦ25-Φ.5-1.Φ
1.4	(-6.8)							

Comments: slight oily sheen on top of core when collected.

10/19/10
KKK15
0.9'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10	Station ID: KKK15	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ19	Water Depth (A):	4.8
Collection Mechanism: PC	Latitude: 41° 40.361'	Length of Push Core Assembly (B):	12.25
Time on Station: 10:30	Longitude: 70° 54.893'	Water Surface to Top of Handle (C):	6.4
Time of Collection: 10:33	GPS Accuracy: 11 ft.	Length of Core (from bottom) (D):	0.9
Time Depart Station: 10:38		Tide Elevation (from tide board) (G):	0.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-5.75
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-5.35
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.85)	OL/CL/ML	organic silt marbled with silty clay	5Y 2.5/1 ~ 5Y 3/1	moderately firm to loose	fine		S-1Φ0-CΦ19-Φ-Φ.5
0.5	(-5.35)	CL/ML	silty clay	5Y 3/1	firm	fine		S-1Φ0-CΦ19-Φ.5-Φ.9
0.9	(-5.75)							

Comments: slight oily sheen on surface of core when collected.

10/18/10
KKK2
0.8'
← bottom
top →
EXPO
S-100-C006-0.5-1.0
10/13/10
S-100-C006-0-0.5
10/13/10

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Station ID: KKK2
All Measurements are ± 0.1 feet
Logged By: KBM
Core Sample ID: S-1Φ0-CΦΦ6
Water Depth (A): 6.6
Collection Mechanism: P.C.
Latitude: 41° 40.414'
Length of Push Core Assembly (B): ~~13.3~~ KBM 12.25
Time on Station: 10:28
Longitude: 70° 54.892'
Water Surface to Top of Handle (C): 4.5
Time of Collection: 10:32
GPS Accuracy: 11 ft.
Length of Core (from bottom) (D): 0.8
Time Depart Station:
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.95

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) —

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -7.15

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.8

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-7.15)	ML/CL	clayey silt	5Y 3/1	loose	fine		S-1Φ0-CΦΦ6-Φ-Φ.5
0.1	(-7.25)	CL/ML	silty clay well sorted sand, fine to coarse	5Y 3/1	firm	coarse sand		S-1Φ0-CΦΦ6-Φ.5-1.Φ
0.8	(-7.95)							

Comments

10/18/10
KKK4
1.3'
bottom
top

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

Date: 10/18/10	Station ID: KCK4	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦΦ-CΦΦ7	Water Depth (A):	6.8
Collection Mechanism: PC.	Latitude: 41° 40. 406'	Length of Push Core Assembly (B):	12.3
Time on Station: 10:39	Longitude: 70° 54.892'	Water Surface to Top of Handle (C):	4.1
Time of Collection: 10:42	GPS Accuracy: 12 ft.	Length of Core (from bottom) (D):	1.3
Time Depart Station:		Tide Elevation (from tide board) (G):	-0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-0.2
(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)	-7.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-7.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-7.0

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-7.1)	OL/ML	Silt	5Y 2.5/1	loose	fine	strong H_2S	S-1ΦΦ-CΦΦ7-Φ-Φ.5
0.2	(-7.3)							
		CL/ML	Silty clay some fine sand	5Y 3/1	firm	fine		S-1ΦΦ-CΦΦ7-Φ5-1.Φ
0.8	dense layer of oyster shells							
1.3	(-8.4)							

Comments

10/18/10
KKK7
1.30"
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Station ID: KKK7
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1Φ0-CΦ13
Water Depth (A): ~~6.4~~ KGM 6.2
Collection Mechanism: P.C.
Latitude: 41° 40.394'
Length of Push Core Assembly (B): 12.25
Time on Station: 11:27
Longitude: 70° 52' 4.893'
Water Surface to Top of Handle (C): 4.6
Time of Collection: 11:30
GPS Accuracy: 13 ft.
Length of Core (from bottom) (D): 1.3
Time Depart Station: 11:35
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.85

(2*) Elevation of visual transition (NGVD(: H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.55

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-6.55)	OL	Organic Silt, Some fine sand	5Y 2.5/1	loose	fine	H_2S petrol odor	S-1Φ0-CΦ13-Φ-Φ.5
0.5 (-7.05)	ML/CL	Clayey silt, fine sand	5Y 3/1	loose	fine		S-1Φ0-~~CΦ13~~ CΦ13-Φ.5-1.Φ
0.65 (-7.2)	CL/ML	Silty clay	5Y 3/1	firm	fine		
1.3 (-7.85)	⊠	(ample oyster shells)					

Comments


10/19/10
KKA
135'
top
bottom

Woods Hole Group

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10
Station ID: KKK9
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1Φ0-CΦ14
Water Depth (A): 6.1
Collection Mechanism: pc.
Latitude: 41° 40.385'
Length of Push Core Assembly (B): 12.3
Time on Station: 09:45
Longitude: 70° 54.893'
Water Surface to Top of Handle (C): ~~6.1~~ KGM 4.7
Time of Collection: 09:47.
GPS Accuracy: 13 ft.
Length of Core (from bottom) (D): 1.35
Time Depart Station: 09:57
Tide Elevation (from tide board) (G): 0.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.5

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.1

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -5.85

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -5.75

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.6

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-5.75)	OL	Organic silt, fine sand	5Y 2.5/1	loose	fine	Strong H_2S	S-1Φ0-CΦ14-Φ-Φ.5
0.1	(-5.85)							
z*		ML/CL	clayey silt, some fine sand, shell hash	5Y 3/1	loose	fine		S-1Φ0-CΦ14-Φ.5-1.Φ
0.8	(-6.55)							
		CL/ML	silty clay, some fine sand	5Y 3/1	firm	fine		
1.35	(-7.1)							

Comments
Slight oily sheen on top of core when collected.

10/18/10
KY5
1.50'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Station ID: KY5
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦO-CΦΦ2
Water Depth (A): 5.7
Collection Mechanism: PC
Latitude: 41° 40.402'
Length of Push Core Assembly (B): 13.3
Time on Station: 09:31
Longitude: 70° 54.959'
Water Surface to Top of Handle (C): 5.5
Time of Collection: 09:38
GPS Accuracy: 13ft.
Length of Core (from bottom) (D): 1.5
Time Depart Station: 09:42
Tide Elevation (from tide board) (G): 0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.6

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -6.8

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.1

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.5

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-6.1)	OL	organic silt, fine sand	5Y 2.5/1 black	loose	fine	H_2S slight petroleum	S-1ΦO-CΦΦ2-Φ-Φ.5
0.2 (-6.3)	OL/CL/ML marbled	organic silt marbled with silty clay, fine sand	5Y 2.5/1 / 5Y 3/1 dark	loose	fine		S-1ΦO-CΦΦ2-Φ.5-1.Φ
0.7 (-6.8)	CL/ML	Silty Clay	5Y 3/1 dark grey	firm	fine		
1.5 (-7.6)							

Comments

10/19/10
KY7
1.30'
bottom
top

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/19/10
Station ID: KY7
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1Φ0-CΦ24
Water Depth (A): 6.7
Collection Mechanism: PC
Latitude: 41° 40.394'
Length of Push Core Assembly (B): 12.3
Time on Station: 09:18
Longitude: 70° 54.959'
Water Surface to Top of Handle (C): 3.9
Time of Collection: 09:23
GPS Accuracy: 13 ft.
Length of Core (from bottom) (D): 1.3
Time Depart Station: 09:27
Tide Elevation (from tide board) (G): 0.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.8

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.6

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -6.6

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -6.3

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -5.9

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-6.3)	OL	organic silt	5Y 2.5/1	loose	fine		S-1Φ0-CΦ24-Φ-Φ.5
0.1	(-6.4)	OL	OL marbled w/ clay silt	5Y 2.5/1	moderately loose	fine	H_2S	
0.3	(-6.6)	ML/CL		5Y 3/1				
		CL/ML with PT (wood chips?)	silty clay with peat (wood chips) piece of wood at 1 foot	5Y 3/1	firm	fine, one rock ~ 6cm		S-1Φ0-CΦ24-Φ.5-1.Φ
1.3	(-7.6)							

Comments
oily sheen on surface of core when collected.


10/18/10
KZ2
1.35'
top
bottom

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/18/10
Station ID: K72
All Measurements are ± 0.1 feet
Logged By: RGM
Core Sample ID: S-1Φ0-CΦΦ1
Water Depth (A): KGM ~~7.1~~ 6.7
Collection Mechanism: P.C.
Latitude: 41° 40.414'
Length of Push Core Assembly (B): 13.3
Time on Station: 09:10
Longitude: 70° 54.953'
Water Surface to Top of Handle (C): KGM ~~4.9~~ 4.6
Time of Collection: 09:20
GPS Accuracy: 13ft.
Length of Core (from bottom) (D): 1.35
Time Depart Station: 09:28
Tide Elevation (from tide board) (G): 0.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -8.5

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -7.35

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -7.15

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -6.5

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = 11)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs	
0.0	(-7.15)	OL	organic silt, some fine sand	5y 2.5/1 black	loose	fine	Strong H_2S	S-1Φ0-CΦΦ1-Φ-Φ.5	
0.2	(-7.35)	CL/ML	Silty clay some fine sand	5y 4/1 dark grey	loose	fine		S-1Φ0-CΦΦ1-Φ.5-1.Φ	Shell hash (oyster shells
1.1	(-8.25)								
1.35	(-8.5)	CL/ML	Silty clay	5y 4/1	firm	fine			

Comments: 1st attempt unsuccessful - oyster shells - core 1ft long, should have been 1.7ft. long


10/21/10
MA4
0.80'
top
bottom

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/21/10
Logged By: KGM
Collection Mechanism: P.C.
Time on Station: 10:36
Time of Collection: 10:41
Time Depart Station: 10:45

Station ID: MA4
Core Sample ID: S-1Φ0-CΦ39
Latitude: 41°40.651'
Longitude: 70°55.007'
GPS Accuracy: 12ft.

All Measurements are ± 0.1 feet
Water Depth (A): 0.3
Length of Push Core Assembly (B): 6.7
Water Surface to Top of Handle (C): 5.5
Length of Core (from bottom) (D): 0.8
Tide Elevation (from tide board) (G): 1.7

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.7
(H) Elevation of the bottom of the core (NGVD): G - (B - C) + 0.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) —
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D ~~0.3~~ KGM 1.3
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A 1.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 11)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (1.3)	PT, ML/CL	roots, organic material, clayey silt surrounding, some fine sand	2.5y 3/2	firm	fine		S-1Φ0-CΦ39-Φ-Φ.5
0.6 (0.7)	↓	↓	2.5y 2.5/1	firm	fine		S-1Φ0-CΦ39-Φ.5-Φ.8
0.8 (0.5)		black					

Comments: hit refusal at depth of 0.8 feet.

10/21/10
MA7
1.10'
bottom
top

Woods Hole Group

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/21/10	Station ID: MA7	All Measurements are ± 0.1 feet	
Logged By: KAM	Core Sample ID: S-1Φ0-CΦ41	Water Depth (A):	4.5
Collection Mechanism: PC	Latitude: 41° 40.637'	Length of Push Core Assembly (B):	12.3
Time on Station: 09:29	Longitude: 70° 55.006'	Water Surface to Top of Handle (C):	6.6
Time of Collection: 09:32	GPS Accuracy: 13ft.	Length of Core (from bottom) (D):	1.1
Time Depart Station: 09:34		Tide Elevation (from tide board) (G):	2.7

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.7
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-3.0
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-2.0
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-1.9
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-1.8

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-1.9)							
0.1	(-2.0)	OL	organic silt	5Y 2.5/1	loose	fine		S-1Φ0-CΦ41-Φ-Φ.5
		CL/ML SW	silty clay, well graded fine to medium sand	5Y 3/1	firm	~~fine~~ medium		
0.6	(-2.5)							S-1Φ0-CΦ41-Φ.5-1.Φ
		PT/CL ML	silty clay organics (peat) some fine sand	5Y 3/2	firm	fine		
1.1	(-3.0)							

Comments: hit refusal at 1.1 foot depth

10/21/10
MA9
0.50'
bottom
top

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/24/10
Logged By: KGM
Collection Mechanism: PC
Time on Station: 10:07
Time of Collection: 10:27
Time Depart Station: 10:32

Station ID: MA9
Core Sample ID: S-100-C043
Latitude: ~~41°40.628'~~ 41°40.629'
Longitude: ~~70°55.006'~~ 70°55.004'
GPS Accuracy: 10 ft.

All Measurements are ± 0.1 feet

Water Depth (A): ~~1.1~~ ~~2.4~~ KGM 3.6
Length of Push Core Assembly (B): ~~11.8~~ ~~6.1~~ KGM 6.65
Water Surface to Top of Handle (C): ~~4.95~~ KGM 2.5
Length of Core (from bottom) (D): 0.5
Tide Elevation (from tide board) (G): ~~2.2~~ KGM 1.9

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): ~~2.2~~ KGM 1.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -2.75
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -1.75
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.7

(Note if I + I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-1.75)	OL	Organic silt, fine to coarse sand	5Y 2.5/1	loose	coarse sand	petro odor	S-100-C043-0-0.5
0.2	(-1.95)	CL/ML	Silty clay organic debris	5Y 2.5/1	firm	fine		
0.4	(-2.15)	CL/ML	Silty clay, Shell hash	5Y 3/1	firm	fine		
0.5	(-2.25)							

Comments: 1st attempt unsuccessful - hit refusal at ~0.5 ft.
2nd attempt unsuccessful - hit refusal at ~0.3ft - moved location ~10 feet into channel for 3rd attempt

10/21/10
MB11
0.85'
bottom
top

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/21/10
Station ID: MB11
Logged By: KGM
Core Sample ID: S-1Φ0-CΦ44
Collection Mechanism: PC
Latitude: 41° 40.621'
Time on Station: 09:51
Longitude: 70° 55.001'
Time of Collection: 09:57
GPS Accuracy: 11 ft.
Time Depart Station: 10:03

All Measurements are ± 0.1 feet
Water Depth (A): ~~5.8~~ KGM 6.0
Length of Push Core Assembly (B): 12.0
Water Surface to Top of Handle (C): ~~4.75~~ KGM 5.0
Length of Core (from bottom) (D): 0.85
Tide Elevation (from tide board) (G): ~~2.4~~ KGM 2.3

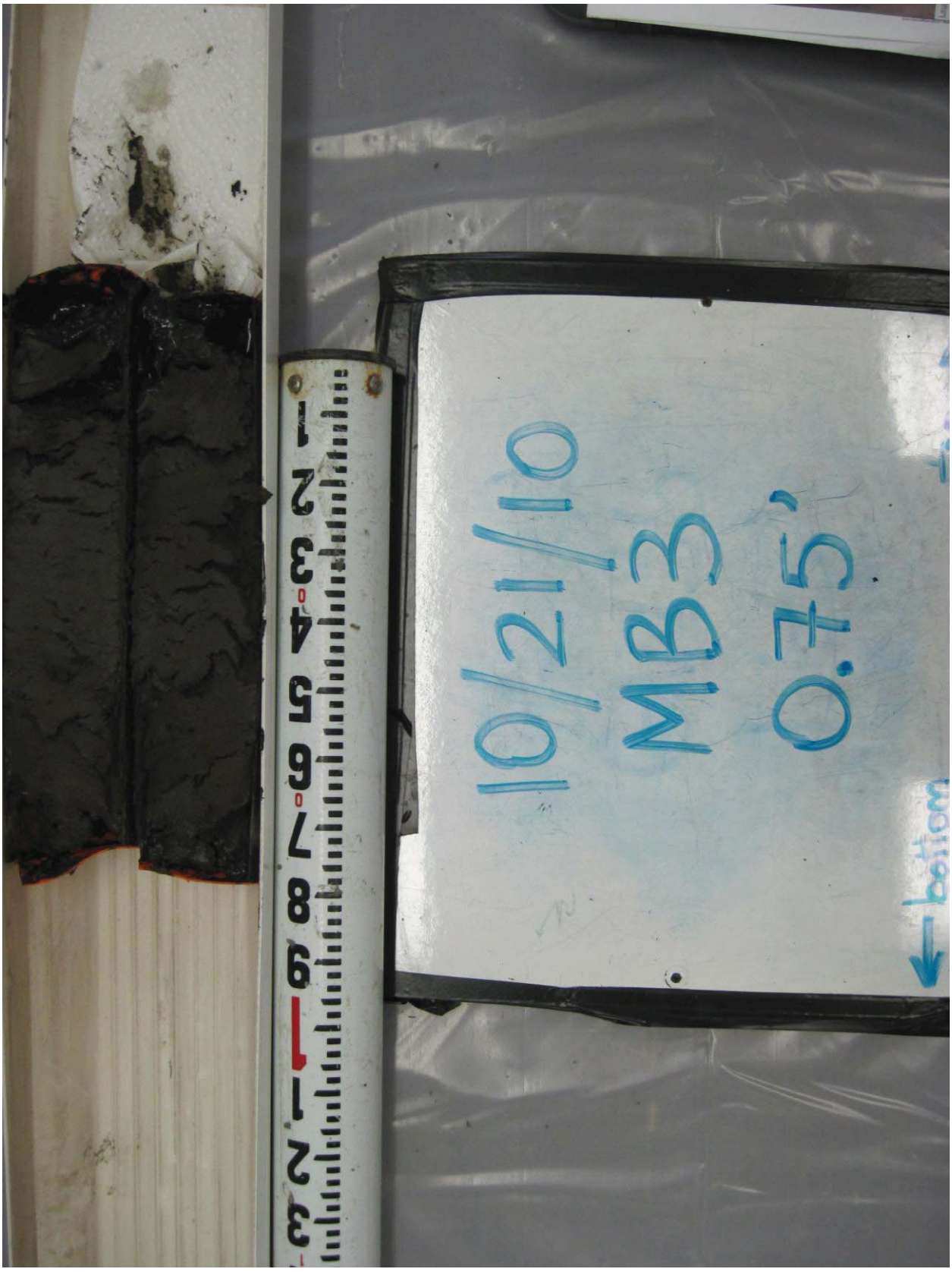
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): ~~2.4~~ KGM 2.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -4.7
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -4.05
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.85)	OL/SW	sandy silt	5y 2.5/1	loose	coarse	petrol odor	S-1Φ0-CΦ44-Φ-Φ.5
0.2	(-4.05)							
		CL/SW/M	sandy silty clay, fine to coarse sand, some gravel	5y 2.5/1	firm	coarse		S-1Φ0-CΦ44-Φ-Φ.9
0.8	(-4.65)							
0.85	(-3.7)	CL/SW/M	sandy silty clay	5y 3/2	firm	coarse		

Comments: 1st try unsuccessful - hit refusal at ~0.75 ft
hit refusal on second attempt at approx. same depth.
Slight spotty sheen on surface of core sample observed during collection


10/21/10
MB3
0.75'
bottom

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/21/10
Station ID: MB3
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1Φ0-CΦ38
Water Depth (A): 7.2
Collection Mechanism: pc
Latitude: 41° 40.654'
Length of Push Core Assembly (B): 12.4
Time on Station: 08:54
Longitude: 70° 54.000'
Water Surface to Top of Handle (C): 4.05
Time of Collection: 08:58
GPS Accuracy: 17 ft.
Length of Core (from bottom) (D): 0.75
Time Depart Station: 09:02
Tide Elevation (from tide board) (G): 3.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 3.2

(H) Elevation of the bottom of the core (NGVD): G - (B - C) ~~-5~~ -5.15

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) ——

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -4.4

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -4.0

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.4)	thin layer of OL (ML), black (5y 2.5/1), fine silt, loose						S-1Φ0-CΦ38-Φ-Φ.5
		CL/ML	Silty clay	5y 3/1				S-1Φ0-CΦ38-Φ.5-Φ.8
0.75	(-5.15)							

Comments: Slight spotty oily sheen on top of core during collection hit refusal at 0.75 ft. depth - could not push core deeper.

10/21/10
MB5
1.25'
bottom
top
EXPO

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/21/10
Station ID: MB5
All Measurements are ± 0.1 feet

Logged By: KGM
Core Sample ID: S-1Φ0-CΦ4Φ
Water Depth (A): 5.6

Collection Mechanism: pc.
Latitude: 41°40.646'
Length of Push Core Assembly (B): 12.3

Time on Station: 09:18
Longitude: 70°55.001'
Water Surface to Top of Handle (C): 5.1

Time of Collection: 09:22
GPS Accuracy: 14 ft.
Length of Core (from bottom) (D): 1.25

Time Depart Station: 09:27
Tide Elevation (from tide board) (G): 2.9

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.9

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -4.3

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.15

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.05

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -2.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.05)	OL	organic silt	5Y 2.5/1	loose	fine		S-1Φ0-CΦ4Φ-Φ-Φ.5
0.1	(-3.15)	SM/SC	well graded fine to coarse sand w/ clay/silt	5Y 3/1	firm	coarse		
0.5	(-3.55)	CL/ML	silty clay	5Y 3/1	firm	fine		S-1Φ0-CΦ4Φ-Φ.5-1.Φ
1.25	(-4.3)							

Comments


10/21/10
MB8
120'
top
bottom

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/21/10	Station ID: MB8	All Measurements are ±0.1 feet	
Logged By: KGM	Core Sample ID: S-1Φ0-CΦ42	Water Depth (A):	5.4
Collection Mechanism: PC	Latitude: 41°40.633'	Length of Push Core Assembly (B):	12.35
Time on Station: 09:39	Longitude: 70°55.000'	Water Surface to Top of Handle (C):	5.3
Time of Collection: 09:44	GPS Accuracy: 15 ft.	Length of Core (from bottom) (D):	1.2
Time Depart Station: 09:48		Tide Elevation (from tide board) (G):	2.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.5
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-4.55
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-3.35
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.25
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.9

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.25)	OL	organic silt	5y 2.5/1	loose	fine	slight petroleum odor	S-1Φ0-CΦ42-Φ-Φ.5
0.1	(-3.35)	SW	well graded sand (fine to gravel)	5y 3/1	firm	coarse gravel		
0.5	(-3.75)	CL/ML	silty clay,	5y 3/2	firm	fine		S-1Φ0-CΦ42-Φ.5-1.Φ
		SP	poorly graded fine sand					
0.8	(-4.05)	CL/ML	silty clay, well graded fine sand to gravel	5y 4/2	moderately firm	6cm Stone (cobble)		
		~~SR~~ SW						
1.2	(-4.55)							

Comments

10/21/10
ME7
1.00'
bottom
top

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/21/10
Station ID: ME7
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: ~~ESS~~ S-1Φ0-CΦ45
Water Depth (A): 7.2
Collection Mechanism: PC
Latitude: 41°40.650'
Length of Push Core Assembly (B): 11.6
Time on Station: 09:07
Longitude: 70° 54.984'
Water Surface to Top of Handle (C): 3.0
Time of Collection: 09:11
GPS Accuracy: 11 ft.
Length of Core (from bottom) (D): 1.0
Time Depart Station: 09:15
Tide Elevation (from tide board) (G): 3.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 3.0

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -5.6

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) ---

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -4.6

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -4.2

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.6)	thin layer of OL, black (5Y 2.5/1), very loose					H_2S	S-1Φ0-CΦ45-Φ-Φ.5
		ML	Silt, some fine sand	5Y 2.5/2	loose	fine		
0.3	(-4.9)							
		ML/CL	clayey silt, fine to medium sand	5Y 3/1	moderately firm	medium grain sand		S-1Φ0-CΦ45-Φ.5-1.Φ
0.8	(-5.4)	CL/ML	silty clay	5Y 3/1	firm	fine		
1.0	(-5.6)							

Comments


A1
S-100-C047
10-26-10
3.6 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Logged By: DB
Collection Mechanism: P.C.
Time on Station: 0913
Time of Collection: 0917
Time Depart Station: 0922

Station ID: A1
Core Sample ID: S-100-C047
Latitude: 41°39.551
Longitude: 70°55.139
GPS Accuracy: ± 9

All Measurements are ± 0.1 feet
Water Depth (A): 4.7
Length of Push Core Assembly (B): 15.25
Water Surface to Top of Handle (C): 6.2
Length of Core (from bottom) (D): 3.8
Tide Elevation (from tide board) (G): 3.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 3.0 - (15.25 - 6.2)
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -6.05
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) ~~-6.05~~ -2.25
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -2.25
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.7

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0		ML/CL Clayey-silt	Sy 2.5/1 Black	Loose	Fine	Strong Petroleum and H2S Odor	Mixed shells
1.4		CL/ML Silty-clay	Sy 2.5/1	Firm	Fine		Organics throughout
3.0		Sand Layer		Fine/med			
3.6		CL/ML Silty-Clay	Sy 2.5/1	Firm	Fine		

Comments
- Sheen when fitting core barrel
- Strong petrolem odor and H2S odor

Samples: S-100-C047-0-1.0
S-100-C047-1.0-2.0
S-100-C047-2.0-3.0
S-100-C047-3.0-3.6


A2
S-100-C071
10/28/10
3.9 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/28/10
Station ID: A2
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID: S-1Ø0-CØ71
Water Depth (A): 4.2
Collection Mechanism: P.C.
Latitude: 41° 39.551
Length of Push Core Assembly (B): 10.15
Time on Station: 0833
Longitude: 70°55.126
Water Surface to Top of Handle (C): 1.1
Time of Collection:
GPS Accuracy: ±9
Length of Core (from bottom) (D): 3.9
Time Depart Station:
Tide Elevation (from tide board) (G): 1.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.0

(H) Elevation of the bottom of the core (NGVD): G - (B - C) 1.0 - (10.15 - 1.1) = -8.05

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -4.4

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -4.15

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.25	OL	Organic Silt	Sy 2.5/1 Black	Loose			
	ML	Silt w/ fine sand	Sy 4/2 Olive Gray	Loose			Shell hash
1.4							
	ML/CL	Clayey Silt w/ fine sand	Sy 2.5/1 Blck	Medium	Fine	Petroleum	
2.5							
	CL/ML	Silty Clay w/ fine sand	Sy 2.5/1 Black	Firm	Fine		Organic Detritus
3.9							

Comments
Strong H_2S odor

Sample Eject open 10/28/10 @ 10:53

SAMPLES: S-1Ø0-CØ71-Ø-1.Ø
S-1Ø0-CØ71-1.Ø-2.Ø
S-1Ø0-CØ71-2.Ø-3.Ø
S-1Ø0-CØ71-3.Ø-3.9


A3
S-100-C048
10-26-10
4.0 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10	Station ID: A3	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: ~~S-100-C048~~ S-100-C048	Water Depth (A): 6.8	
Collection Mechanism: P.C.	Latitude: 41°39.552	Length of Push Core Assembly (B): 15.3	
Time on Station: 0856	Longitude: 70°55.114	Water Surface to Top of Handle (C): 3.85	
Time of Collection: 0905	GPS Accuracy: ± 9	Length of Core (from bottom) (D): 4.0	
Time Depart Station: 0910		Tide Elevation (from tide board) (G): 3.0	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 3.0-(15.3-3.85)

(H) Elevation of the bottom of the core (NGVD): G - (B - C) = -8.45

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) = -4.65

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D = -4.45

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A = -3.8

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL	Silty w/fine sand	5Y 2.5/1 Black	loose	Fine		organics
0.2	CL/ML	Silty Clay w/fine sand	5Y 4/2 Olive Grey	loose	Fine		
0.7	ML/CL	Clayey Silt w/fine sand	5Y 2.5/1 Black		Fine		
1.6	CL/ML	Silty Clay	5Y 2.5/1 Black	~~loose~~ medium	Fine		
2.35	CL/ML	Silty Clay fine sand and shells	5Y 2.5/2 Black	Firm	Fine		
4.0							

Comments
H_2S + Petroleum odor

Samples: S-100-C048-0-1.0
S-100-C048-1.0-2.0
S-100-C048-2.0-3.0
S-100-C048-3.0-4.0


B1
S-100-C049
10-26-10
4.05ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10	Station ID: B1	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C049	Water Depth (A): 3.1	
Collection Mechanism: P.C.	Latitude: 41°39.536	Length of Push Core Assembly (B): 15.3	
Time on Station: 1442	Longitude: 70°55.127	Water Surface to Top of Handle (C): 7.45	
Time of Collection: 1450	GPS Accuracy: ±9	Length of Core (from bottom) (D): 4.05	
Time Depart Station: 1455		Tide Elevation (from tide board) (G): -0.4	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.4-(15.3-7.45)

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.45

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.65

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.4

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.5

(Note if I * I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom ⇨ H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL	Silt - Fine to medium sand	5Y 2.5/1 Black	loose			Shells throughout
0.25	ML/CL	Clayey Silt w/ fine sand	5Y 3/2 Dark olive Gray	loose			
0.45	CL/ML	Silty Clay w/ fine sand	5Y 2.5/1 Black	Firm			
0.7	CL/ML	Silty Clay w/ fine sand + shell hash	5Y 3/2 Dark olive gray	Firm			
4.05							

Comments: H_2S Odor

Samples = S-100-C049-0-1.0
S-100-C049-1.0-2.0
S-100-C049-2.0-3.0
S-100-C049-3.0-4.05


B2
S-100
10-26-10
4.25ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Logged By: DB
Collection Mechanism: P.C.
Time on Station: 1426
Time of Collection: 1432
Time Depart Station: 1437

Station ID: B2
Core Sample ID: S-100-C050
Latitude: 41° 39.535
Longitude: 70° 55.111
GPS Accuracy: ± 9

All Measurements are ± 0.1 feet
Water Depth (A): 3.6
Length of Push Core Assembly (B): 15.3
Water Surface to Top of Handle (C): 6.95
Length of Core (from bottom) (D): 4.15
Tide Elevation (from tide board) (G): -0.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.4-(15.3-6.95)

(H) Elevation of the bottom of the core (NGVD): G - (B - C) = -8.75

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) = -4.6

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D = -4.6

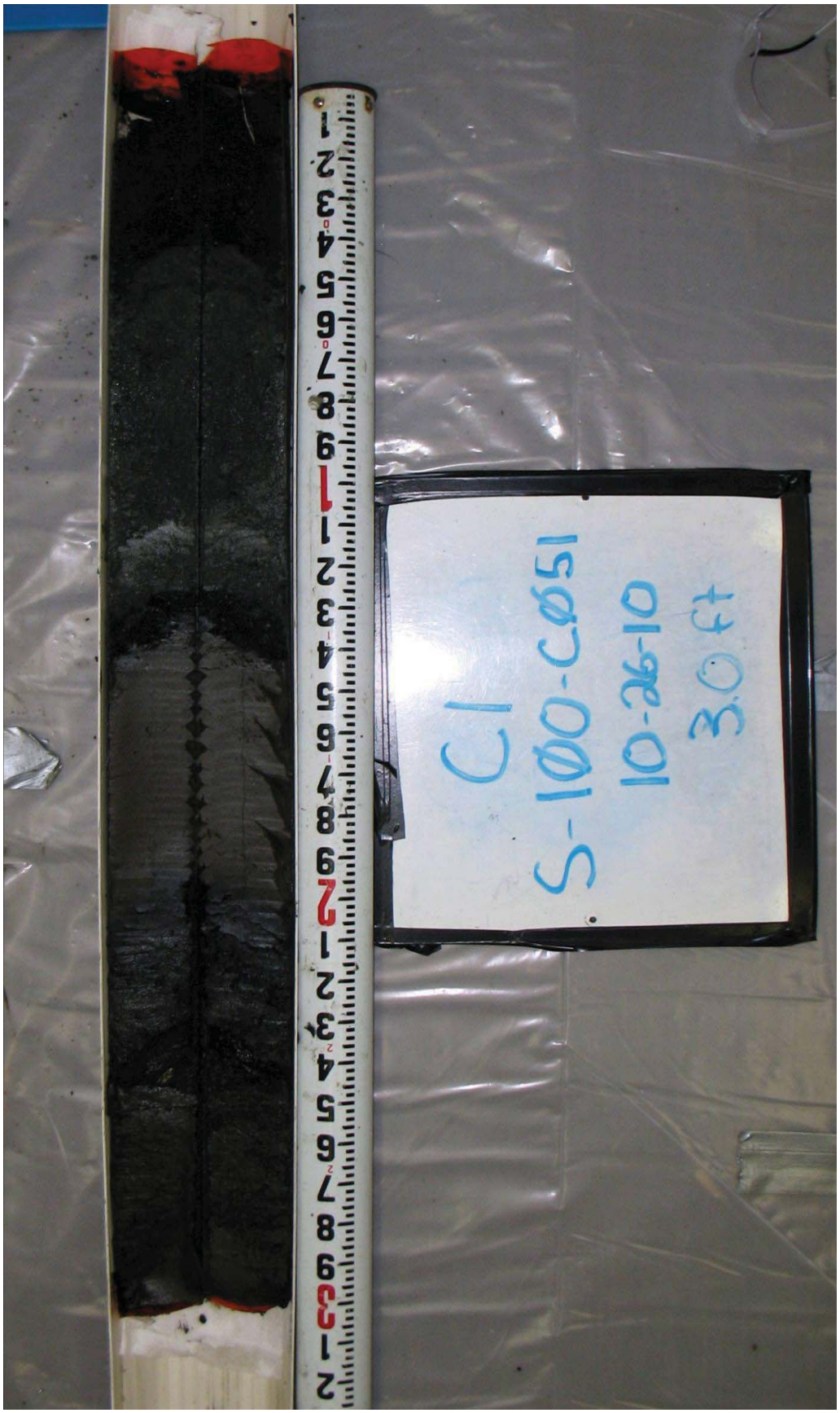
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A = -4.0

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.1	OL/ML	Silt	5Y2.5	loose			
	CL/ML	Silty Clay w/fine sand	5Y 2.5/2 Black	loose			
0.6	CL/ML	Silt / Clay w/ fine sand + shell hash	5Y 3/2 Dark olive gray	loose - medium			
1.4	CL/ML	Silty Clay w/fine sand shell hash	5Y 4/2 Olive gray	Firm			
4.25							

Comments
- Strong H_2S + Petroleum odor

Samples: S-100-C050-0-1.0
S-100-C050-1.0-2.0
S-100-C050-2.0-3.0
S-100-C050-3.0-4.0


C1
S-100-C051
10-26-10
3.0 ft

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

Date: 10/25/10 | Station ID: C1 | All Measurements are ± 0.1 feet
Logged By: DB | Core Sample ID: S-100-CØS1- | Water Depth (A): 3.6
Collection Mechanism: P.C. | Latitude: 41°39.526 | Length of Push Core Assembly (B): ~~15.25~~ 10.2
Time on Station: 0923 | Longitude: 70°55.140 | Water Surface to Top of Handle (C): 2.85
Time of Collection: 0937 | GPS Accuracy: ±9 | Length of Core (from bottom) (D): 3.0
Time Depart Station: 0945 | Tide Elevation (from tide board) (G): 3.2

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 3.2 - (10.2 - 2.85)
(H) Elevation of the bottom of the core (NGVD): G - (B - C) = -4.2
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) = -4.2
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D = -1.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A = -0.4

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom → H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	SM	Fine to coarse sand well sorted	Gley1 2.5/ Black	Medium		Petroleum	
0.4	SM/SC	Silty Clayey Sand	Gley1 4/10y Dark greenish gray	Firm			
1.25	SM		Gley1 4/10y	Firm		Petroleum	
1.4	CL	Clay	5y 2.5/2 Black				
2.0	CL/ML	Silty Clay w/ fine to medium sand	5y 2.5/1 Black			Petroleum	
2.45	CL	Clay w/ fine Sand	5y 2.5/1 Black				
3.0							

Comments
-1st attempt unsuccessful, using fingers on second attempt

Samples = S-100-CØS1-Ø-1.Ø
S-100-CØS1-1.Ø-2.Ø
S-100-CØS1-2.Ø-3.Ø


C2
S-ION-C001
11/3/10

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Logged By: DRW
Collection Mechanism: P.C.
Time on Station: 13:35
Time of Collection: 1343
Time Depart Station: 13:53

Station ID: C2
Core Sample ID: S-1ΦN-CΦΦ1
Latitude: 41° 39.526'
Longitude: 70° 55.120'
GPS Accuracy: 12 ft.

All Measurements are ± 0.1 feet
Water Depth (A): 1.0
Length of Push Core Assembly (B): 10.1
Water Surface to Top of Handle (C): 4.4
Length of Core (from bottom) (D): 4.0
Tide Elevation (from tide board) (G): -0.9

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.9
(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) ~~-4.0~~ -4
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D ~~-4.0~~ -2.6
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.9

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-2.6)	OL/SM	Silty fine to coase well graded sand, organics	5y 2.5/1 black	firm	coarse	strong H_2S	S-1ΦN-CΦΦ1-Φ-~~Φ.5~~ 1.Φ + one MSMSD
1.4	(-4.0)	CL/ML	silty clay	5y 4/1 dark grey	firm	fine		S-1ΦN-CΦΦ1-1.Φ-2.Φ
1.8	(-4.4)	SM/SC	Silty clayey sand - fine to medium w/gravel	5y black 2.5/1	firm	2cm gravel		S-1ΦN-CΦΦ1-2.Φ-3.Φ archive
2.6	(-5.2)	CL/ML	silty clay	5y 4/1 ~~dark~~ dark grey	firm	fine		
3.2	(-5.8)	CL/ML	silty clay, some fine sand	5y 3/1 very dark grey	firm	fine		S-1ΦN-CΦΦ1-3.Φ-4.Φ
4.0	(-6.6)							

Comments: 1st attempt successful

Cut open 11/4/10 at 09:00


C3
S-ION-C002
11/3/10
4.2 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Station ID: C3
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦN-CΦΦ2
Water Depth (A): 6.5
Collection Mechanism: PC
Latitude: 41°39.526'
Length of Push Core Assembly (B): 15.2
Time on Station: 13:13
Longitude: 70°55.117'
Water Surface to Top of Handle (C): 4.0
Time of Collection: 13:20
GPS Accuracy: 10 ft.
Length of Core (from bottom) (D): 4.2
Time Depart Station: 13:30
Tide Elevation (from tide board) (G): ~~-1.2~~ KGM -1.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): ~~-1.2~~ KGM -1.1

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -12.3

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -8.5

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -8.1

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -7.6

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-8.1)	OL/SM	silty sand (fine) with organics	5y black 2.5/1	firm	fine	H_2S	S-1ΦN-CΦΦ2-Φ-1.Φ
0.4	(-8.5)	CL/ML	Silty clay, Some fine sand, Oyster shell hash	5y 3/1 Very dark grey	firm	fine	Strong H_2S	S-1ΦN-CΦΦ2-1.Φ-2.Φ S-1ΦN-CΦΦ2-2.Φ-3.Φ S-1ΦN-CΦΦ2-3.Φ-4.Φ
4.2	(-12.3)							

Comments
1st attempt successful
cut open 11/4/10 at 09:20


CH
S-100-0852
10-26-10
4054

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Logged By: DB
Collection Mechanism: P.C.
Time on Station: 1414
Time of Collection: 1420
Time Depart Station: 1426

Station ID: C4
Core Sample ID: S-100-C052
Latitude: 41°39.526
Longitude: 70°55.104
GPS Accuracy: ±9

All Measurements are ± 0.1 feet
Water Depth (A): 7.7
Length of Push Core Assembly (B): 15.3
Water Surface to Top of Handle (C): 3.0
Length of Core (from bottom) (D): 4.05
Tide Elevation (from tide board) (G): -0.2

Calculations for Determination of Z* Elevation

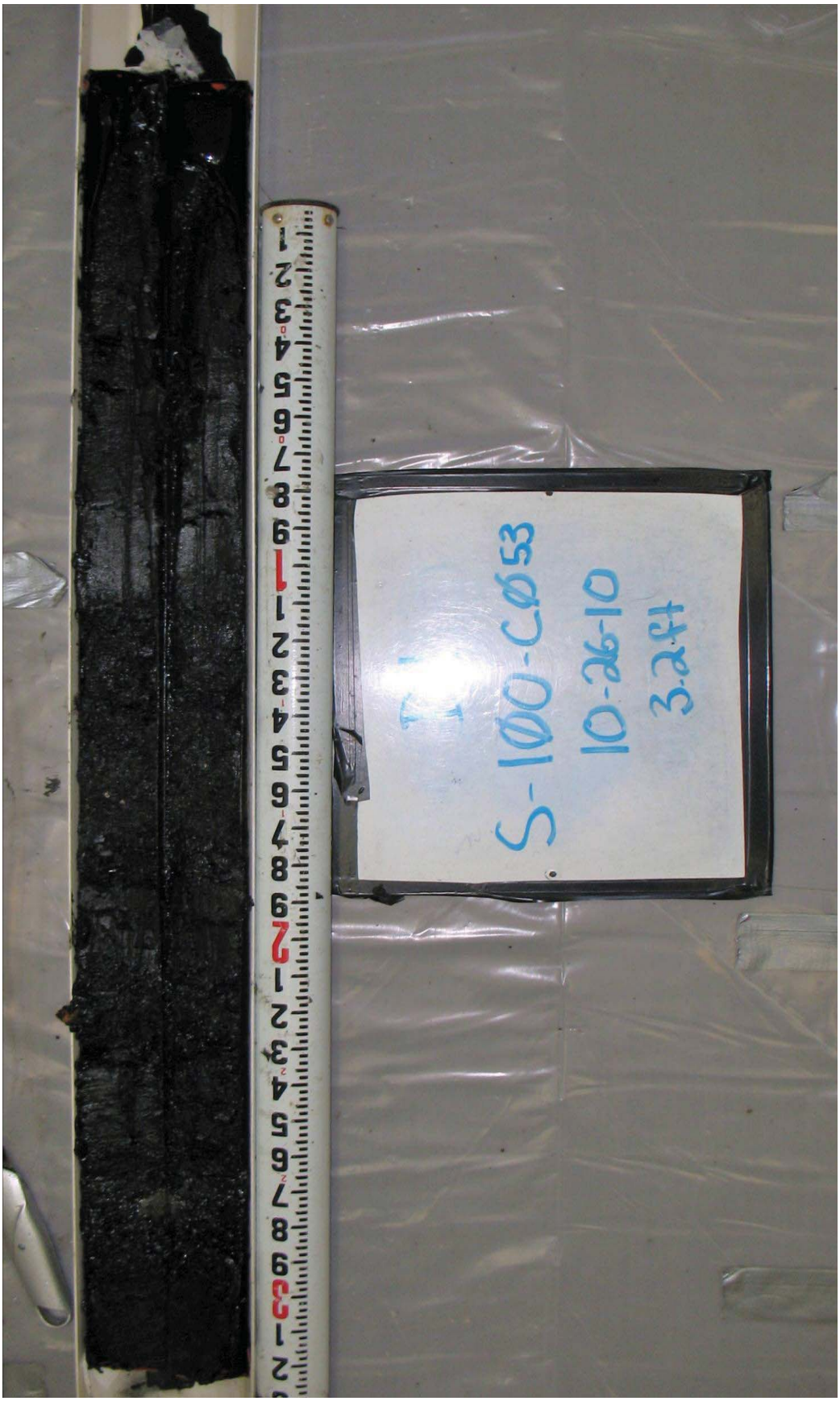
(G) Elevation of Water Surface (NVGD) (as read from tide board): ~~-7.55~~ -0.2
-0.2(15.3-3.0)
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -12.5
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -8.65
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -8.45
(I_2) -Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -7.5

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.2	OL	Clayey Silt w/ fine sand	5Y 2.5/1 Black	Loose	—	—	—
	CL/ML	Silty Clay w/ fine sand	5Y 3/1	Firm			
1.0						—	—
	CL/ML	Clay w/ shell hash	5Y 3/2 Dark Olive Grey	Firm			Lots of shell hash
3.0							
	CL/M	Silty Clay w/ fine to medium sand	5Y 3/2 Dark Olive Grey	Loose			
4.05							

Comments

Samples = S-100-C052-0-1.0
S-100-C052-1.0-2.0
S-100-C052-2.0-3.0
S-100-C052-3.0-4.0


S-100-C053
10-26-10
3.2ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Logged By: DB
Collection Mechanism: P.C.
Time on Station: 0948
Time of Collection: 0955
Time Depart Station: 1000

Station ID: D1
Core Sample ID: S-100-C053
Latitude: 41°39.518
Longitude: 70°55.153
GPS Accuracy: ±9

All Measurements are ± 0.1 feet
Water Depth (A): 5.1
Length of Push Core Assembly (B): 10.25
Water Surface to Top of Handle (C): 1.2
Length of Core (from bottom) (D): 3.4 DB 3.2
Tide Elevation (from tide board) (G): 3.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 3.4-(10.25-1.2)
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -5.65
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.45
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -2.45
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
Ø	OL	Silt to Clayey Silt		Loose			
1.Ø	SM/SC	Sand with Clayey silt		Poorly Sorted			
1.85	CL/ML	Silty Clay		Firm			
2.1	ML/CL	Clayey silt w/ detritus		Loose			
2.75	SC	Sand with Clay		Well sorted			
3.2							

Comments
- Sheen on surface
- Strong Petroleum + H_2S Odor

Samples: S-100-C053-Ø-1.Ø.
S-100-C053-1.Ø-2.Ø
S-100-C053-2.Ø-3.Ø


D2
S-ION-C003
11/3/10
3.94

Woods Hole Group

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10	Station ID: D2	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦN-CΦΦ3	Water Depth (A):	2.7
Collection Mechanism: PC	Latitude: 41° 39.517'	Length of Push Core Assembly (B):	10.1
Time on Station: 13:55	Longitude: 70° 55.139'	Water Surface to Top of Handle (C):	2.7
Time of Collection: 14:02	GPS Accuracy: 9ft.	Length of Core (from bottom) (D):	3.9
Time Depart Station: 1410		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)	-8.0
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.7
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.3

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.1)	OL/MH	organic silt, some fine sand	black 5Y 2.5/1	loose	fine	H_2S	S-1ΦN-CΦΦ3-Φ1Φ
0.6	(-4.7)	SM/GM	silty medium to coarse sand with gravel, organics		firm	3 cm		S-1ΦN-CΦΦ3-1.Φ-2.Φ
1.4	(-5.5)	SM	silty fine to coarse sand		firm	coarse sand		S-1ΦN-CΦΦ3-2.Φ-3.Φ
2.4	(-6.5)	GM/SM	silty medium to coarse sand with gravel		firm	3cm		S-1ΦN-CΦΦ3-3.Φ-3.9
3.9	(-8.0)							

Comments: 1st attempt successful

Cut open 11/4/10 at 09:40


C3
S-ION-C004
11/3/10
3.6 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Logged By: KGM
Collection Mechanism: PC
Time on Station: 12:56
Time of Collection: 13:03
Time Depart Station: 13:11

Station ID: D3
Core Sample ID: S-1ΦN-CΦΦ4
Latitude: 41° 39.516'
Longitude: 70° 58.117'
GPS Accuracy: 10 ft.

All Measurements are ± 0.1 feet
Water Depth (A): KGM ~~10.2~~ 7.4
Length of Push Core Assembly (B): KGM ~~10.2~~ 15.3
Water Surface to Top of Handle (C): KGM ~~7.4~~ 3.4
Length of Core (from bottom) (D): 3.6
Tide Elevation (from tide board) (G): −1.2

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) −13.1
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) −9.7
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D −9.5
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A −8.6

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-9.5)	OL	organic silt, fine sand	black 5y 2.5/1	loose	fine		S-1ΦN-CΦΦ4-Φ-1.Φ
0.2 (-9.7)	CL/ML (OL)	organic silty clay, detritis, fine sand	very dark grey 5y 3/1	firm	strong fine	H_2S	S-1ΦN-CΦΦ4-1.Φ-2.Φ
1.0 (-10.5)	CL/ML	silty clay, some shell hash	dark grey 5y 4/1	very firm	fine		S-1ΦN-CΦΦ4-2.Φ-3.Φ
3.6 (-13.1)							S-1ΦN-CΦΦ4-3.Φ-3.6

Comments: 1st attempt successful
out open 11/4/10 at 10:05


LH
S-10U-C054
10-26-10
3.7ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10	Station ID: D4	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C054	Water Depth (A):	7.8
Collection Mechanism: P.C	Latitude: 41°39.517	Length of Push Core Assembly (B):	15.3
Time on Station: 1345	Longitude: 70°55.088	Water Surface to Top of Handle (C):	2.8
Time of Collection: 1353	GPS Accuracy: ±9	Length of Core (from bottom) (D):	3.7
Time Depart Station: 1356		Tide Elevation (from tide board) (G):	0.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 0.1-(15.3-2.8)	-12.4
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-8.75
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-8.7
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-7.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 / 0.05	OL		5y2.5/1 Black				
	CL/ML	Silty Clay w/ fine to medium sand	5y 4/2 Olive Grey	Firm			Shell Hash
3.7							

Comments: H_2S Odor

Samples: S-100-C054-0-1.0
S-100-C054-1.0-2.0
S-100-C054-2.0-3.0
S-100-C054-3.0-4.0

E2
S-ION-C005
11/3/10
4.1 ft.

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Station ID: E2
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦN-CΦΦ5
Water Depth (A): 1.6
Collection Mechanism: PC
Latitude: 41° 39.506'
Length of Push Core Assembly (B): 10.1
Time on Station: 15:05
Longitude: 70° 55.135'
Water Surface to Top of Handle (C): 3.8
Time of Collection: 15:10
GPS Accuracy: 10 ft.
Length of Core (from bottom) (D): 4.1
Time Depart Station: 15:15
Tide Elevation (from tide board) (G): 0.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.4

(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) -2.6

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -1.7

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.2

(Note if I - I_2 within ± 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-1.7)	OL/SM	organic Silty Sand - well graded fine to medium	black 5y 2.5/1	firm	medium	light H_2S	S-1ΦN-CΦΦ5-Φ-1.Φ
0.9	(-2.6)							
		SM	silty sand - well graded fine to coarse with gravel	very dark grey 2.5y 3/1	firm	coarse 2cm gravel		S-1ΦN-CΦΦ5-1.Φ-2.Φ
2.2	(-3.9)							
		SM	silty fine sand some organics	very dark grey 5y 3/1	firm	fine		S-1ΦN-CΦΦ5-2.Φ-3.Φ
3.4	(-5.1)							
3.7	(-5.4)	CL/ML	silty clay	5y 3/1	firm	fine		
		ML/CL	clayey silt with fine sand	5y 3/1	firm	fine		S-1ΦN-CΦΦ5-3.Φ-4.Φ
4.1	(-5.8)							

+ one MSMSD (archive)

Comments: 1st attempt successful -

cut open 11/4/10 at 10:20

E3
S-ION-C006
11/3/10
4.1 ft.

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10	Station ID: E3	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦN-CΦΦ6	Water Depth (A):	1.0
Collection Mechanism: PC.	Latitude: 41°39.506'	Length of Push Core Assembly (B):	10.2
Time on Station: 12:41	Longitude: 70°55.122'	Water Surface to Top of Handle (C):	4.6
Time of Collection: 12:46	GPS Accuracy: 11 ft.	Length of Core (from bottom) (D):	3.9
Time Depart Station: 12:51		Tide Elevation (from tide board) (G):	-1.3

Calculations for Determination of Z* Elevation

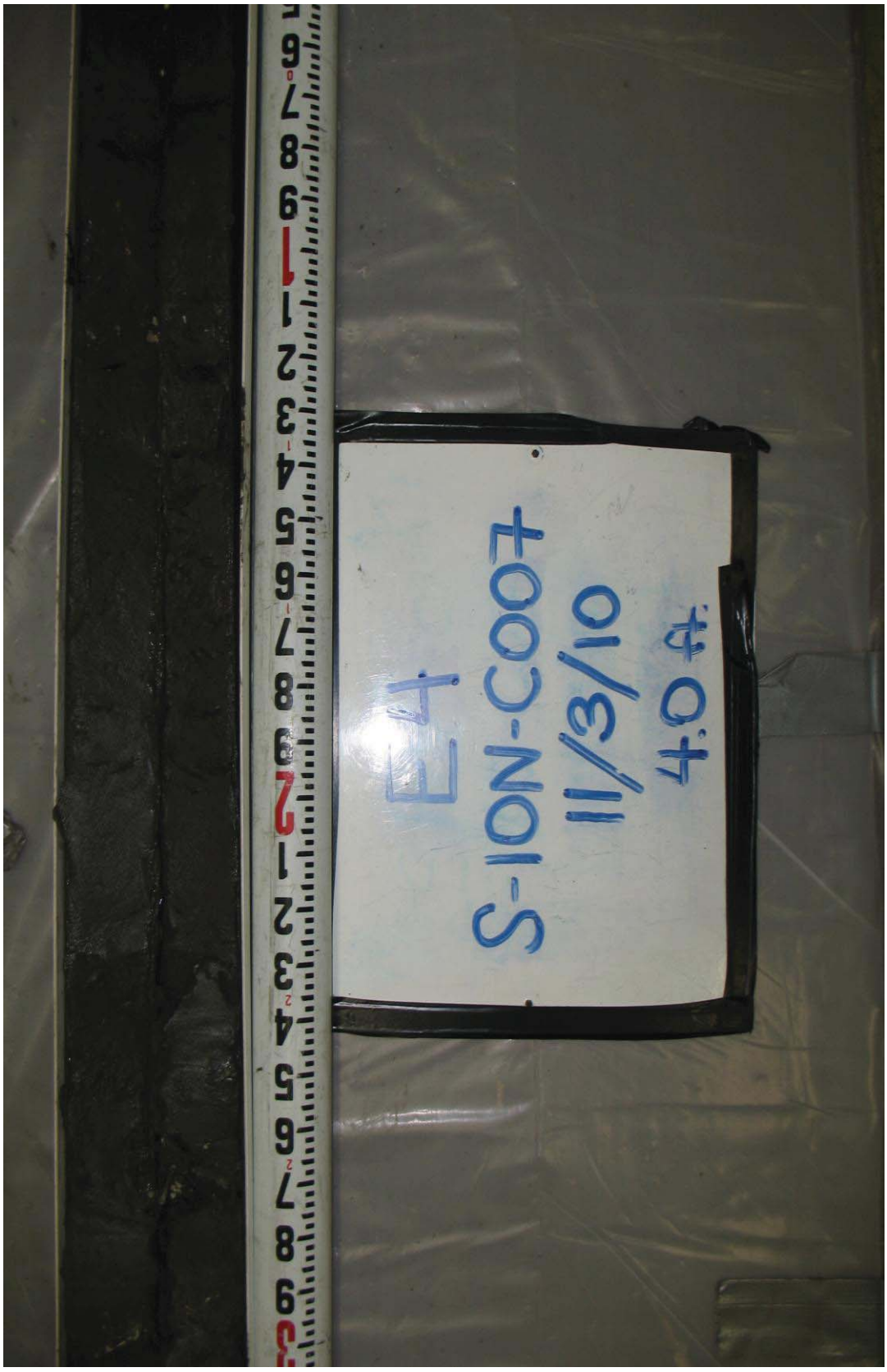
(G) Elevation of Water Surface (NVGD) (as read from tide board):	-1.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-6.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.9
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.Φ
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.8

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.0)	OL/SM	organic silty well graded fine to medium sand	black 5y 2.5/1	firm	medium	H_2S	S-1ΦN-CΦΦ6-Φ-1.Φ
1.9	(-4.9)	OL/ML/CL	organic clayey silt, some fine sand, detritis	very dark grey 5y 3/1	firm	fine	light H_2S	S-1ΦN-CΦΦ6-1.Φ-2.Φ
2.5	(-5.5)	CL/ML	silty clay	olive grey 5y 4/2	firm	fine		S-1ΦN-CΦΦ6-2.Φ-3.Φ
2.7	(-5.7)	OL/ML/CL	organic clayey silt, detritis	5y 3/1	firm	fine		
3.3	(-6.3)	CL/ML	silty clay. shell hash	5y 3/2 dark olive grey	firm	fine		S-1ΦN-CΦΦ6-3.Φ-3.9
3.9	(-6.9)							

Comments: 1st attempt successful

at open 11/4/10 at 10:50


E4
S-ION-C007
11/3/10
4 of 4

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

Date: 11/3/10	Station ID: E4	All Measurements are ± 0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦN-CΦΦ7	Water Depth (A):	4.2
Collection Mechanism: PC	Latitude: 41° 39.506'	Length of Push Core Assembly (B):	10.1
Time on Station: 12:23	Longitude: 70° 55.109'	Water Surface to Top of Handle (C):	~~1.7~~ 1.3
Time of Collection: 12:34	GPS Accuracy: 10 ft	Length of Core (from bottom) (D):	~~1.3~~ KGM 4.0
Time Depart Station: 12:39		Tide Elevation (from tide board) (G):	-1.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	-1.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-10.1
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-6.2
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.1
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-5.5

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom → H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-6.1)	OL	organic silt, fine sand	5Y black 2.5/1	loose	fine		S-1ΦN-CΦΦ7-Φ.1Φ
0.1	(-6.2)	ML/CL	clayey silt, fine sand	5Y 3/1 dark gray	moderately firm	fine		S-1ΦN-CΦΦ7-1.Φ-2.Φ
0.6	(-6.7)	CL/ML	silty clay, shell hash throughout	olive grey 5Y 4/1	firm	fine		S-1ΦN-CΦΦ7-2.Φ-3.Φ + one NSMSD (archive)
								S-1ΦN-CΦΦ7-3.Φ-4.Φ
4.0	(-10.1)							

Comments: 1st attempt - successful
cut open 11/4/10 at 11:10


F
S-10U-C0SS
10-26-10
3.95

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

Date: 10/25/10	Station ID: E5	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C055	Water Depth (A): 8.7	
Collection Mechanism: P.C.	Latitude: 41° 39.506	Length of Push Core Assembly (B): 15.25	
Time on Station: 1357	Longitude: 70° 55.088	Water Surface to Top of Handle (C): 1.7	
Time of Collection: 1404	GPS Accuracy: ± 9	Length of Core (from bottom) (D): 3.95	
Time Depart Station: 1412		Tide Elevation (from tide board) (G): 0.0	

Calculations for Determination of Z* Elevation

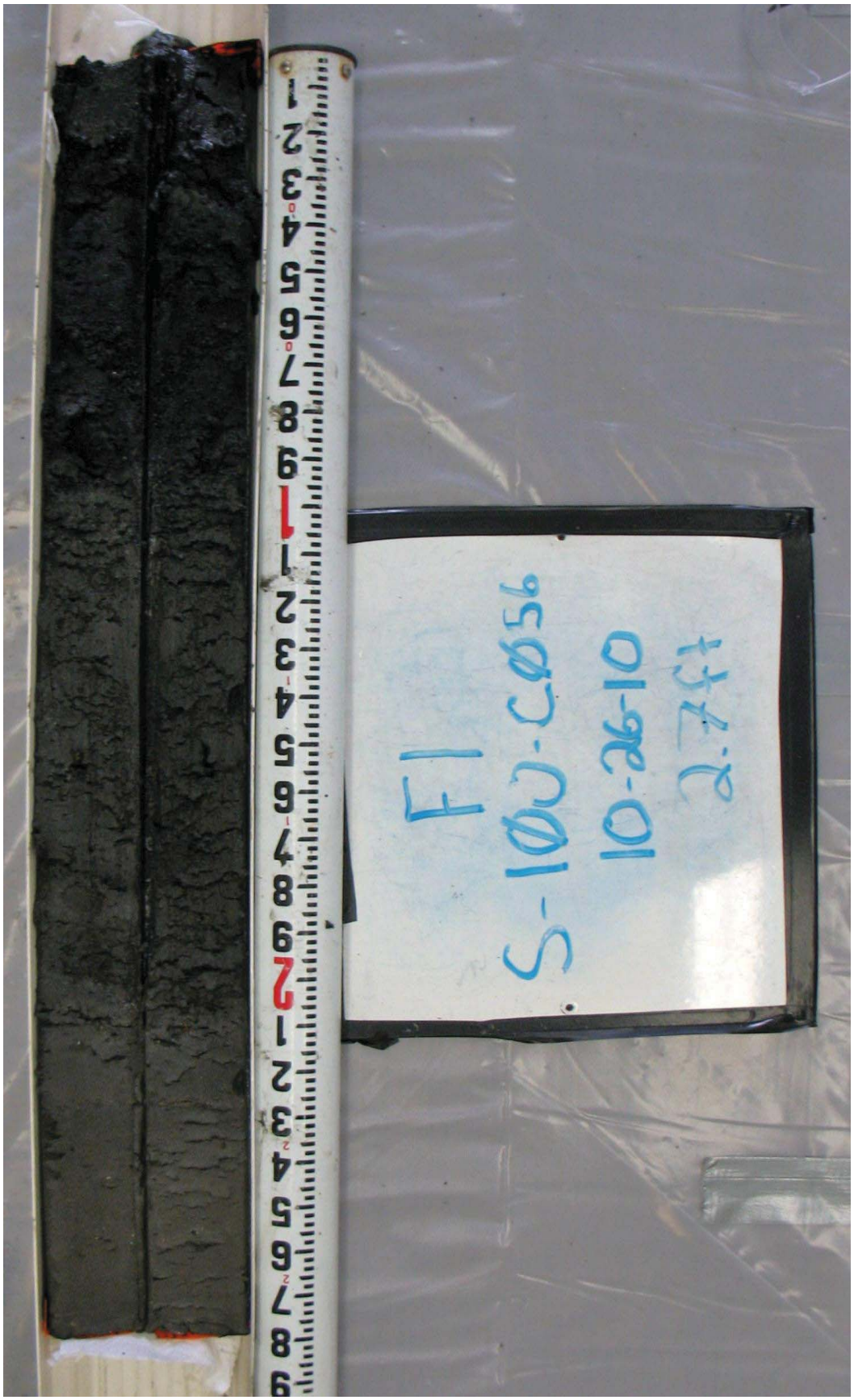
(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.0-(15.25-1.7)	0.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-13.55
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-9.8
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-9.6
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-8.7

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL	Silt w/ organics	Sy 2.5/1 Black	Loose			
0.2	CL/ML	Silty Clay w/ fine sand	Sy 5/B/2	Firm			
1.7	CL/ML	Loose Oyster Shells	Dark Olive Grey	Firm			
2.25	CL/ML	Silty Clay w/fine sand					
3.95							

Comments: H_2S Odor

Samples: S-100-C055-0-1.0
S-100-C055-1.0-2.0
S-100-C055-2.0-3.0
S-100-C055-3.0-4.0


F1
S-10U-C056
10-26-10
2.7ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10	Station ID: F1	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C056	Water Depth (A): ~~4.8~~ DB 4.9	
Collection Mechanism: P.C.	Latitude: 41°39.496	Length of Push Core Assembly (B): 9.55	
Time on Station: 1026	Longitude: 70°55.1484	Water Surface to Top of Handle (C): ~~6.45~~	
Time of Collection: 1036	GPS Accuracy: ± 9	Length of Core (from bottom) (D): 2.7	
Time Depart Station: 1039		Tide Elevation (from tide board) (G): 3.0	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 3.0
3-(9.55-6.45)

(H) Elevation of the bottom of the core (NGVD): G - (B - C) ~~-4.8~~ DB -5.1

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -2.6

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D ~~-3.6~~ DB -2.4

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.9

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom - H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL		5y 2.5/1 Black	Loose		Petroleum	
0.2	SM	Silty Sand	5y 2.5/1 Black	Firm			
0.9	CL/ML	Silty Clay w/ fine sand	5y 2.5/2	Firm			Detritus
2.0	CL/ML	Silty Clay w/ fine sand	5y 3/2 Dark Olive gray	Firm			Shell hash
2.7							

Comments
- 1st attempt only recoved a 0.4 ft core
- 2nd attempt moved to back of the boat
- Fingers used

Samples: S-100-C056-0-1.0
S-100-C056-1.0-2.0
S-100-C056-2.0-3.0

F2
S-ION-C008
11/3/10
4.1A

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Station ID: F2
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦN-CΦΦ8
Water Depth (A): 1.4
Collection Mechanism: PC
Latitude: 41° 39.494'
Length of Push Core Assembly (B): 10.2
Time on Station: 14:16
Longitude: 70° 55.136'
Water Surface to Top of Handle (C): 3.8
Time of Collection: 14:22
GPS Accuracy: 9 A.
Length of Core (from bottom) (D): 4.1
Time Depart Station: 14:28
Tide Elevation (from tide board) (G): -0.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.4

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -6.8

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -4.1

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -2.7

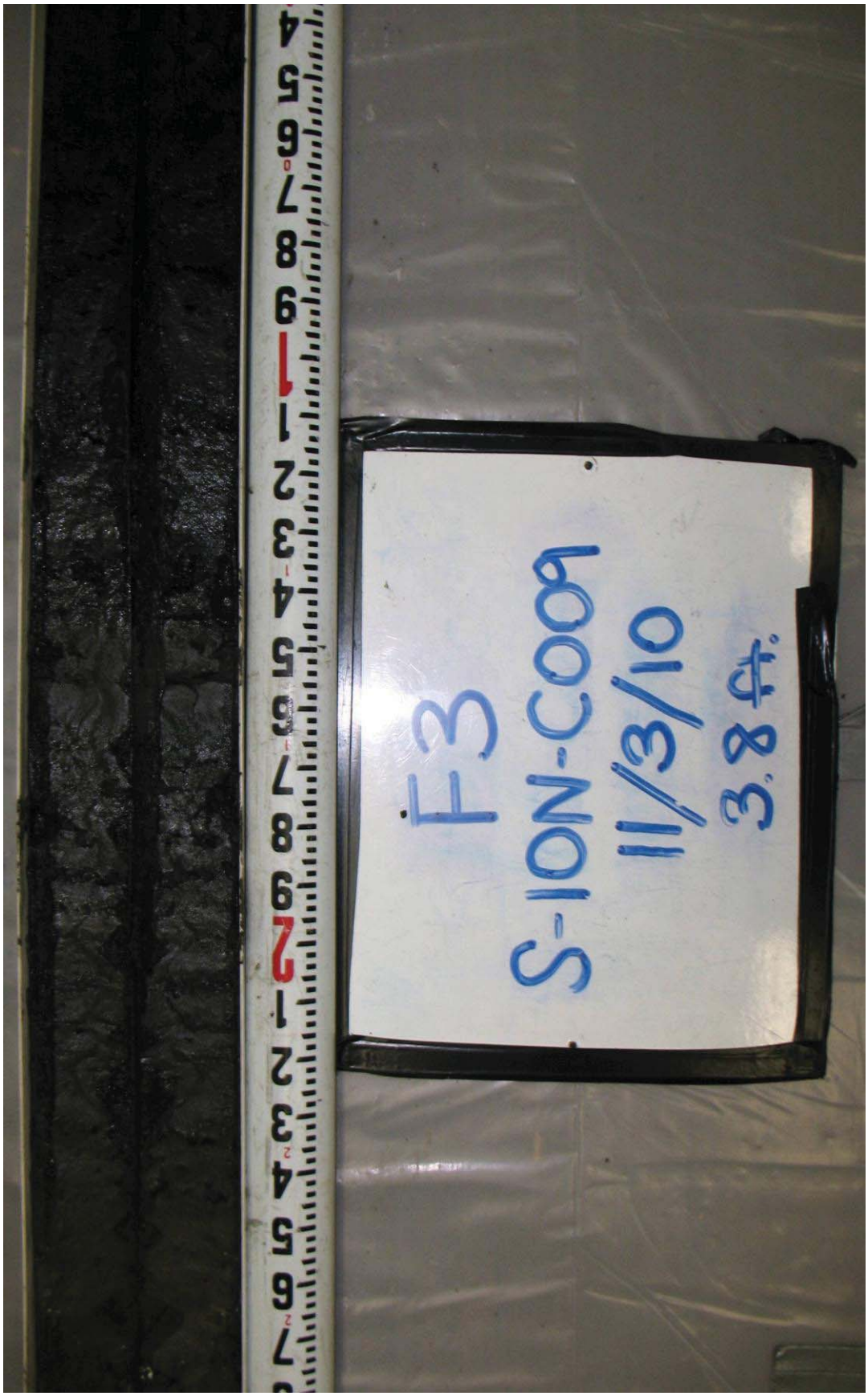
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.8

(Note if $I - I_2$ within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-2.7)	OL/SM	organic silty sand - well graded fine to coarse	5Y 2.5/1 black	firm	coarse	strong H_2S	S-1ΦN-CΦΦ8-Φ-1.Φ
1.4	(-4.1)	OL/SM/SC	organic silty clayey fine sand	5Y 2.5/1	firm	fine		S-1ΦN-CΦΦ8-1.Φ-2.Φ
1.9	(-4.6)							
2.1	(-4.8)	CL/mL	silty clay	5Y 4/1 dark grey	firm	fine		S-1ΦN-CΦΦ8-2.Φ-3.Φ
		CL/mL	silty clay with organic debris	5Y 3/1 very dark grey	firm	fine		
2.9	(-5.6)							
		CL/mL	silty clay with fine sand, shell hash	5Y 4/1 dark grey	firm	fine		S-1ΦN-CΦΦ8-3.Φ-4.Φ
4.1	(-6.8)							

Comments: 1st attempt successful

Cut open 11/4/10 at 11:35


F3
S-ION-C009
11/3/10
3.8 ft.

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

Date: 11/3/10 | Station ID: F3 | All Measurements are ± 0.1 feet
Logged By: KGM | Core Sample ID: S-1ΦN-CΦΦ9 | Water Depth (A): 1.8
Collection Mechanism: PC | Latitude: 41° 39.494' | Length of Push Core Assembly (B): 10.1
Time on Station: 12:09 | Longitude: 70° 55.122' | Water Surface to Top of Handle (C): 4.0
Time of Collection: 12:16 | GPS Accuracy: 10 ft. | Length of Core (from bottom) (D): 3.8
Time Depart Station: 12:20 | Tide Elevation (from tide board) (G): -1.3

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.3
(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): -4.5
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D: -3.6
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A: -3.1

(Note if I + I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.6)	OL/SM	Organic silty Sand -	5Y 2.5/1	firm	medium	H_2S	S-1ΦN-CΦΦ9-Φ-ΦΦ 1.Φ
0.9	(-4.5)	OL/sm/sc	fine to medium organic silty clayey sand	black 5Y 2.5/1 dark grey	firm	fine		S-1ΦN-CΦΦ9-1.Φ-2.Φ
1.4	(-5.0)	CL/ML	Silty clay	5Y 4/1	firm	fine		
1.6	(-5.2)	CL/ML	Silty clay, some organics	5Y 3/1 very dark grey		fine		S-1ΦN-CΦΦ9-2.Φ-3.Φ
2.3	(-5.9)	CL/ML	silty clay	5Y 4/1 dark grey	firm	fine		S-1ΦN-CΦΦ9-3.Φ-3.8
3.8	(-7.4)							

Comments: 1st attempt successful
Cut open 11/4/10 at 11:45


F4
S-100-C0773
10/28/10
3.9ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/28/10	Station ID: F4	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C073	Water Depth (A):	4.9
Collection Mechanism: P.C.	Latitude: 41°39.494	Length of Push Core Assembly (B):	10.2
Time on Station: 0850	Longitude: 70° 55.110	Water Surface to Top of Handle (C):	0.9
Time of Collection: 0855	GPS Accuracy: ± 9	Length of Core (from bottom) (D):	3.9
Time Depart Station: 0905		Tide Elevation (from tide board) (G):	1.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 1.0-(10.2-0.9)	-8.3
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.4
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.4
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.9

(Note if I • I_2 within + 1.0 feet, discard and resample)

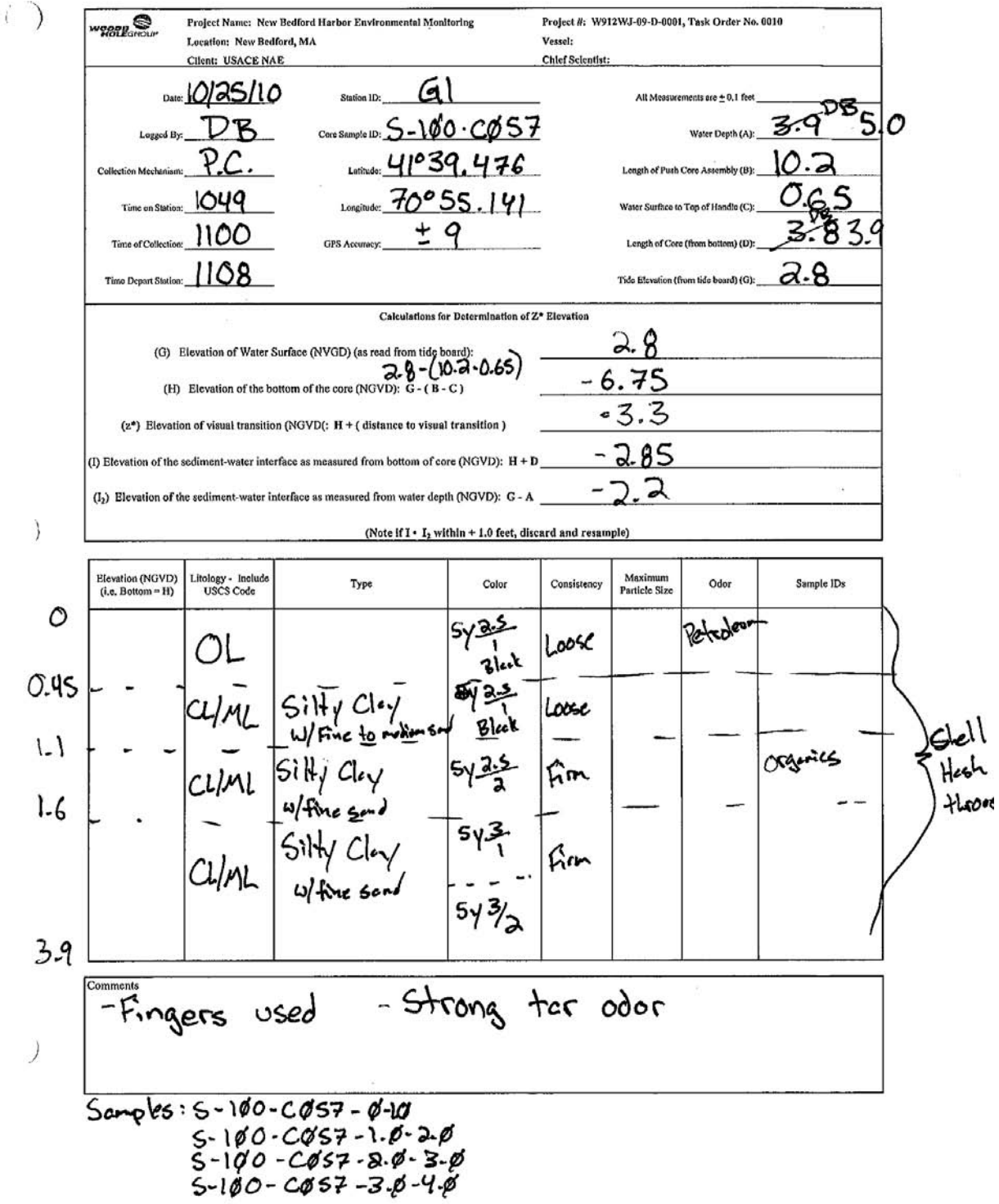
Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	SM	Silty Sand	5y 2.5/1	Loose	Medium	Petroleum	
0.45							
	ML/CL CL/ML	Silty Clay w/ fine sand	5y 3/1 Very Dark Grey	Loose	Fine		
1.8							
	ML/CL CL/ML	Silty Clay w/ fine sand	5y 4/1 Dark grey	Loose	Fine		
3.9							

Shells throughout

Comments
H2S odor
Cut open 10/28/10 @ 11:38

Samples: S-100-C073-0-1.0
S-100-C073-1.0-2.0
S-100-C073-2.0-3.0
S-100-C073-2.0-3.0MSD
S-100-C073-3.0-4.0


GI
S-100-C057
10-26-10
3.4++



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

Date: 10/25/10
Station ID: G1
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID: S-100-C057
Water Depth (A): 3.9 DB 5.0
Collection Mechanism: P.C.
Latitude: 41°39.476
Length of Push Core Assembly (B): 10.2
Time on Station: 1049
Longitude: 70°55.141
Water Surface to Top of Handle (C): 0.65
Time of Collection: 1100
GPS Accuracy: ± 9
Length of Core (from bottom) (D): 3.8 DB 3.9
Time Depart Station: 1108
Tide Elevation (from tide board) (G): 2.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.8
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 2.8-(10.2-0.65) = -6.75
(2*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -2.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -2.2

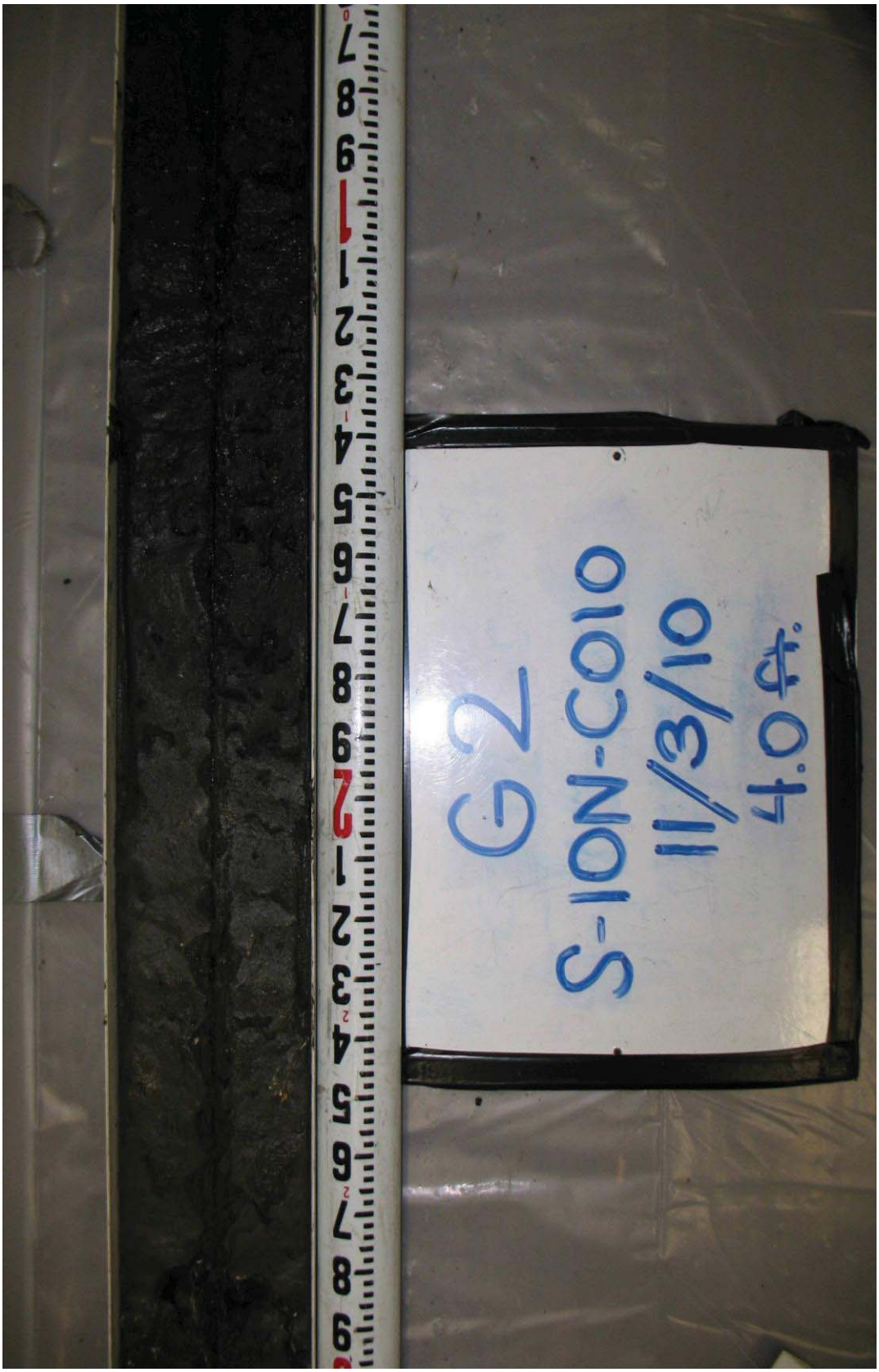
(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL		5Y 2.5/1 Black	Loose		Petroleum	
0.45	CL/ML	Silty Clay w/Fine to medium sand	5Y 2.5/1 Black	Loose			
1.1	CL/ML	Silty Clay w/fine sand	5Y 2.5/2	Firm		organics	
1.6	CL/ML	Silty Clay w/fine sand	5Y 3/1	Firm			
			5Y 3/2				
3.9							

Shell Hash throughout

Comments
- Fingers used - Strong tar odor

Samples: S-100-C057-0-1.0
S-100-C057-1.0-2.0
S-100-C057-2.0-3.0
S-100-C057-3.0-4.0


G2
S-ION-C010
11/3/10
4.0ft.

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Station ID: G2
All Measurements are ± 0.1 feet
Logged By: RGM
Core Sample ID: S-1ΦN-CΦ1Φ
Water Depth (A): 1.6
Collection Mechanism: PC
Latitude: 41°39.477'
Length of Push Core Assembly (B): 10.2
Time on Station: 11:37
Longitude: 70°55.127'
Water Surface to Top of Handle (C): 3.9
Time of Collection: 11:42
GPS Accuracy: 11 ft.
Length of Core (from bottom) (D): 4.0
Time Depart Station: 11:45
Tide Elevation (from tide board) (G): -1.4

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.4

(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.7

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -4.1

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.7

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.0

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.7)	OL	organic silt, some fine sand	5Y 2.5/1 black	loose	fine	H_2S	S-1ΦN-CΦ1Φ-Φ-1.Φ
0.4	(-4.1)	OL/SM	organic silty fine to coarse sand		firm	coarse		
0.7	(-4.4)	CL/ML	silty clay, some fine sand, organic debitis	5Y 3/1	firm	fine		S-1ΦN-CΦ1Φ-1.Φ-2.Φ
1.7	(-5.4)	CL/ML	~~organic~~ silty clay, some fine sand, shell hash	5Y 4/1	firm	fine		S-1ΦN-CΦ1Φ-2.Φ-3.Φ
								S-1ΦN-CΦ1Φ-3.Φ-4.Φ
4.0	(-7.7)							

Comments: 1st attempt successful

cut open 11/4/10 at 12:05


G3
S-ION-C011
11/3/10
3.8 ft.

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10	Station ID: G3	All Measurements are ±0.1 feet	
Logged By: KGM	Core Sample ID: S-1ΦN-CΦ11	Water Depth (A):	2.1
Collection Mechanism: pC	Latitude: 41°39.477'	Length of Push Core Assembly (B):	10.1
Time on Station: 11:51	Longitude: 70° 55.115'	Water Surface to Top of Handle (C):	3.8
Time of Collection: 11:56	GPS Accuracy: 10 ft.	Length of Core (from bottom) (D):	3.8
Time Depart Station: 12:00		Tide Elevation (from tide board) (G):	-1.3

Calculations for Determination of Z* Elevation

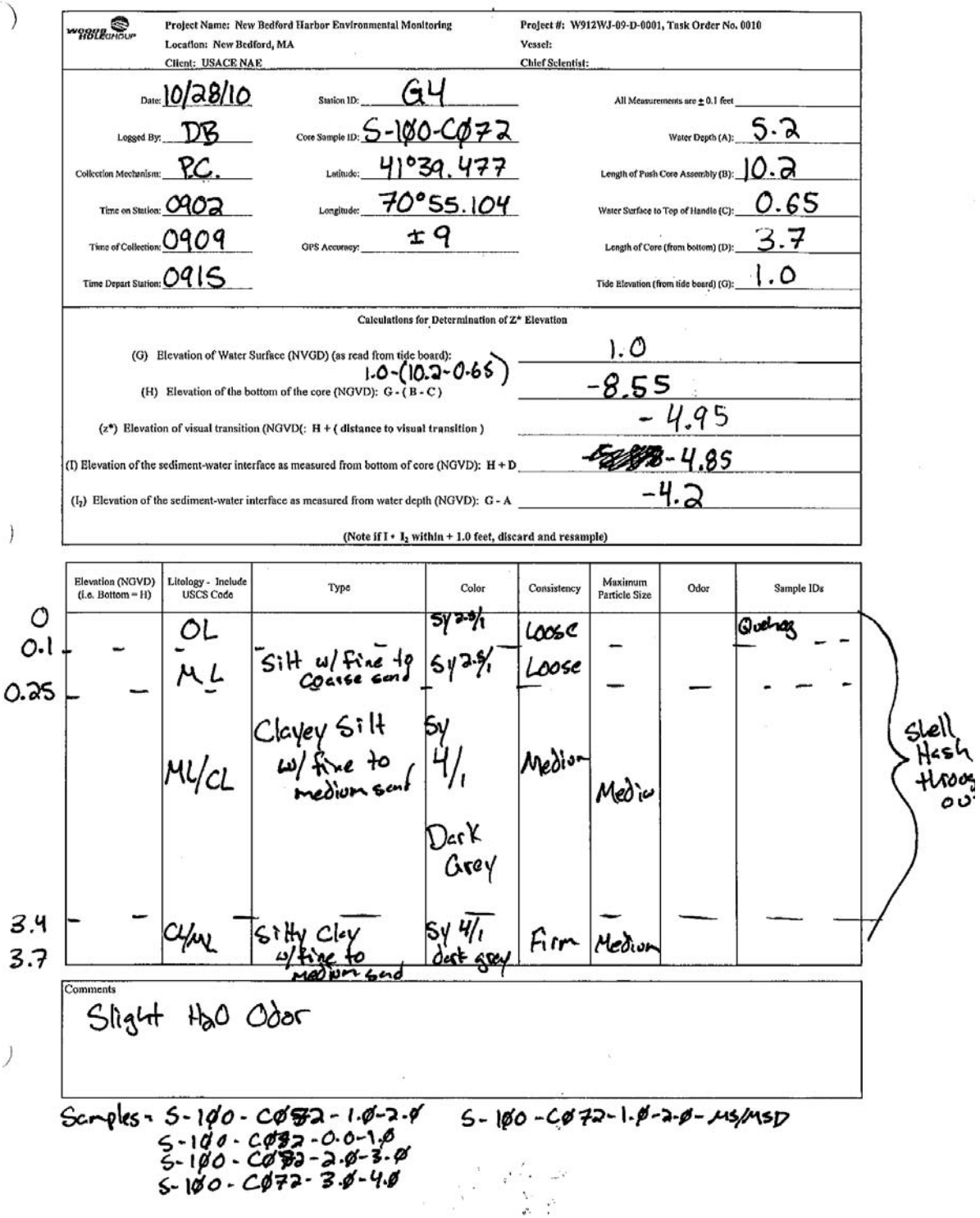
(G) Elevation of Water Surface (NVGD) (as read from tide board):	-1.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.6
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.1
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.8
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.8)	OL	organic silt some fine sand	5Y 2.5/1 black	loose	fine	H_2S	S-1ΦN-CΦ11-Φ-1.Φ
0.3	(-4.1)	CL/ML	silty clay with fine to medium sand, organics	very dark grey 5Y 3/1	firm	medium		S-1ΦN-CΦ11-1.Φ-2.Φ
1.3	(-5.1)	(OL) SM						
		CL/ML	Silty clay, some fine sand, shell hash	dark grey 5Y 4/1	firm	fine		S-1ΦN-CΦ11-2.Φ-3.Φ
								S-1ΦN-CΦ11-3.Φ-~~4.Φ~~ 3.8
(3.8)	(-7.6)							

Comments: 1st attempt successful
cut open 11/4/10 at 12:30


G4
S-100-C#72
10/28/10
3.4ft



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

Date: 10/28/10
Station ID: G4
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID: S-100-C072
Water Depth (A): 5.2
Collection Mechanism: P.C.
Latitude: 41°39.477
Length of Push Core Assembly (B): 10.2
Time on Station: 0902
Longitude: 70°55.104
Water Surface to Top of Handle (C): 0.65
Time of Collection: 0909
GPS Accuracy: ± 9
Length of Core (from bottom) (D): 3.7
Time Depart Station: 0915
Tide Elevation (from tide board) (G): 1.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.0
1.0-(10.2-0.65)
(H) Elevation of the bottom of the core (NGVD): G-(B-C) -8.55
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -4.95
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -4.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -4.2

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL		SY 2.5/1	Loose			Quahog
0.1	ML	Silt w/ fine to coarse sand	SY 2.5/1	Loose			
0.25	ML/CL	Clayey Silt w/ fine to medium sand	SY 4/1 Dark Grey	Medium	Medium		Shell Hash throughout
3.4	CL/ML	Silty Clay w/ fine to medium sand	SY 4/1 dark grey	Firm	Medium		
3.7							

Comments
Slight H2O Odor

Samples - S-100-C072-1.0-2.0 S-100-C072-1.0-2.0-MS/MSD
S-100-C072-0.0-1.0
S-100-C072-2.0-3.0
S-100-C072-3.0-4.0


H1
S-100-C075
10/28/10
3.6 ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/28/10	Station ID: H1	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C074	Water Depth (A):	5.1
Collection Mechanism: P.C.	Latitude: 41° 39.467	Length of Push Core Assembly (B):	10.2
Time on Station: 0916	Longitude: 70° 55.107	Water Surface to Top of Handle (C):	0.9
Time of Collection: 0920	GPS Accuracy: ± 9	Length of Core (from bottom) (D):	3.6
Time Depart Station: 0925		Tide Elevation (from tide board) (G):	1.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	1.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 1.0-(10.2-0.9)	-8.3
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.7
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.7
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-4.1

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.4 - -	ML/SM	Silt with Sand Coarse to gravel	5Y 2.5/1	Loose	Gravel	H_2S	- -
	ML/CL	Clayey Silt w/ fine Sand	5Y 4/2 Olive Grey	Loose			Shell Hash Throughout
3.6							

Comments

Samples Taken @ 10/28/10 1204

Samples = S-100-C074-0-1.0
S-100-C074-1.0-2.0
S-100-C074-2.0-3.0
S-100-C074-2.0-3.0 MS/MSD
S-100-C074-3.0-4.0


S-10U-C058
10-26-10
3.5ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10	Station ID: I1	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C058	Water Depth (A): 5.6	
Collection Mechanism: P.C.	Latitude: 41°39.456	Length of Push Core Assembly (B): 10.1	
Time on Station: 1116	Longitude: 70°55.128	Water Surface to Top of Handle (C): 0.5	
Time of Collection: 1132	GPS Accuracy: ± 9	Length of Core (from bottom) (D): 3.5	
Time Depart Station:		Tide Elevation (from tide board) (G): 2.7	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.7
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 2.7-(10.1-0.8)	-6.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-3.45
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.4
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.9

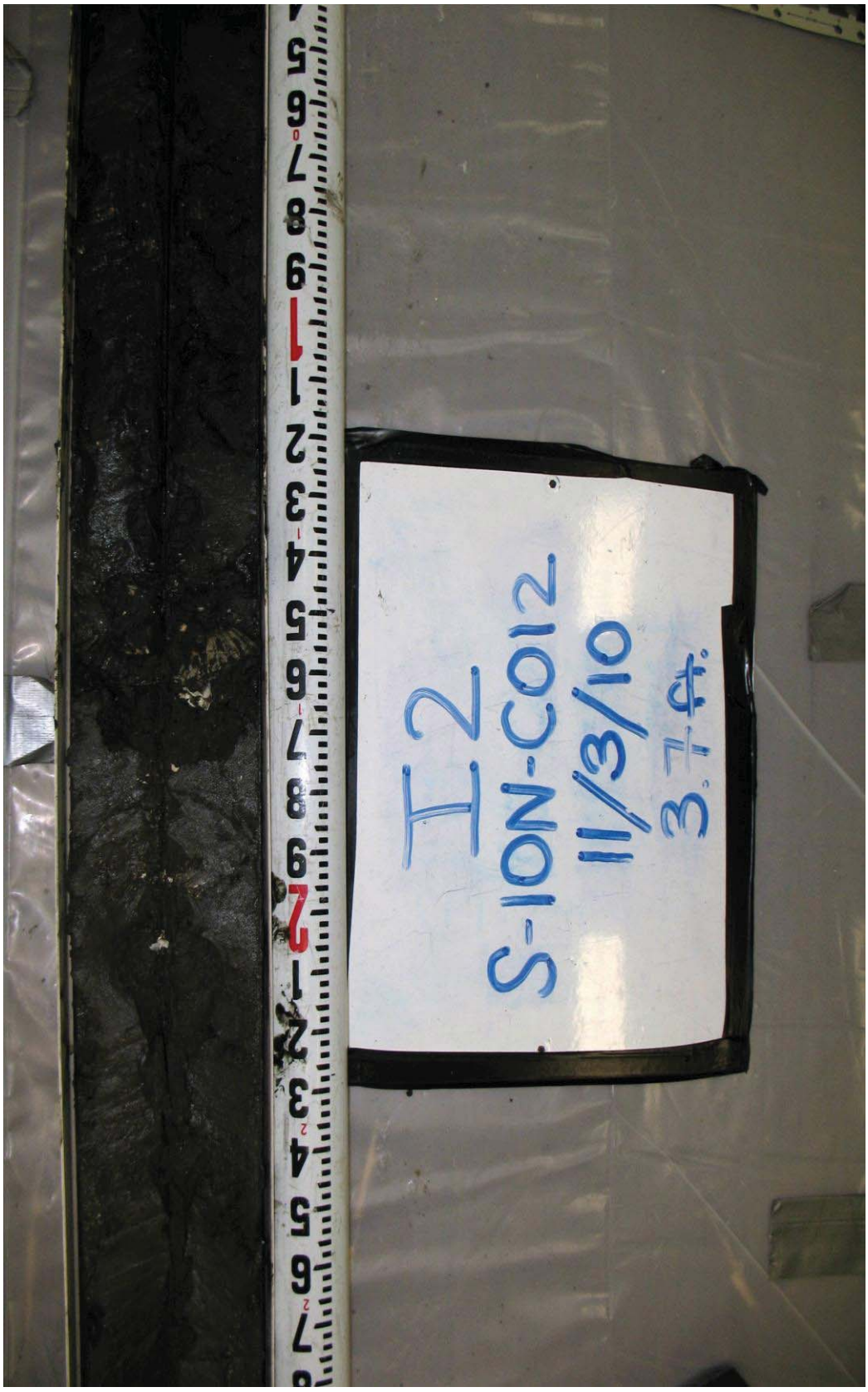
(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL			Loose			
0.05	CL/ML	Silt/Clay w/ sand		Loose		Petroleum	
0.35	SC	Sand with Clay and cobbel		Firm			
0.65	CL/SC	Clay with sand		Firm			
1.2	SC	Sand with small amount of clay		Firm			
1.4	CL/SC	50% clay 50% sand		Firm			
1.65	CL/ML	Silty Clay w/ trace amount of sand		Firm			
3.5							

Shell Hash throughout

Comments

Samples: S-100-C058-0-1.0
S-100-C058-1.0-2.0
S-100-C058-2.0-3.0
S-100-C058-3.0-4.0


I2
S-ION-C012
11/3/10
3.7 ft.

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Station ID: I1
All Measurements are ± 0.1 feet

Logged By: DB
Core Sample ID: S-100-C0058
Water Depth (A): 5.6

Collection Mechanism: P.C.
Latitude: 41°39.456
Length of Push Core Assembly (B): 10.1

Time on Station: 1116
Longitude: 70°55.128
Water Surface to Top of Handle (C): 0.5

Time of Collection: 1132
GPS Accuracy: ± 9
Length of Core (from bottom) (D): 3.5

Time Depart Station:
Tide Elevation (from tide board) (G): 2.7

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.7

(H) Elevation of the bottom of the core (NGVD): G - (B - C) 2.7-(10.1-0.8) = -6.9

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.45

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.4

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -2.9

(Note if I • I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL			Loose			
0.05	CL/ML	Silt/Clay w/ sand		Loose		Petroleum	
0.35	SC	Sand with Clay and cobbel		Firm			
0.65	CL/SC	Clay with sand		Firm			
1.2	SC	Sand with small amount of clay		Firm			
1.4	CL/SC	50% clay 50% sand		Firm			
1.65	CL/ML	Silty Clay w/ trace amount of sand		Firm			
3.5							

Shell Hash throughout

Comments

Samples: S-100-C0058-0-1.0
S-100-C0058-1.0-2.0
S-100-C0058-2.0-3.0
S-100-C0058-3.0-4.0


I3
S-100-C075
10/28/10
3.6ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/28/10	Station ID: I3	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C075	Water Depth (A): 4.6	
Collection Mechanism: PC.	Latitude: 41°39.457	Length of Push Core Assembly (B): 10.15	
Time on Station: 0930	Longitude: 70° 55.107	Water Surface to Top of Handle (C): 0.95	
Time of Collection: 0935	GPS Accuracy: ± 9	Length of Core (from bottom) (D): 3.6	
Time Depart Station: 0941		Tide Elevation (from tide board) (G): 1.4	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.4 - (10.15-0.95)	1.4
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.8
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.2
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.2

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	SM	Silty-Sand	Sy 2.5/1 Black	Loose	Coarse	H_2S	
0.5	ML	Silt with Sand w/medium-coarse Sand	Sy 3/1 Very Dark Grey	Loose	Coarse		
1.05	ML/CL	Clayey Silt w/ fine Sand	Sy 3/2	Firm	Fine		
2.0	CL/ML	& Silty Clay w/shell Hash	Sy 3/2	Firm			
3.6							

Comments
- 1st attempt unsuccessful, core length only 3ft

Samples: S-100-C075-0-1.0
S-100-C075-1.0-2.0
S-100-C075-2.0-3.0
S-100-C075-3.0-4.0


J1
S-100-C076
10/28/10
3.85 ft

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

Date: 10/28/10	Station ID: J1	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-1Ø0-CØ76	Water Depth (A):	5.3
Collection Mechanism: P.C.	Latitude: 41° 39.448	Length of Push Core Assembly (B):	10.15
Time on Station: 0954	Longitude: 70° 55.115	Water Surface to Top of Handle (C):	0.4
Time of Collection: 1000	GPS Accuracy: ± 9	Length of Core (from bottom) (D):	3.85
Time Depart Station: 1002		Tide Elevation (from tide board) (G):	1.6

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.6-(10.16-0.4)	1.6
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-8.15
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-5.25
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.3
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.7

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL	Silt w/ sand + Detritus	5y 2.5/1 Black	Loose	~~Medium~~ Coarse	Petroleum	
0.95	-	-	-	-	-	-	-
	ML/CL	Clayey Silt w/ gravel ~~Sand~~ poorly sorted throughout	5y 2.5/1	Firm	gravel		
3.85							

Comments

Samples: S-1Ø0-CØ76-Ø-1.Ø
S-1Ø0-CØ76-Ø-1.Ø-MS/MSD
S-1Ø0-CØ76-1.Ø-2.Ø
S-1Ø0-CØ76-2.Ø-3.Ø
S-1Ø0-CØ76-3.Ø-4.Ø


K1
S-10U-C059
10-26-10
3 of 4

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Station ID: K1
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID: S-100-C059
Water Depth (A): 3.3
Collection Mechanism: P.C.
Latitude: 41°39.435
Length of Push Core Assembly (B): 10.35
Time on Station: 1141
Longitude: 70°55.150
Water Surface to Top of Handle (C): 3.30
Time of Collection: 1154
GPS Accuracy: ± 9
Length of Core (from bottom) (D): 3.7
Time Depart Station: 1159
Tide Elevation (from tide board) (G): 2.1

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 2.1-(10.35-3.30) = -4.95
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -1.95
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -1.25
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -1.2

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.8	OL	—	5Y 2.5/1 Black	Loose	—	—	—
	ML/CL	Clayey silt with sand/gravel	5Y 2.5/1 Black	Loose			
2.6	—	—	—	—	—	—	—
3.8	CL	Clay with sand fine to coarse	5Y 2.5/2	Firm			

Comments
- Heavy sheen on top of core

Samples: S-100-C059-0-1.0
S-100-C059-1.0-2.0
S-100-C059-2.0-3.0
S-100-C059-3.0-4.0


K2
S-ION-C013
11/3/10
3 84

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Logged By: KGM
Collection Mechanism: PC
Time on Station: 10.32
Time of Collection: 10:48
Time Depart Station: 10:51

Station ID: K2
Core Sample ID: S-1ΦN-CΦ13
Latitude: 41° 39.436'
Longitude: 70° 55.135'
GPS Accuracy: 10 A.

All Measurements are ± 0.1 feet KGM
Water Depth (A): ~~0.9~~ 1.1 KGM
Length of Push Core Assembly (B): ~~10.1~~ 10.2
Water Surface to Top of Handle (C): 4.7
Length of Core (from bottom) (D): 3.8
Tide Elevation (from tide board) (G): -1.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -1.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -6.8
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.3
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -2.7
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A ~~-2.2~~ KGM -2.1

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-2.7)	OL	organic silt	black 5y2.5/1	loose	fine	H_2S	S-1ΦN-CΦ13-Φ-1.Φ
0.6	(-3.3)		organic silty	very dark grey				
0.9	(-3.6)	a/SM	sand - fine	5y 3/1	firm	fine	—	S-1ΦN-CΦ13-1.Φ-2.Φ
		CL/ML	silty clay	very dark grey	firm	fine		
1.4	(-4.1)		fine sand	5y 3/1			—	
		SM/SC	silty clayey well graded fine to coarse sand	2.5y 3/3 dark olive brown	firm	~~coarse~~ fine		S-1ΦN-CΦ13-2.Φ-3.Φ
2.2	(-4.9)			dark grey			—	
		CL/ML	silty clay, fine to medium sand in layers throughout	5y 4/1	firm	medium		S-1ΦN-CΦ13-3.Φ-3.8
3.8	(-6.5)			2.5y 4/4 layers olive brown				

Comments
1st attempt - unsuccessful - compaction
2nd attempt - successful
cut open 11/4/10 at 13:10

K3
S-1ON-C014
11/3/10
3.9ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Station ID: K3
All Measurements are ± 0.1 feet
Logged By: KGM
Core Sample ID: S-1ΦN-CΦ14
Water Depth (A): 1.2
Collection Mechanism: pc
Latitude: 41° 39.437'
Length of Push Core Assembly (B): 10.1
Time on Station: 10:59
Longitude: 70° 55.123'
Water Surface to Top of Handle (C): 3.6
Time of Collection: 11:05
GPS Accuracy: 10 ft.
Length of Core (from bottom) (D): 3.9
Time Depart Station: 11:12
Tide Elevation (from tide board) (G): -1.2

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) ~~-7.6~~ KGM -7.7

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -4.0

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.8

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A ~~-2.8~~ KGM -2.4

(Note If I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.8)	OL	organic silt	~~black~~ 5Y 2.5/1	loose	fine		S-1ΦN-CΦ14-Φ-1.Φ
0.2 (-4.0)	~~CL/OL~~ ML/CL	clayey silt with fine sand	v.dk grey 5Y 3/1	moderately firm	fine	H_2S	S-1ΦN-CΦ14-1.Φ-2.Φ
1.0 (-4.8)	CL/ML	silty clay, fine sand throughout	dark grey 5Y 4/1	firm	fine		S-1ΦN-CΦ14-2.Φ-3Φ
3.6 (-7.4)							S-1ΦN-CΦ14-3.Φ-~~4.Φ~~ 3.9
3.9 (-7.7)	SC	clayey sand fine to medium	5Y 4/2 dark olive grey	firm	medium		

Comments: 1st attempt - successful. no fingers
cut open 11/4/10 at 13:35


K4
S-100-C077
10/28/10
3.6ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/28/10	Station ID: K4	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C077	Water Depth (A): 5.3	
Collection Mechanism: P.C.	Latitude: 41° 39.437	Length of Push Core Assembly (B): 10.25	
Time on Station: 1005	Longitude: 70° 55.111	Water Surface to Top of Handle (C): 0.7	
Time of Collection: 1009	GPS Accuracy: ±9	Length of Core (from bottom) (D): 3.6	
Time Depart Station: 1016		Tide Elevation (from tide board) (G): 1.8	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.8-(10.25-0.7)	1.8
(H) Elevation of the bottom of the core (NGVD): G-(B-C)	-7.75
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.25
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-4.15
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.5

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.1	OL	Silt w/organics	2.5/1 Black	Loose		H_2S	
	SM	Silty Sand, medium to coarse	5Y 2.5/1 Black	Loose	Coarse	H_2S	
0.5							
	ML/CL	Clayey Silt w/shell hash	5Y 2.5/1 Black	Firm			
2.55							
	CL/ML	Silty Clay w/shell hash	5Y 3/2 Dark Olive Grey	Firm			
3.6							

Comments

Cut open 10/28/10 @ 1316

Samples: S-100-C077-0-1.0
S-100-C077-1.0-2.0
S-100-C077-2.0-3.0
S-100-C077-2.0-3.0-MS/MSD
S-100-C077-3.0-4.0


L1
S-100-C060
10-26-10
3.3ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Station ID: L1
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID: S-1Ø0-CØ6Ø
Water Depth (A): 3.8
Collection Mechanism: P.C.
Latitude: 41°39.427
Length of Push Core Assembly (B): 10.15
Time on Station: 1205
Longitude: 70° 55.137
Water Surface to Top of Handle (C): 3.45
Time of Collection: 1211
GPS Accuracy: ± 9
Length of Core (from bottom) (D): 3.4 DB 3.3
Time Depart Station: 1219
Tide Elevation (from tide board) (G): 1.8

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.8
1.8 - (10.15 - 3.45)
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -4.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -1.7
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -1.6
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -2.0

(Note if I • I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consisteney	Maximum Particle Size	Odor	Sample IDs
0							
0.1	OL	Silt w/ sand/gravel	5y 2.5/1 Black Black	Loose	—	—	— —
	CL/MH	Silty Clay w/fine sand/ gravel	5y 2.5/1 ↓ 5y 2.5/2	Loose/ medium			
1.55	- -	- -	- -	- -	-	-	- —
	CL	Clay with fine sand	5y 3/2 Dark Olive Grey	Firm		H2S	
3.8							

Petroleum odor

Comments
-used fingers

Samples: S-1Ø0-CØ6Ø-Ø-1.6
S-1Ø0-CØ6Ø-1.Ø-2.Ø
S-1Ø0-CØ6Ø-2.Ø-3.Ø
S-1Ø0-CØ6Ø-3.Ø-4.Ø


L2
S-ION-C015
11/3/10
3.9 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Station ID: L2
Logged By: KGM
Core Sample ID: S-1ΦN-CΦ1S
Collection Mechanism: PC
Latitude: 41° 39.424' KGM
Time on Station: 09:28
Longitude: 70° 55.129'
Time of Collection: ~~09:45~~ KGM 09:56
GPS Accuracy: 10 ft.
Time Depart Station: 10:05

All Measurements are ± 0.1 feet
Water Depth (A): ~~2.6~~ KGM ~~2.4~~ KGM 2.3
Length of Push Core Assembly (B): ~~10.1~~ KGM 10.1
Water Surface to Top of Handle (C): ~~2.2~~ KGM 3.3
Length of Core (from bottom) (D): 3.9
Tide Elevation (from tide board) (G): -0.3

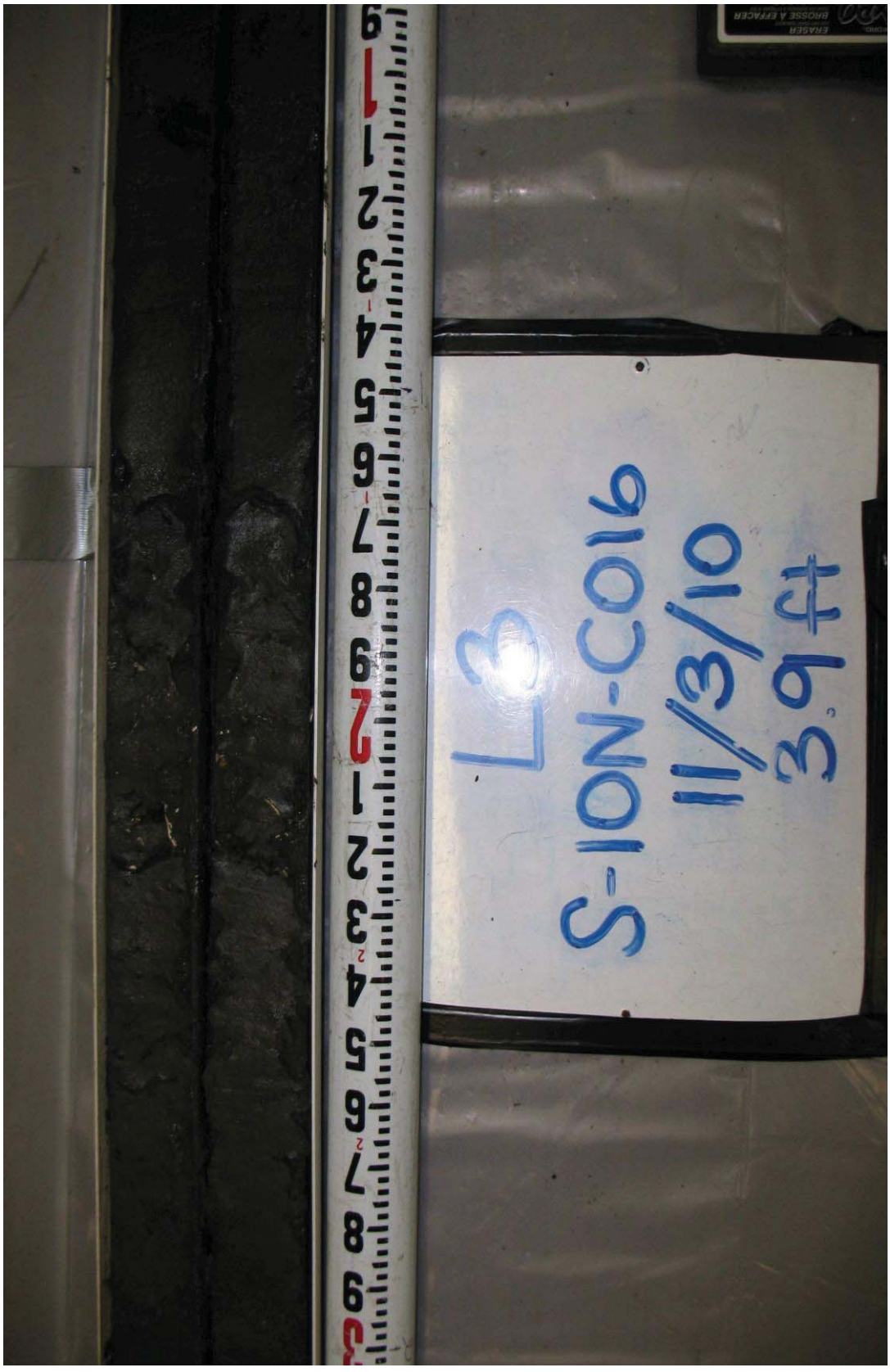
Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): -0.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C) ~~-6.5~~ KGM -7.1
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.2
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -2.6

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 (-3.2)	OL	Oily, greasy organic silt	black 5Y 2.5/1	loose	fine	H_2S	S-1ΦN-CΦ1S-Φ-1Φ
0.6 (-3.8)	OL/ML/GM	organic silty gravel	black 5Y 2.5/1	moder. loose	1-2cm gravel		S-1ΦN-CΦ1S-1.Φ-2.Φ
1.1 (-4.3)	CL/ML	silty clay, some fine sand	dark olive grey 5Y 3/2	firm	fine		S-1ΦN-CΦ1S-2.Φ-3Φ
2.2 (-5.4)	CL/ML	silty clay, some fine sand	5Y 4/2 olive grey	firm	fine		S-1ΦN-CΦ1S-3.Φ-3.9
3.9 (-7.1)							

Comments: 1st attempt - overpenetrated
2nd attempt - unsuccessful, insufficient recovery
3rd attempt - successful Cut open 11/4/10 at 13:55


L3
S-ION-C016
11/3/10
3.9 ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Station ID: C3
All Measurements are ± 0.1 feet

Logged By: KBM
Core Sample ID: S-10N-C016
Water Depth (A): 2.7

Collection Mechanism: PC
Latitude: 41° 39.425'
Length of Push Core Assembly (B): 10.2

Time on Station: 10:13
Longitude: 70° 55.119'
Water Surface to Top of Handle (C): 3.3

Time of Collection: 10:21
GPS Accuracy: 13 ft.
Length of Core (from bottom) (D): 3.9

Time Depart Station: 10:25
Tide Elevation (from tide board) (G): -0.7

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) -7.6

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.9

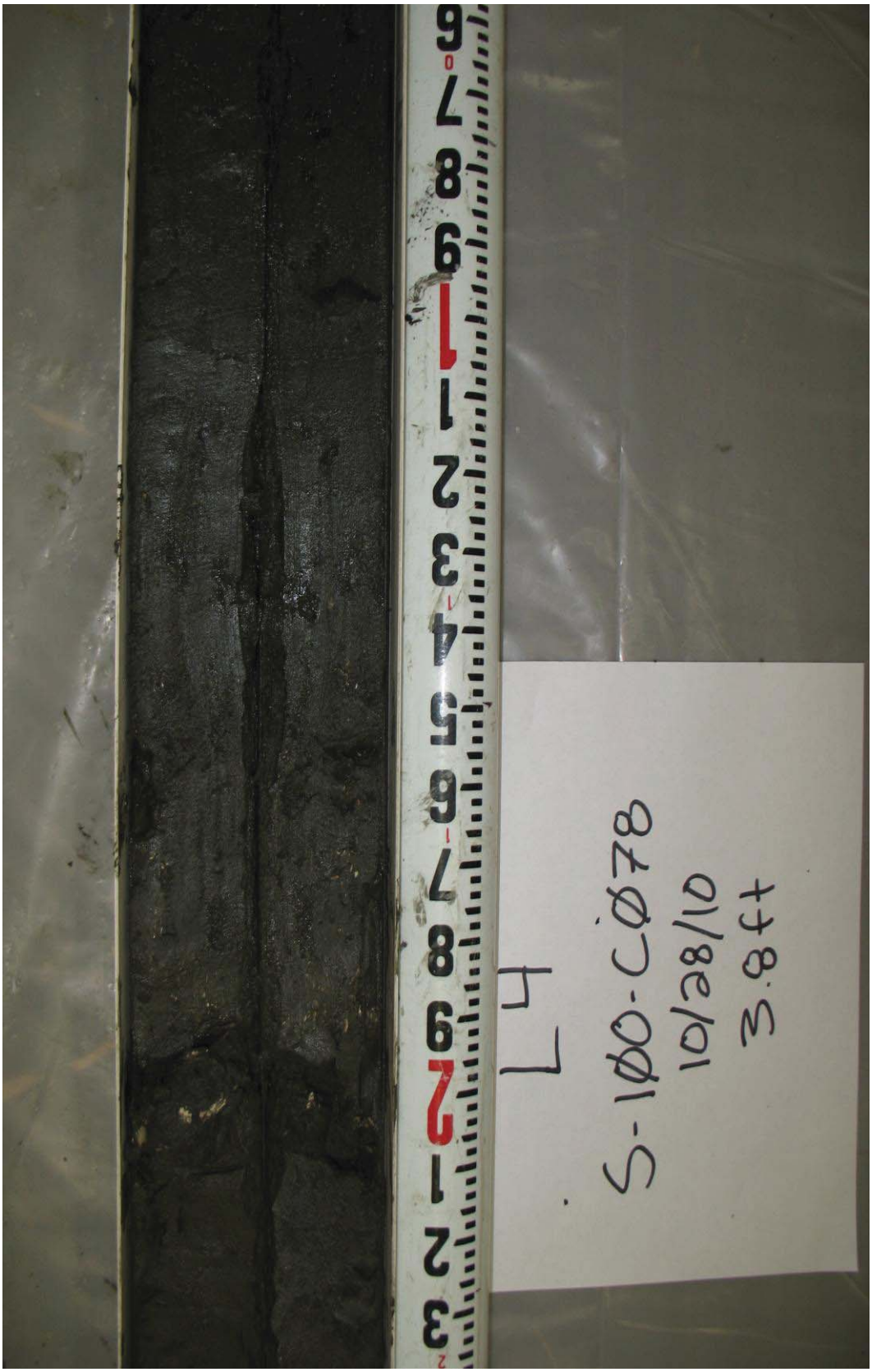
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.7

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = II)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-3.7)	OL	organic silty greasy	black 5y 2.5/1	loose	fine	H_2S	S-10N-C016-0-1.0
0.2	(-3.9)	ML/CL	clayey silt, some fine sand	V. dk. grey 5y 3/1	moderately firm	fine		
0.7	(-4.4)	CL/ML	silty clay, some fine sand	V. dk grey 5y 3/1	firm	fine		~~S-10N-C016-1.0-2.0~~
1.7	(-5.4)	CL/ML	silty clay, poorly sorted, well graded fine to coarse sand in layers throughout	dark grey 5y 4/1	firm	coarse		S-10N-C016-2.0-3.0
3.9	(-7.6)							S-10N-C016-3.0-3.9

Comments: 1st attempt successful, no fingers used
cut open 11/4/10 at 14:15


S-100-C078
10/28/10
3.8ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/28/10
Station ID: L4
All Measurements are ± 0.1 feet

Logged By: DB
Core Sample ID: S-100-C078
Water Depth (A): 5.3

Collection Mechanism: P.C.
Latitude: 41°39.427
Length of Push Core Assembly (B): 10.15

Time on Station: 1020
Longitude: 70°55.107
Water Surface to Top of Handle (C): 0.6

Time of Collection: 1025
GPS Accuracy: ±9
Length of Core (from bottom) (D): 3.8

Time Depart Station: 1030
Tide Elevation (from tide board) (G): 1.9

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.9
1.9-(10.15-0.6)
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.65
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.95
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.4

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
0.1	OL	Silt w/sand	5y 2.5/ Black	Loose	Coarse	H_2S	
	ML/CL	Clayey Silt	5y 3/1 Very Dark Grey	Medium			
1.4							
	CL/ML	Silty Clay w/shell hash, and gravel chunks throughout	5y 4/1 Dark Grey	Firm	Gravel		
3.8							

Comments

Samples: S-100-C078-0-1.0
S-100-C078-1.0-2.0
S-100-C078-2.0-3.0
S-100-C078-3.0-4.0


MI
S-10U-C061
10-26-10
3.5ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Station ID: M1
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID: S-100-C0G1
Water Depth (A): 4.4
Collection Mechanism: P.C.
Latitude: 41° 39. 409
Length of Push Core Assembly (B): 10.15
Time on Station: 1228
Longitude: 70° 55. 119
Water Surface to Top of Handle (C): ~~0.75~~ DB 1.7
Time of Collection: 1236
GPS Accuracy: ± 9
Length of Core (from bottom) (D): 3.5
Time Depart Station: 1242
Tide Elevation (from tide board) (G): 1.3

Calculations for Determination of Z* Elevation

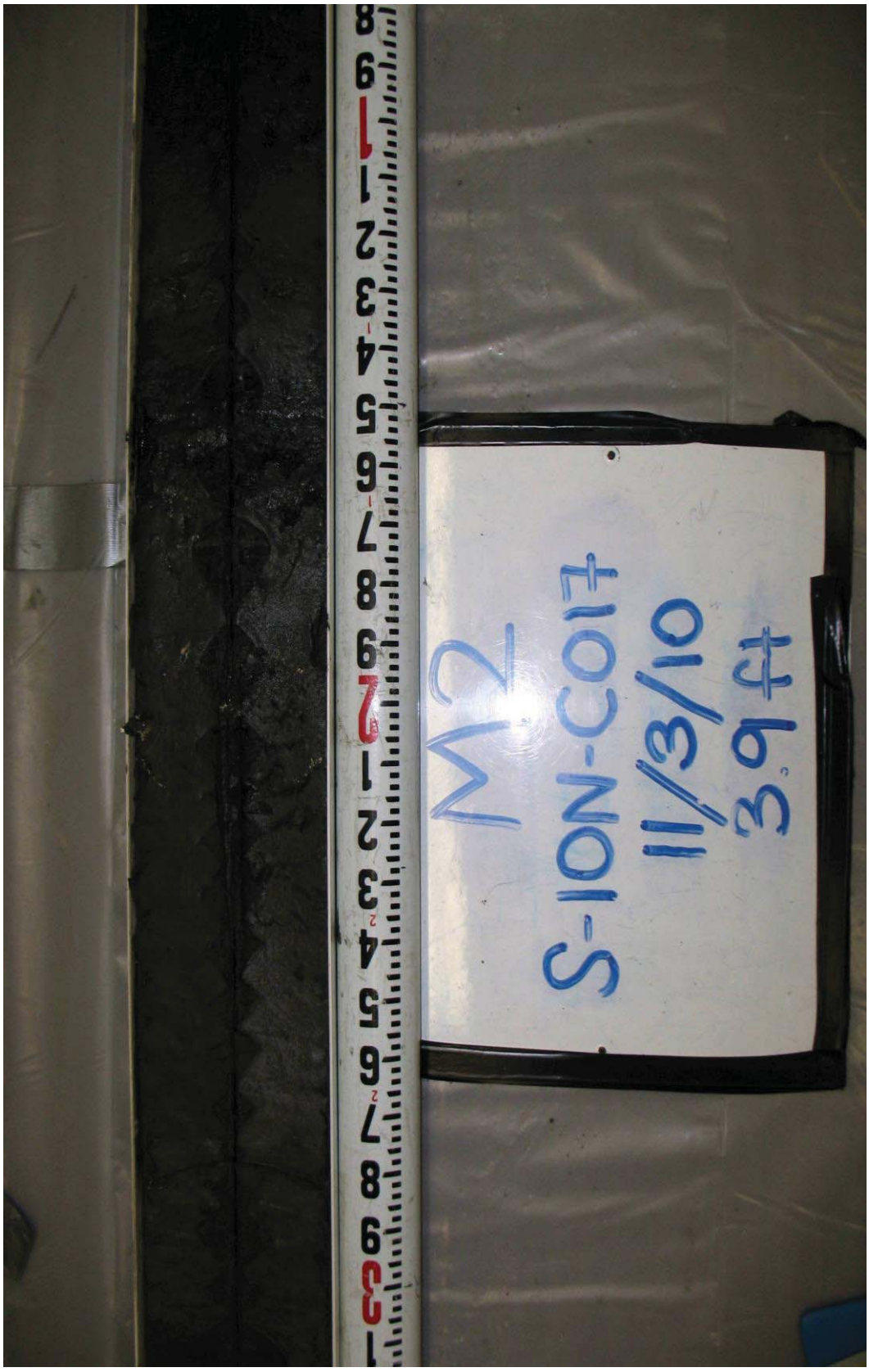
(G) Elevation of Water Surface (NVGD) (as read from tide board): 1.3
1.3-(10.15-1.7)
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.15
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -3.75
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.65
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.1

(Note if I + I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL		5Y 2.5/1 Black	Loose			
0.1	CL/ML	Silty Clay	5Y 2.5/a	Medium		H_2S	
1.0	CL/ML	Silty Clay w/ fine to coarse sand	5Y 2.5/1	Loose		H_2S	Detritus
1.3	CL/ML	Silty Clay	5Y 3/2 Dark Olive Grey	Firm		H_2S	Shell hash throughout
3.5							

Comments
- 1st attempt unsuccessful, lost core out of bottom
- 2nd attempt used fingers

Samples: S-100-C0G1-0-1.0
S-100-C0G1-1.0-2.0
S-100-C0G1-2.0-3.0
S-100-C0G1-3.0-4.0


M2
S-ION-C014
11/3/10
3.9 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 11/3/10
Logged By: KGM
Collection Mechanism: pc
Time on Station: 09:03
Time of Collection: 09:12
Time Depart Station: 09:20

Station ID: M2
Core Sample ID: S-1ΦN-CΦ17
Latitude: 41° 39.407'
Longitude: 70° 55.114'
GPS Accuracy: 11 ft.

All Measurements are ± 0.1 feet
Water Depth (A): 3.8
Length of Push Core Assembly (B): 10.2
Water Surface to Top of Handle (C): 1.8
Length of Core (from bottom) (D): 3.9
Tide Elevation (from tide board) (G): 0.5

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 0.5
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.9
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -4.6
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -4.0
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.3

(Note if I • I_2 within + 1.0 feet, discard and resample)

	Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0	(-4.0)	OL	greasy oily organic silt	black 5Y 2.5/1	loose	fine	H_2S	S-1ΦN-CΦ17-Φ-1Φ
0.6	(-4.6)							
		ML/CL	greasy clayey silt	black 5Y 2.5/1	moderately firm	fine		S-1ΦN-CΦ17-1.Φ-2.Φ
1.1	(-5.1)							
		CL/ML	Silty clay, layers of well graded fine to coarse sand	olive grey 5Y 4/2	firm	Coarse		S-1ΦN-CΦ17-2.Φ-3.Φ
								S-1ΦN-CΦ17-3.Φ-~~3.9~~ 3.9
3.9	(-7.9)							

Comments: 1st attempt successful - no finger nails needed
tide: 1.0 at 08:55
0.3 at 09:23
cut open 11/4/10 at 14:45


M3
S-100-C079
10/28/10
3.9

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

Date: 10/28/10	Station ID: M3	All Measurements are ±0.1 feet	
Logged By: DB	Core Sample ID: S-100-C079	Water Depth (A):	5.3
Collection Mechanism: P.C.	Latitude: 41°39.406	Length of Push Core Assembly (B):	10.2
Time on Station: 1033	Longitude: 70° 55.103	Water Surface to Top of Handle (C):	0.75
Time of Collection: 1038	GPS Accuracy: ±9	Length of Core (from bottom) (D):	3.9
Time Depart Station: 1040		Tide Elevation (from tide board) (G):	2.0

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): 2.0 - (10.2-0.75)	2.0
(H) Elevation of the bottom of the core (NGVD): G - (B - C)	-7.45
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.2
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.55
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.3

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0							
	OL	Silt w/coarse sands	5y 2.5/1 Black	Loose	coarse	H_2S	
0.65							
	ML	Silt	5y 2.5/1 Black	Medium		H_2S	
1.45							
	ML/CL	Clayey Silt w/gravel + Shell hash	5y 3/2 Dark Olive Grey	Firm			
2.4							
	CL/ML	Silty Clay w/gravel + Shell hash	5y 4/2 Olive Grey	Firm			
3.9							

Comments

Samples: S-100-C079-0-1.0
S-100-C079-1.0-2.0
S-100-C079-1.0-2.0-MS/MSD
S-100-C079-2.0-3.0
S-100-C079-3.0-4.0


S-100-C06a
10-26-10
4.0ft

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

Date: 10/25/10	Station ID: N2	All Measurements are ± 0.1 feet
Logged By: DB	Core Sample ID: S-100-C062	Water Depth (A): 3.8
Collection Mechanism: P.C.	Latitude: 41° 39.399	Length of Push Core Assembly (B): 10.15
Time on Station: 1254	Longitude: 70° 55.114	Water Surface to Top of Handle (C): 2.0
Time of Collection: 1300	GPS Accuracy: ±9	Length of Core (from bottom) (D): 4.0
Time Depart Station: 1304		Tide Elevation (from tide board) (G): 0.9

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.9
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 0.9-(10.15-2)	-7.25
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-4.25
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.25
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-2.9

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL	Silt w/organics shell hash, sand, gravel	5y 2.5/1	Loose		Petroleum	
1.0	CL/ML	Silty Clay w/Fine sand	5y 2.5/2	Medium			
1.95	SM	Sand w/silt	5Y 3/2	Firm			
2.05	CL/ML	Silty Clay w/Fine sand	5y 3/2 Dark Olive Grey	Firm			
4.0							

Shell Hash throughout

Comments
- used fingers
- H_2S Odor

Samples: S-100-C062-0-1.0
S-100-C062-1.0-2.0
S-100-C062-2.0-3.0
S-100-C062-3.0-4.0


N3
S-100-C@80
10/28/10
3.85ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/28/10	Station ID: N3	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C000	Water Depth (A): 5.3	
Collection Mechanism: P.C	Latitude: 41° 39.399	Length of Push Core Assembly (B): 10.15	
Time on Station: 1047	Longitude: 70° 55.099	Water Surface to Top of Handle (C): 0.45	
Time of Collection: 1052	GPS Accuracy: ± 9	Length of Core (from bottom) (D): 3.85	
Time Depart Station: 1100		Tide Elevation (from tide board) (G): 2.1	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	2.1
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 2.1 - (10.15 - 0.45)	-7.6
(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)	-4.65
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-3.75
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-3.2

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL	Silt with chunks of grass	5Y 2.5/1 Black	Loose		H_2S	
0.9	ML/CL	Clayey Silt	5Y 3/1 Very Dark Grey	Medium		H_2S	
1.65	CL/ML	Silty Clay w/ shell hash	5Y 4/1 Dark Grey	Firm			
3.85							

Comments

Samples: S-100-C000-0-1.0
S-100-C000-1.0-2.0
S-100-C000-2.0-3.0
S-100-C000-3.0-4.0


01
S-10J-C063
10-26-10
3.8 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/25/10
Station ID: 01
All Measurements are ± 0.1 feet
Logged By: DB
Core Sample ID: S-100-C063
Water Depth (A): 4.2
Collection Mechanism: P.C.
Latitude: 41°39.388
Length of Push Core Assembly (B): 9.75
Time on Station: 1309
Longitude: 70°55.102
Water Surface to Top of Handle (C): 1.5
Time of Collection: 1319
GPS Accuracy: ± 9
Length of Core (from bottom) (D): 3.8
Time Depart Station: 1324
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
0.6-(9.75-1.5)
(H) Elevation of the bottom of the core (NGVD): G - (B - C) -7.65
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition) -4.55
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D -3.85
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A -3.6

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL	Silt with gravel	5Y 2.5/1 Black	Loose		H_2S	
0.7							
	CL/ML	Silty Clay w/fine sand	5Y 3/1 Very Dark Grey	Medium			
1.4	SM	Silty Sand		Firm			
1.5							
	CL/ML	Silty Clay w/fine sand	5Y 3/2 Dark Olive Grey	Firm			
3.8							

Shell Hash

Comments

Samples = S-100-C063-0-1.0
S-100-C063-1.0-2.0
S-100-C063-2.0-3.0
S-100-C063-3.0-4.0


PL
S-100-C064
10-26-10
3.0ft

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/28/10	Station ID: P1	All Measurements are ± 0.1 feet	
Logged By: DB	Core Sample ID: S-100-C064	Water Depth (A): 8.1	
Collection Mechanism: P.C.	Latitude: 41°39.388	Length of Push Core Assembly (B): 15.35	
Time on Station: 1331	Longitude: 70° 55.078	Water Surface to Top of Handle (C): 4.0	
Time of Collection: 1338	GPS Accuracy: ± 9	Length of Core (from bottom) (D): 3.0	
Time Depart Station: 1341		Tide Elevation (from tide board) (G): 0.3	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):	0.3
(H) Elevation of the bottom of the core (NGVD): G - (B - C) 0.3 - (15.35-4.0)	-11.05
(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)	-10.65
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-8.05
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-7.8

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	OL	Silt with organic detritus + fine sand	5Y 2.5/1 Black	Loose		Petroleum	
2.6	CL	Clay with Sand	5Y 3/1 dark gray	Firm			
3.0							

Comments
- Heavy sheen
- Used fingers

Samples: S-100-C064-0-1.0
S-100-C064-1.0-2.0
S-100-C064-2.0-3.0

Soil 1
S-100-C064
10/27/10
0-1.0 ft

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/27/10
Station ID: Soil 1
All Measurements are ±0.1 feet

Logged By: DB
Core Sample ID: S-100-C0[illegible]65
Water Depth (A):

Collection Mechanism: AUG
Latitude: 41° 39.502
Length of Push Core Assembly (B):

Time on Station: 0839
Longitude: 70° [illegible] 55.163
Water Surface to Top of Handle (C):

Time of Collection: 0905
GPS Accuracy: ±9
Length of Core (from bottom) (D): 4ft

Time Depart Station: 0910
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

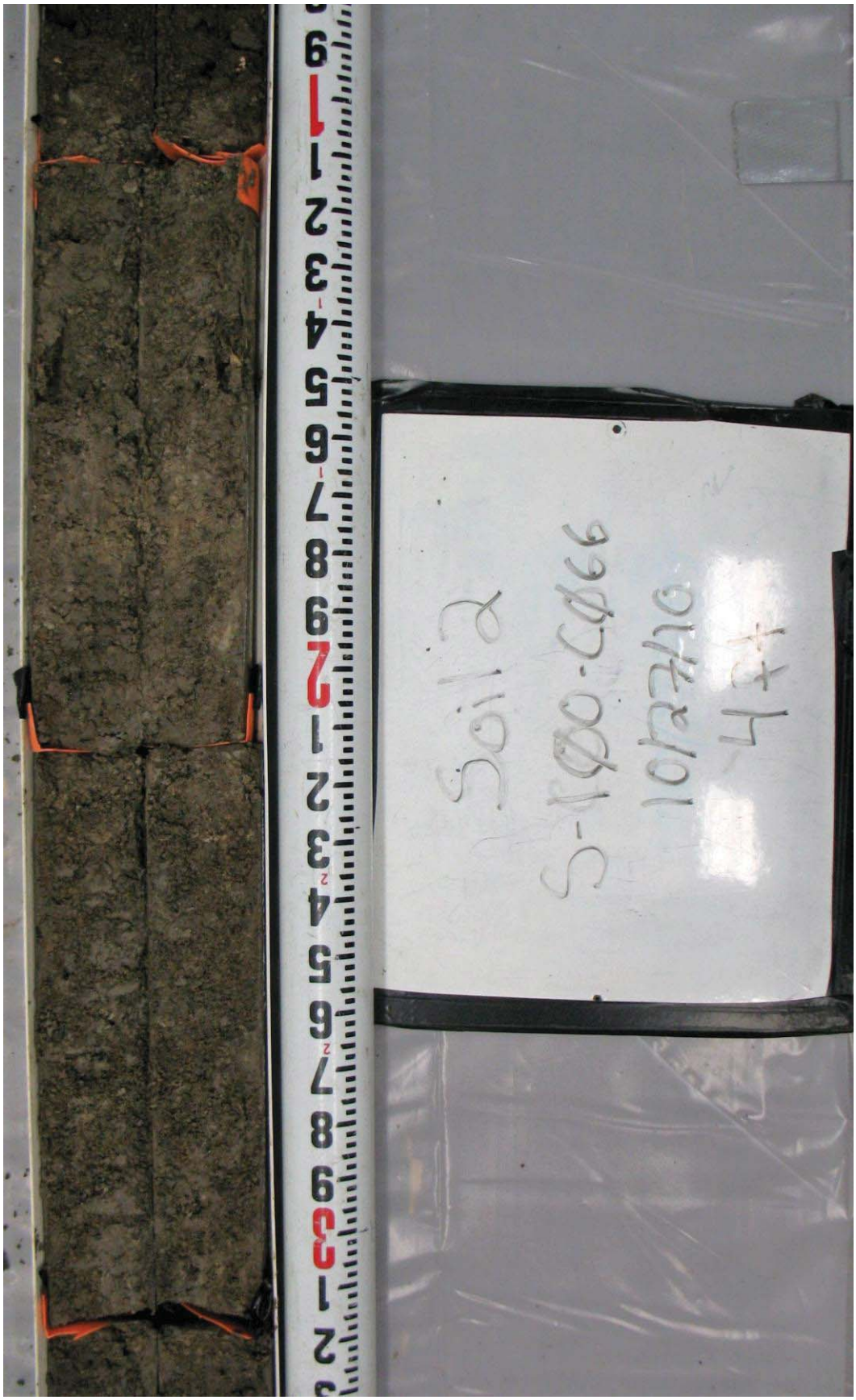
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	ML	Silt w/ fine sand	10YR 3/2 Very Dark Grayish Brown				organics throughout (roots)
1.2	ML[illegible]	Silt w/ fine sands + gravel	10YR 2/1 Black				
1.4	ML	Silt w/ fine to coarse sand	10YR Very Dark Grayish Brown				shell hash
2.1	ML/CL	Clayey Silt	10YR 4/2 Dark grayish Brown				
2.6	CL/ML	Silty Clay w/ fine to medium sand	10YR 4/2 Dark grayish Brown				
4.0							

Comments
- Filled 6 barrels, each barrel 1.5ft of sediment
- Barrel length = 6 ft, actual depth = 4ft

Samples: S-100-C065-0-1.0
S-100-C065-1.0-2.0
S-100-C065-2.0-3.0
S-100-C065-3.0-4.0


Soil 2
S-100-C066
10/27/10
4+

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/27/10
Station ID: Soil2
All Measurements are ± 0.1 feet

Logged By: DB
Core Sample ID: S-100-C066
Water Depth (A):

Collection Mechanism: AUG
Latitude: 41°39.490
Length of Push Core Assembly (B):

Time on Station: 0915
Longitude: 70°55.161
Water Surface to Top of Handle (C):

Time of Collection: 1007
GPS Accuracy: ±9
Length of Core (from bottom) (D): 4.00

Time Depart Station: 1010
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

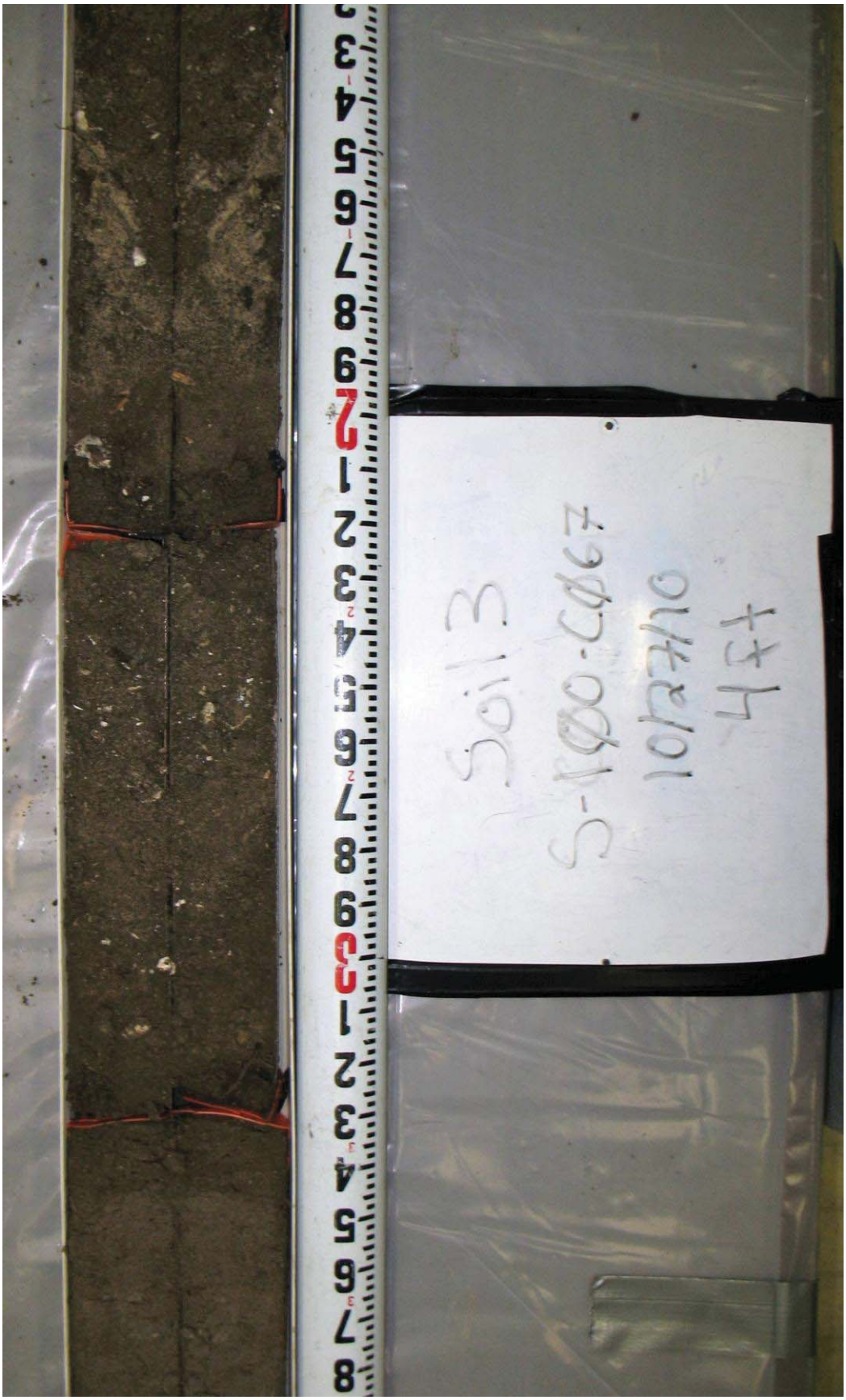
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	ML	Silt w/Fine, coarse Sand	10YR 4/4 Dark Yellowish Brown	Loose			-Bits of gravel
0.3	ML	Silt w/organics & fine sand	10YR 3/1 Very Dark Grey	Loose			-Shell Hash
0.5	ML/CL	Clayey Silt w/fine Sand	10YR 4/2 Dark Greyish Brown				-Organics
0.75	CL/ML	Silty Clay	10YR 3/2 Very Dark Greyish Brown	Firm			
2.5	CL	Silty Clay w/some fine Sand	10YR 3/1 Very Dark Grey	Firm			
3.75	SM	Sand with some clay	10YR 3/1	Firm	Coarse to gravel		
4.00							

Comments
6 Barrels
Barrel length = 6 ft, Core depth = 4ft

Samples: S-100-C066-0-1.0
S-100-C066-1.0-2.0
S-100-C066-2.0-3.0
S-100-C066-3.0-4.0


Soil 3
S-1000-0067
10/27/10
45+

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/27/10
Logged By: DB
Collection Mechanism: AOG
Time on Station: 1015
Time of Collection: 1035
Time Depart Station: 1040

Station ID: Soil B
Core Sample ID: S-100-C067
Latitude: 41° 39.475
Longitude: 70° 55.155
GPS Accuracy: ± 9

All Measurements are ± 0.1 feet
Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 4.0
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	ML	Silt w/fine/coarse sand	10YR 3/3 Dark Brown	Loose			Gravel
0.6	SM	Sand with Silt	10YR 3/2	Loose	Fine/ Coarse		Very Dark Grayish Brown
0.8	SM	Sand with Silt	10YR 4/2	Loose	Fine/ Coarse		-Shell hash, Organics - Dark Grey Brown
1.4	CL	Silty Clay	10YR 3/1	Loose			- Little bit of gravel - Very Dark Grey
1.5	SM	Sand with Silt	10YR 3/3 Dark Brown	Loose/ Medium	Fine/ Coarse		-Shell hash, gravel
2.3	ML	Silt w/ fine Sand	10YR 4/3 Brown	Firm	Fine		
3.3	CL	Silty Clay w/ Sand	10YR 3/1	Firm	Fine/ Coarse		Very Dark Grey
4.0							

Comments

Samples: S-100-C067-Ø-1.Ø
S-100-C067-1.Ø-2.Ø
S-100-C067-2.Ø-3.Ø
S-100-C067-3.Ø-4.Ø

Soil 4
S-100-C068
10/27/10
2.75-7

WOODS HOLE GROUP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/27/10
Logged By: DB
Collection Mechanism: AUG
Time on Station: 1048
Time of Collection: 1110
Time Depart Station: 1115

Station ID: Soil 4
Core Sample ID: S-100-C068
Latitude: 41039.462
Longitude: 70° 55.151
GPS Accuracy: ± 9

All Measurements are ± 0.1 feet
Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.75
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

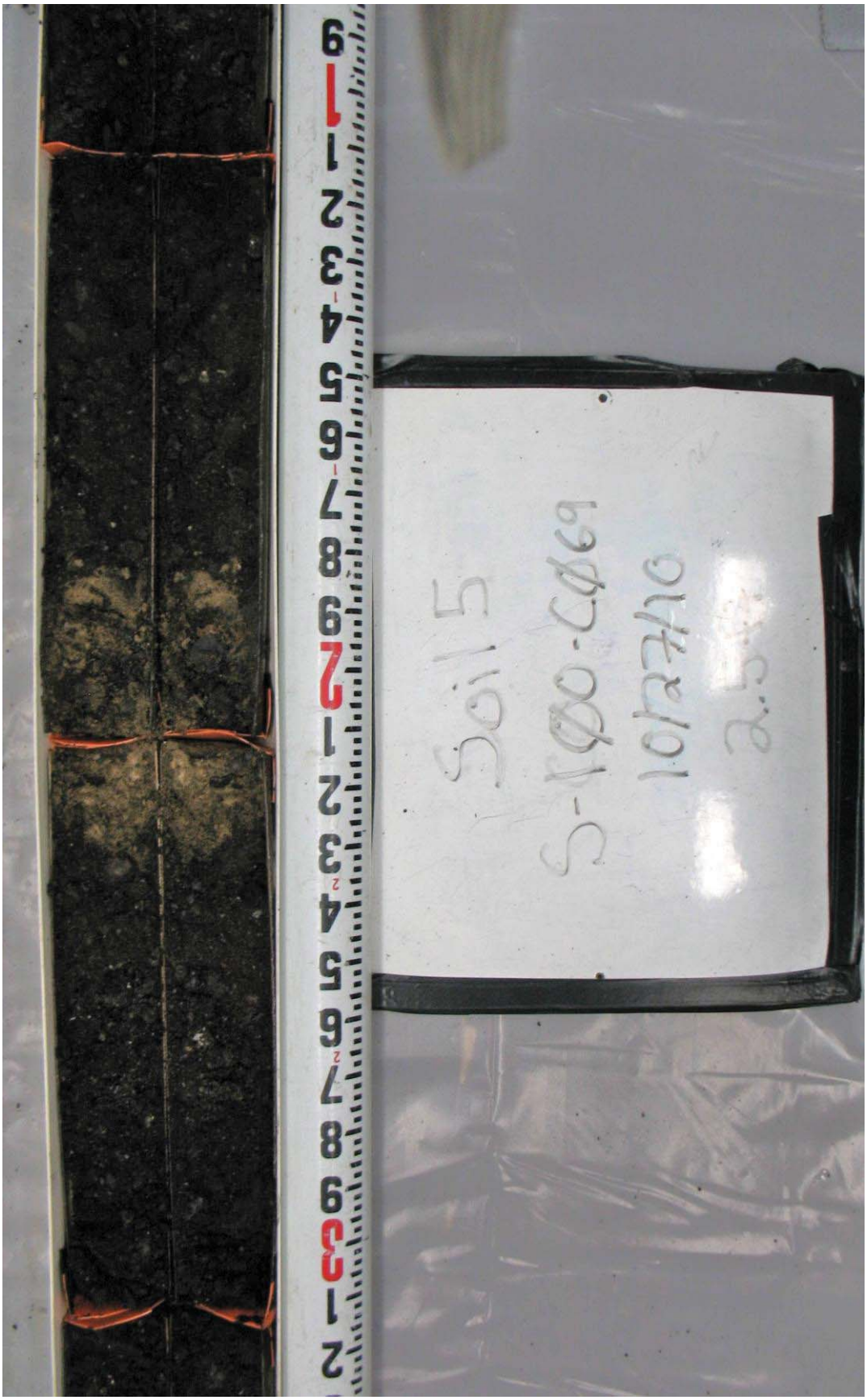
(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	ML	Silt w/ Fine to coarse sand	10YR 2/2 Very Dark Brown		Fine/ Coars		-Organics
0.4	-	-	-		-		-
	SM	Silty Sand Poorly graded Sands Fines to gravel	10YR 3/3 Dark Brown		Gravel		-Chunks of Brick throughout
2.75							

Comments
4 barrels
Core depth = 2.75 ft

Samples: S-100-C068-0-1.0
S-100-C068-1.0-2.0
S-100-C068-2.0-3.0


Soil 5
S-100-C069
10/27/10
2.5'

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

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

Date: 10/27/10
Logged By: DB
Collection Mechanism: AUG
Time on Station: 1118
Time of Collection: 1130
Time Depart Station: 1135

Station ID: Soil S
Core Sample ID: S-100-CØ69
Latitude: 41° 39.452
Longitude: 70° 55.147
GPS Accuracy: ±9

All Measurements are ± 0.1 feet
Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.5
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD(: H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0	ML	Silt w/sand	10YR 2/1 Black	Fine/ Coarse			-Organics (roots)
0.5	SM/ML	Silty Sand	10YR 2/1 Black	Loose	Fine/ Coarse		Some Organics
1.2	SM	Fine Sand w/ Silt	10YR 3/6 Dark Yellowish Brown	Loose	Coarse/ Gravel		
1.55	SM	Sand w/ Silt	10YR 2/1 Black	Loose	Fine/ Coarse		-Gravel/Brick throughout
2.5							

Comments
3 3/4 Barrels
-Total core length = 2.5

Samples: S-100-CØ69-Ø-1.Ø
S-100-CØ69-1.Ø-2.Ø
S-100-CØ69-2.Ø-3.Ø

APPENDIX B. ALPHA ANALYTICAL LABORATORIES ANALYTICAL DATA REPORTS (ON CD)

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APPENDIX B: ALPHA ANALYTICAL LABORATORIES ANALYTICAL DATA REPORTS

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ANALYTICAL REPORT

Lab Number:	L1014584
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-0010-03
Report Date:	10/13/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1014584
Report Date: 10/13/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1014584-01	S-10S-C001-0-0.5	NEW BEDFORD, MA	09/15/10 09:37
L1014584-02	S-10S-C002-0-0.5	NEW BEDFORD, MA	09/15/10 09:50
L1014584-03	S-10S-C003-0-0.5	NEW BEDFORD, MA	09/15/10 10:09
L1014584-04	S-10S-C004-0-0.5	NEW BEDFORD, MA	09/15/10 10:23
L1014584-05	S-10S-C005-0-0.5	NEW BEDFORD, MA	09/15/10 10:34
L1014584-06	S-10S-C006-0-0.5	NEW BEDFORD, MA	09/15/10 10:45
L1014584-07	S-10S-C007-0-0.5	NEW BEDFORD, MA	09/15/10 10:57
L1014584-08	S-10S-C008-0-0.5	NEW BEDFORD, MA	09/15/10 11:11
L1014584-09	S-10S-C009-0-0.5	NEW BEDFORD, MA	09/15/10 11:25
L1014584-10	S-10S-C010-0-0.5	NEW BEDFORD, MA	09/15/10 11:37
L1014584-11	S-10S-C011-0-0.5	NEW BEDFORD, MA	09/15/10 12:36
L1014584-12	S-10S-C012-0-0.5	NEW BEDFORD, MA	09/15/10 12:57
L1014584-13	S-10S-C013-0-0.5	NEW BEDFORD, MA	09/15/10 13:10
L1014584-14	S-10S-C014-0-0.5	NEW BEDFORD, MA	09/15/10 13:21
L1014584-15	S-10S-C015-0-0.5	NEW BEDFORD, MA	09/15/10 13:33
L1014584-16	S-10S-C016-0-0.5	NEW BEDFORD, MA	09/15/10 13:45
L1014584-17	S-10S-C017-0-0.5	NEW BEDFORD, MA	09/15/10 13:57
L1014584-18	S-10S-C018-0-0.5	NEW BEDFORD, MA	09/15/10 14:09
L1014584-19	S-10S-C019-0-0.5	NEW BEDFORD, MA	09/15/10 14:20
L1014584-20	S-10S-C020-0-0.5	NEW BEDFORD, MA	09/15/10 14:33

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1014584
Project Number:	TO-0010-03	**Report Date:**	10/13/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on September 16, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage on September 26 until September 28, 2010 when they were removed to extract samples for PCB Congener analysis. The original percent solids can be found as an addendum to the report.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1014584
Project Number:	TO-0010-03	**Report Date:**	10/13/10

Case Narrative (continued)

whether it was the higher or lower value.

L1014584-01 through -20 were analyzed at a dilution due to the elevated concentrations of target compounds in the samples.

Several samples were re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range. Due to the dilutions required for several samples the surrogates were diluted out.

There is no matrix spike/matrix spike duplicate reported due to the high concentrations of the native sample the spike concentration were effectively diluted out.

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: 10/13/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-01	Date Collected:	09/15/10 09:37
Client ID:	S-10S-C001-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 06:32	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	90%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	646	E	ug/kg	14.4	--	10
Cl5-BZ#105	29.8		ug/kg	14.4	--	10
Cl6-BZ#138	131		ug/kg	14.4	--	10
Cl6-BZ#128	24.5		ug/kg	14.4	--	10
Cl8-BZ#195	ND		ug/kg	14.4	--	10
Cl10-BZ#209	ND		ug/kg	14.4	--	10

DBOB	65	30-150
BZ 198	117	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-01	Date Collected:	09/15/10 09:37
Client ID:	S-10S-C001-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 06:32	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	90%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	296	E	ug/kg	14.4	--	10
Cl3-BZ#28	866	E	ug/kg	14.4	--	10
Cl4-BZ#52	1300	E	ug/kg	14.4	--	10
Cl4-BZ#44	405	E	ug/kg	14.4	--	10
Cl4-BZ#66	334	E	ug/kg	14.4	--	10
Cl5-BZ#101	212		ug/kg	14.4	--	10
Cl5-BZ#118	127		ug/kg	14.4	--	10
Cl6-BZ#153	196		ug/kg	14.4	--	10
Cl7-BZ#187	44.7		ug/kg	14.4	--	10
Cl7-BZ#180	28.4		ug/kg	14.4	--	10
Cl7-BZ#170	20.4		ug/kg	14.4	--	10
Cl9-BZ#206	ND		ug/kg	14.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	117		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-01 D	Date Collected:	09/15/10 09:37
Client ID:	S-10S-C001-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 01:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	90%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	846		ug/kg	144	--	100
Cl4-BZ#66	554		ug/kg	144	--	100

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-01 D	Date Collected:	09/15/10 09:37
Client ID:	S-10S-C001-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 01:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	90%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	494		ug/kg	144	--	100
Cl3-BZ#28	1340		ug/kg	144	--	100
Cl4-BZ#52	2020		ug/kg	144	--	100
Cl4-BZ#44	623		ug/kg	144	--	100

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-02	Date Collected:	09/15/10 09:50
Client ID:	S-10S-C002-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 05:10	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	282		ug/kg	15.1	--	10
Cl5-BZ#105	20.7		ug/kg	15.1	--	10
Cl6-BZ#138	83.8		ug/kg	15.1	--	10
Cl6-BZ#128	16.9		ug/kg	15.1	--	10
Cl8-BZ#195	ND		ug/kg	15.1	--	10
Cl9-BZ#206	ND		ug/kg	15.1	--	10
Cl10-BZ#209	ND		ug/kg	15.1	--	10

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

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-02	Date Collected:	09/15/10 09:50
Client ID:	S-10S-C002-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 05:10	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	187		ug/kg	15.1	--	10
Cl3-BZ#28	564	E	ug/kg	15.1	--	10
Cl4-BZ#52	849	E	ug/kg	15.1	--	10
Cl4-BZ#44	271		ug/kg	15.1	--	10
Cl4-BZ#66	217		ug/kg	15.1	--	10
Cl5-BZ#101	138		ug/kg	15.1	--	10
Cl5-BZ#118	83.6		ug/kg	15.1	--	10
Cl6-BZ#153	128		ug/kg	15.1	--	10
Cl7-BZ#187	30.3		ug/kg	15.1	--	10
Cl7-BZ#180	19.6		ug/kg	15.1	--	10
Cl7-BZ#170	ND		ug/kg	15.1	--	10

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-02 D	Date Collected:	09/15/10 09:50
Client ID:	S-10S-C002-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 00:34	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	739		ug/kg	75.3	--	50
Cl4-BZ#52	1100		ug/kg	75.3	--	50

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-03	Date Collected:	09/15/10 10:09
Client ID:	S-10S-C003-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 11:31	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	6500		ug/kg	1420	--	1000
Cl3-BZ#18	9300		ug/kg	1420	--	1000
Cl4-BZ#52	17600		ug/kg	1420	--	1000
Cl4-BZ#66	3740		ug/kg	1420	--	1000
Cl5-BZ#118	ND		ug/kg	1420	--	1000
Cl5-BZ#105	ND		ug/kg	1420	--	1000
Cl6-BZ#138	ND		ug/kg	1420	--	1000
Cl7-BZ#187	ND		ug/kg	1420	--	1000
Cl6-BZ#128	ND		ug/kg	1420	--	1000
Cl7-BZ#180	ND		ug/kg	1420	--	1000
Cl7-BZ#170	ND		ug/kg	1420	--	1000
Cl8-BZ#195	ND		ug/kg	1420	--	1000
Cl9-BZ#206	ND		ug/kg	1420	--	1000
Cl10-BZ#209	ND		ug/kg	1420	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-03	Date Collected:	09/15/10 10:09
Client ID:	S-10S-C003-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 11:31	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	9900		ug/kg	1420	--	1000
Cl4-BZ#44	4100		ug/kg	1420	--	1000
Cl5-BZ#101	1810		ug/kg	1420	--	1000
Cl6-BZ#153	1720		ug/kg	1420	--	1000

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-04	Date Collected:	09/15/10 10:23
Client ID:	S-10S-C004-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 07:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	93%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5600		ug/kg	1410	--	1000
Cl3-BZ#18	8750		ug/kg	1410	--	1000
Cl4-BZ#52	18800		ug/kg	1410	--	1000
Cl4-BZ#66	4580		ug/kg	1410	--	1000
Cl5-BZ#118	1520		ug/kg	1410	--	1000
Cl5-BZ#105	ND		ug/kg	1410	--	1000
Cl6-BZ#138	1780		ug/kg	1410	--	1000
Cl7-BZ#187	ND		ug/kg	1410	--	1000
Cl6-BZ#128	ND		ug/kg	1410	--	1000
Cl7-BZ#180	ND		ug/kg	1410	--	1000
Cl7-BZ#170	ND		ug/kg	1410	--	1000
Cl8-BZ#195	ND		ug/kg	1410	--	1000
Cl9-BZ#206	ND		ug/kg	1410	--	1000
Cl10-BZ#209	ND		ug/kg	1410	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-04	Date Collected:	09/15/10 10:23
Client ID:	S-10S-C004-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 07:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	93%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	11800		ug/kg	1410	--	1000
Cl4-BZ#44	4930		ug/kg	1410	--	1000
Cl5-BZ#101	2360		ug/kg	1410	--	1000
Cl6-BZ#153	2420		ug/kg	1410	--	1000

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-05	Date Collected:	09/15/10 10:34
Client ID:	S-10S-C005-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/06/10 23:41	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1450	E	ug/kg	13.7	--	10
Cl3-BZ#18	2180	E	ug/kg	13.7	--	10
Cl4-BZ#52	1880	E	ug/kg	13.7	--	10
Cl4-BZ#44	763	E	ug/kg	13.7	--	10
Cl4-BZ#66	1030	E	ug/kg	13.7	--	10
Cl5-BZ#118	438	E	ug/kg	13.7	--	10
Cl6-BZ#138	318	E	ug/kg	13.7	--	10
Cl7-BZ#187	53.0		ug/kg	13.7	--	10
Cl6-BZ#128	66.2		ug/kg	13.7	--	10
Cl7-BZ#180	60.7		ug/kg	13.7	--	10
Cl7-BZ#170	46.3		ug/kg	13.7	--	10
Cl8-BZ#195	ND		ug/kg	13.7	--	10
Cl9-BZ#206	ND		ug/kg	13.7	--	10
Cl10-BZ#209	ND		ug/kg	13.7	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	96		30-150
BZ 198	93		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-05	Date Collected:	09/15/10 10:34
Client ID:	S-10S-C005-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/06/10 23:41	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1140	E	ug/kg	13.7	--	10
Cl5-BZ#101	404	E	ug/kg	13.7	--	10
Cl6-BZ#153	228		ug/kg	13.7	--	10
Cl5-BZ#105	92.5		ug/kg	13.7	--	10

DBOB	96	30-150
BZ 198	93	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-05 D	Date Collected:	09/15/10 10:34
Client ID:	S-10S-C005-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 19:45	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2330		ug/kg	275	--	200
Cl3-BZ#18	2890		ug/kg	275	--	200
Cl4-BZ#52	3150		ug/kg	275	--	200
Cl4-BZ#66	1620		ug/kg	275	--	200
Cl5-BZ#118	684		ug/kg	275	--	200
Cl6-BZ#138	485		ug/kg	275	--	200

Project Name: NEW BEDFORD HARBOR
Lab Number: L1014584
Project Number: TO-0010-03
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-05 D	Date Collected:	09/15/10 10:34
Client ID:	S-10S-C005-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 19:45	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3110		ug/kg	275	--	200
Cl4-BZ#44	1370		ug/kg	275	--	200
Cl5-BZ#101	889		ug/kg	275	--	200

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-06	Date Collected:	09/15/10 10:45
Client ID:	S-10S-C006-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 05:51	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2020	E	ug/kg	15.3	--	10
Cl3-BZ#18	3180	E	ug/kg	15.3	--	10
Cl4-BZ#52	4200	E	ug/kg	15.3	--	10
Cl4-BZ#44	1060	E	ug/kg	15.3	--	10
Cl4-BZ#66	1080	E	ug/kg	15.3	--	10
Cl5-BZ#118	325	E	ug/kg	15.3	--	10
Cl6-BZ#138	388	E	ug/kg	15.3	--	10
Cl7-BZ#187	112		ug/kg	15.3	--	10
Cl6-BZ#128	70.6		ug/kg	15.3	--	10
Cl7-BZ#180	84.3		ug/kg	15.3	--	10
Cl7-BZ#170	59.0		ug/kg	15.3	--	10
Cl8-BZ#195	ND		ug/kg	15.3	--	10
Cl9-BZ#206	15.3		ug/kg	15.3	--	10
Cl10-BZ#209	ND		ug/kg	15.3	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	121		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-06	Date Collected:	09/15/10 10:45
Client ID:	S-10S-C006-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 05:51	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1630	E	ug/kg	15.3	--	10
Cl5-BZ#101	428	E	ug/kg	15.3	--	10
Cl6-BZ#153	358	E	ug/kg	15.3	--	10
Cl5-BZ#105	74.6		ug/kg	15.3	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	121		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-06 D	Date Collected:	09/15/10 10:45
Client ID:	S-10S-C006-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 03:59	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2620		ug/kg	305	--	200
Cl3-BZ#18	4040		ug/kg	305	--	200
Cl4-BZ#52	5540		ug/kg	305	--	200
Cl4-BZ#66	1420		ug/kg	305	--	200
Cl5-BZ#118	429		ug/kg	305	--	200
Cl6-BZ#138	502		ug/kg	305	--	200

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-06 D	Date Collected:	09/15/10 10:45
Client ID:	S-10S-C006-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 03:59	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4170		ug/kg	305	--	200
Cl4-BZ#44	1450		ug/kg	305	--	200
Cl5-BZ#101	653		ug/kg	305	--	200
Cl6-BZ#153	596		ug/kg	305	--	200

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-07	Date Collected:	09/15/10 10:57
Client ID:	S-10S-C007-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 04:29	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	945	E	ug/kg	13.7	--	10
Cl3-BZ#18	1610	E	ug/kg	13.7	--	10
Cl4-BZ#52	2740	E	ug/kg	13.7	--	10
Cl4-BZ#66	668	E	ug/kg	13.7	--	10
Cl5-BZ#118	210		ug/kg	13.7	--	10
Cl5-BZ#105	39.9		ug/kg	13.7	--	10
Cl6-BZ#138	250		ug/kg	13.7	--	10
Cl6-BZ#128	41.0		ug/kg	13.7	--	10
Cl8-BZ#195	ND		ug/kg	13.7	--	10
Cl10-BZ#209	ND		ug/kg	13.7	--	10

DBOB	47	30-150
BZ 198	140	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-07	Date Collected:	09/15/10 10:57
Client ID:	S-10S-C007-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 04:29	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1500	E	ug/kg	13.7	--	10
Cl4-BZ#44	776	E	ug/kg	13.7	--	10
Cl5-BZ#101	380	E	ug/kg	13.7	--	10
Cl6-BZ#153	367	E	ug/kg	13.7	--	10
Cl7-BZ#187	87.2		ug/kg	13.7	--	10
Cl7-BZ#180	54.3		ug/kg	13.7	--	10
Cl7-BZ#170	38.6		ug/kg	13.7	--	10
Cl9-BZ#206	ND		ug/kg	13.7	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	47		30-150
BZ 198	140		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-07 D	Date Collected:	09/15/10 10:57
Client ID:	S-10S-C007-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 03:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2620		ug/kg	549	--	400
Cl3-BZ#18	5200		ug/kg	549	--	400
Cl4-BZ#52	7500		ug/kg	549	--	400
Cl4-BZ#66	1840		ug/kg	549	--	400

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-07 D	Date Collected:	09/15/10 10:57
Client ID:	S-10S-C007-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 03:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4830		ug/kg	549	--	400
Cl4-BZ#44	1830		ug/kg	549	--	400
Cl5-BZ#101	891		ug/kg	549	--	400
Cl6-BZ#153	922		ug/kg	549	--	400

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-08	Date Collected:	09/15/10 11:11
Client ID:	S-10S-C008-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 03:48	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3280	E	ug/kg	14.1	--	10
Cl4-BZ#52	4900	E	ug/kg	14.1	--	10
Cl4-BZ#44	1440	E	ug/kg	14.1	--	10
Cl4-BZ#66	1170	E	ug/kg	14.1	--	10
Cl5-BZ#118	241		ug/kg	14.1	--	10
Cl6-BZ#138	370	E	ug/kg	14.1	--	10
Cl7-BZ#187	118		ug/kg	14.1	--	10
Cl6-BZ#128	53.4		ug/kg	14.1	--	10
Cl7-BZ#180	87.8		ug/kg	14.1	--	10
Cl7-BZ#170	58.8		ug/kg	14.1	--	10
Cl8-BZ#195	ND		ug/kg	14.1	--	10
Cl9-BZ#206	15.1		ug/kg	14.1	--	10
Cl10-BZ#209	ND		ug/kg	14.1	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	133		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-08	Date Collected:	09/15/10 11:11
Client ID:	S-10S-C008-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 03:48	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4410	E	ug/kg	14.1	--	10
Cl3-BZ#28	1640	E	ug/kg	14.1	--	10
Cl5-BZ#101	443	E	ug/kg	14.1	--	10
Cl6-BZ#153	333	E	ug/kg	14.1	--	10
Cl5-BZ#105	52.6		ug/kg	14.1	--	10

DBOB	74	30-150
BZ 198	133	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-08 D	Date Collected:	09/15/10 11:11
Client ID:	S-10S-C008-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 03:49	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	11900		ug/kg	1410	--	1000
Cl3-BZ#18	18500		ug/kg	1410	--	1000
Cl4-BZ#52	18400		ug/kg	1410	--	1000
Cl4-BZ#66	4010		ug/kg	1410	--	1000
Cl6-BZ#138	ND		ug/kg	1410	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-08 D	Date Collected:	09/15/10 11:11
Client ID:	S-10S-C008-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 03:49	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	16200		ug/kg	1410	--	1000
Cl4-BZ#44	5210		ug/kg	1410	--	1000
Cl5-BZ#101	1710		ug/kg	1410	--	1000
Cl6-BZ#153	1420		ug/kg	1410	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-09	Date Collected:	09/15/10 11:25
Client ID:	S-10S-C009-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 01:44	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	372	E	ug/kg	14.4	--	10
Cl3-BZ#18	691	E	ug/kg	14.4	--	10
Cl4-BZ#66	246		ug/kg	14.4	--	10
Cl5-BZ#105	ND		ug/kg	14.4	--	10
Cl6-BZ#138	86.3		ug/kg	14.4	--	10
Cl6-BZ#128	ND		ug/kg	14.4	--	10
Cl7-BZ#180	18.0		ug/kg	14.4	--	10
Cl7-BZ#170	ND		ug/kg	14.4	--	10
Cl8-BZ#195	ND		ug/kg	14.4	--	10
Cl9-BZ#206	ND		ug/kg	14.4	--	10
Cl10-BZ#209	ND		ug/kg	14.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	96		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-09	Date Collected:	09/15/10 11:25
Client ID:	S-10S-C009-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 01:44	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	780	E	ug/kg	14.4	--	10
Cl4-BZ#52	1120	E	ug/kg	14.4	--	10
Cl4-BZ#44	323	E	ug/kg	14.4	--	10
Cl5-BZ#101	128		ug/kg	14.4	--	10
Cl5-BZ#118	62.9		ug/kg	14.4	--	10
Cl6-BZ#153	125		ug/kg	14.4	--	10
Cl7-BZ#187	32.8		ug/kg	14.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	96		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1014584
Project Number: TO-0010-03
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-09 D	Date Collected:	09/15/10 11:25
Client ID:	S-10S-C009-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 23:34	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	531		ug/kg	144	--	100
Cl3-BZ#18	990		ug/kg	144	--	100

Project Name: NEW BEDFORD HARBOR
Lab Number: L1014584
Project Number: TO-0010-03
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-09 D	Date Collected:	09/15/10 11:25
Client ID:	S-10S-C009-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 23:34	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1040		ug/kg	144	--	100
Cl4-BZ#52	1540		ug/kg	144	--	100
Cl4-BZ#44	426		ug/kg	144	--	100

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-10	Date Collected:	09/15/10 11:37
Client ID:	S-10S-C010-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 07:54	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1800	E	ug/kg	14.4	--	10
Cl3-BZ#18	3240	E	ug/kg	14.4	--	10
Cl4-BZ#52	4990	E	ug/kg	14.4	--	10
Cl4-BZ#44	1240	E	ug/kg	14.4	--	10
Cl4-BZ#66	1220	E	ug/kg	14.4	--	10
Cl5-BZ#118	290	E	ug/kg	14.4	--	10
Cl6-BZ#138	405	E	ug/kg	14.4	--	10
Cl7-BZ#187	147		ug/kg	14.4	--	10
Cl6-BZ#128	60.8		ug/kg	14.4	--	10
Cl7-BZ#180	79.1		ug/kg	14.4	--	10
Cl7-BZ#170	57.3		ug/kg	14.4	--	10
Cl8-BZ#195	ND		ug/kg	14.4	--	10
Cl9-BZ#206	18.3		ug/kg	14.4	--	10
Cl10-BZ#209	ND		ug/kg	14.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	102		30-150
BZ 198	130		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-10	Date Collected:	09/15/10 11:37
Client ID:	S-10S-C010-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 07:54	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1670	E	ug/kg	14.4	--	10
Cl5-BZ#101	461	E	ug/kg	14.4	--	10
Cl6-BZ#153	443	E	ug/kg	14.4	--	10
Cl5-BZ#105	49.4		ug/kg	14.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	102		30-150
BZ 198	130		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-10 D	Date Collected:	09/15/10 11:37
Client ID:	S-10S-C010-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 04:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	6090		ug/kg	1440	--	1000
Cl3-BZ#28	12500		ug/kg	1440	--	1000
Cl4-BZ#52	17200		ug/kg	1440	--	1000
Cl4-BZ#66	4180		ug/kg	1440	--	1000
Cl5-BZ#118	ND		ug/kg	1440	--	1000
Cl6-BZ#138	ND		ug/kg	1440	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-10 D	Date Collected:	09/15/10 11:37
Client ID:	S-10S-C010-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 04:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	15800		ug/kg	1440	--	1000
Cl4-BZ#44	4340		ug/kg	1440	--	1000
Cl5-BZ#101	1730		ug/kg	1440	--	1000
Cl6-BZ#153	1790		ug/kg	1440	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-11	Date Collected:	09/15/10 12:36
Client ID:	S-10S-C011-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 09:16	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	89%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2530	E	ug/kg	14.7	--	10
Cl3-BZ#18	3460	E	ug/kg	14.7	--	10
Cl4-BZ#52	4970	E	ug/kg	14.7	--	10
Cl4-BZ#44	1140	E	ug/kg	14.7	--	10
Cl4-BZ#66	1140	E	ug/kg	14.7	--	10
Cl5-BZ#118	310	E	ug/kg	14.7	--	10
Cl6-BZ#138	404	E	ug/kg	14.7	--	10
Cl7-BZ#187	136		ug/kg	14.7	--	10
Cl6-BZ#128	60.4		ug/kg	14.7	--	10
Cl7-BZ#180	98.0		ug/kg	14.7	--	10
Cl7-BZ#170	67.3		ug/kg	14.7	--	10
Cl8-BZ#195	ND		ug/kg	14.7	--	10
Cl9-BZ#206	18.2		ug/kg	14.7	--	10
Cl10-BZ#209	ND		ug/kg	14.7	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	118		30-150
BZ 198	123		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-11	Date Collected:	09/15/10 12:36
Client ID:	S-10S-C011-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 09:16	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	89%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1450	E	ug/kg	14.7	--	10
Cl5-BZ#101	478	E	ug/kg	14.7	--	10
Cl6-BZ#153	424	E	ug/kg	14.7	--	10
Cl5-BZ#105	17.1		ug/kg	14.7	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	118		30-150
BZ 198	123		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-11 D	Date Collected:	09/15/10 12:36
Client ID:	S-10S-C011-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 05:53	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	89%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	9420		ug/kg	1470	--	1000
Cl3-BZ#18	16800		ug/kg	1470	--	1000
Cl4-BZ#52	18200		ug/kg	1470	--	1000
Cl4-BZ#44	4330		ug/kg	1470	--	1000
Cl4-BZ#66	3960		ug/kg	1470	--	1000
Cl5-BZ#118	ND		ug/kg	1470	--	1000
Cl6-BZ#138	ND		ug/kg	1470	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1014584
Project Number: TO-0010-03
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-11 D	Date Collected:	09/15/10 12:36
Client ID:	S-10S-C011-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 05:53	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	89%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	13200		ug/kg	1470	--	1000
Cl5-BZ#101	1900		ug/kg	1470	--	1000
Cl6-BZ#153	1820		ug/kg	1470	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-12	Date Collected:	09/15/10 12:57
Client ID:	S-10S-C012-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/06/10 23:00	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	520	E	ug/kg	13.4	--	10
Cl3-BZ#18	724	E	ug/kg	13.4	--	10
Cl4-BZ#52	659	E	ug/kg	13.4	--	10
Cl4-BZ#66	201		ug/kg	13.4	--	10
Cl5-BZ#118	79.1		ug/kg	13.4	--	10
Cl6-BZ#138	73.6		ug/kg	13.4	--	10
Cl7-BZ#187	19.6		ug/kg	13.4	--	10
Cl6-BZ#128	14.6		ug/kg	13.4	--	10
Cl7-BZ#180	17.7		ug/kg	13.4	--	10
Cl7-BZ#170	ND		ug/kg	13.4	--	10
Cl8-BZ#195	ND		ug/kg	13.4	--	10
Cl9-BZ#206	ND		ug/kg	13.4	--	10
Cl10-BZ#209	ND		ug/kg	13.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	108		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-12	Date Collected:	09/15/10 12:57
Client ID:	S-10S-C012-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/06/10 23:00	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	536	E	ug/kg	13.4	--	10
Cl4-BZ#44	191		ug/kg	13.4	--	10
Cl5-BZ#101	113		ug/kg	13.4	--	10
Cl6-BZ#153	81.0		ug/kg	13.4	--	10
Cl5-BZ#105	18.5		ug/kg	13.4	--	10

DBOB	80	30-150
BZ 198	108	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1014584
Project Number: TO-0010-03
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-12 D	Date Collected:	09/15/10 12:57
Client ID:	S-10S-C012-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 17:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	786		ug/kg	66.8	--	50
Cl3-BZ#18	858		ug/kg	66.8	--	50

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-12 D	Date Collected:	09/15/10 12:57
Client ID:	S-10S-C012-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 17:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	825		ug/kg	66.8	--	50
Cl4-BZ#52	940		ug/kg	66.8	--	50

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-13	Date Collected:	09/15/10 13:10
Client ID:	S-10S-C013-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 00:22	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	93%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	694	E	ug/kg	14.1	--	10
Cl6-BZ#138	94.3		ug/kg	14.1	--	10
Cl7-BZ#187	35.6		ug/kg	14.1	--	10
Cl6-BZ#128	ND		ug/kg	14.1	--	10
Cl7-BZ#180	18.8		ug/kg	14.1	--	10
Cl8-BZ#195	ND		ug/kg	14.1	--	10
Cl9-BZ#206	ND		ug/kg	14.1	--	10
Cl10-BZ#209	ND		ug/kg	14.1	--	10

DBOB	79	30-150
BZ 198	108	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-13	Date Collected:	09/15/10 13:10
Client ID:	S-10S-C013-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 00:22	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	93%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	522	E	ug/kg	14.1	--	10
Cl3-BZ#28	995	E	ug/kg	14.1	--	10
Cl4-BZ#52	1420	E	ug/kg	14.1	--	10
Cl4-BZ#44	439	E	ug/kg	14.1	--	10
Cl4-BZ#66	329	E	ug/kg	14.1	--	10
Cl5-BZ#101	161		ug/kg	14.1	--	10
Cl5-BZ#118	80.6		ug/kg	14.1	--	10
Cl6-BZ#153	142		ug/kg	14.1	--	10
Cl5-BZ#105	16.2		ug/kg	14.1	--	10
Cl7-BZ#170	ND		ug/kg	14.1	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	108		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-13 D	Date Collected:	09/15/10 13:10
Client ID:	S-10S-C013-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 19:04	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	93%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	954		ug/kg	141	--	100
Cl4-BZ#66	440		ug/kg	141	--	100

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-13 D	Date Collected:	09/15/10 13:10
Client ID:	S-10S-C013-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 19:04	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	93%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	650		ug/kg	141	--	100
Cl3-BZ#28	1340		ug/kg	141	--	100
Cl4-BZ#52	1820		ug/kg	141	--	100
Cl4-BZ#44	550		ug/kg	141	--	100

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-14	Date Collected:	09/15/10 13:21
Client ID:	S-10S-C014-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 01:03	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	922	E	ug/kg	13.8	--	10
Cl5-BZ#105	20.4		ug/kg	13.8	--	10
Cl6-BZ#138	131		ug/kg	13.8	--	10
Cl6-BZ#128	19.9		ug/kg	13.8	--	10
Cl8-BZ#195	ND		ug/kg	13.8	--	10
Cl9-BZ#206	ND		ug/kg	13.8	--	10
Cl10-BZ#209	ND		ug/kg	13.8	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	106		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-14	Date Collected:	09/15/10 13:21
Client ID:	S-10S-C014-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 01:03	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	621	E	ug/kg	13.8	--	10
Cl3-BZ#28	1230	E	ug/kg	13.8	--	10
Cl4-BZ#52	1920	E	ug/kg	13.8	--	10
Cl4-BZ#44	565	E	ug/kg	13.8	--	10
Cl4-BZ#66	453	E	ug/kg	13.8	--	10
Cl5-BZ#101	214		ug/kg	13.8	--	10
Cl5-BZ#118	105		ug/kg	13.8	--	10
Cl6-BZ#153	208		ug/kg	13.8	--	10
Cl7-BZ#187	53.9		ug/kg	13.8	--	10
Cl7-BZ#180	22.7		ug/kg	13.8	--	10
Cl7-BZ#170	16.4		ug/kg	13.8	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	106		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-14 D	Date Collected:	09/15/10 13:21
Client ID:	S-10S-C014-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 22:53	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1700		ug/kg	276	--	200
Cl4-BZ#66	714		ug/kg	276	--	200

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-14 D	Date Collected:	09/15/10 13:21
Client ID:	S-10S-C014-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 22:53	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	950		ug/kg	276	--	200
Cl3-BZ#28	2110		ug/kg	276	--	200
Cl4-BZ#52	3050		ug/kg	276	--	200
Cl4-BZ#44	849		ug/kg	276	--	200

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-15	Date Collected:	09/15/10 13:33
Client ID:	S-10S-C015-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 03:06	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	88%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	741	E	ug/kg	15.0	--	10
Cl3-BZ#18	1340	E	ug/kg	15.0	--	10
Cl4-BZ#52	2060	E	ug/kg	15.0	--	10
Cl4-BZ#66	475	E	ug/kg	15.0	--	10
Cl5-BZ#118	139		ug/kg	15.0	--	10
Cl6-BZ#138	181		ug/kg	15.0	--	10
Cl7-BZ#187	63.2		ug/kg	15.0	--	10
Cl6-BZ#128	29.3		ug/kg	15.0	--	10
Cl7-BZ#180	41.8		ug/kg	15.0	--	10
Cl7-BZ#170	28.6		ug/kg	15.0	--	10
Cl8-BZ#195	ND		ug/kg	15.0	--	10
Cl10-BZ#209	ND		ug/kg	15.0	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	118		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-15	Date Collected:	09/15/10 13:33
Client ID:	S-10S-C015-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 03:06	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	88%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1510	E	ug/kg	15.0	--	10
Cl4-BZ#44	548	E	ug/kg	15.0	--	10
Cl5-BZ#101	259		ug/kg	15.0	--	10
Cl6-BZ#153	236		ug/kg	15.0	--	10
Cl5-BZ#105	29.8		ug/kg	15.0	--	10
Cl9-BZ#206	ND		ug/kg	15.0	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	118		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-15 D	Date Collected:	09/15/10 13:33
Client ID:	S-10S-C015-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 01:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	88%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1510		ug/kg	301	--	200
Cl3-BZ#18	3470		ug/kg	301	--	200
Cl4-BZ#52	4600		ug/kg	301	--	200
Cl4-BZ#66	1040		ug/kg	301	--	200

Project Name: NEW BEDFORD HARBOR
Lab Number: L1014584
Project Number: TO-0010-03
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-15 D	Date Collected:	09/15/10 13:33
Client ID:	S-10S-C015-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 01:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	88%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3100		ug/kg	301	--	200
Cl4-BZ#44	1190		ug/kg	301	--	200

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-16	Date Collected:	09/15/10 13:45
Client ID:	S-10S-C016-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 08:35	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2000	E	ug/kg	13.7	--	10
Cl3-BZ#18	2740	E	ug/kg	13.7	--	10
Cl4-BZ#52	5530	E	ug/kg	13.7	--	10
Cl4-BZ#44	1320	E	ug/kg	13.7	--	10
Cl4-BZ#66	1270	E	ug/kg	13.7	--	10
Cl5-BZ#118	243		ug/kg	13.7	--	10
Cl5-BZ#105	53.5		ug/kg	13.7	--	10
Cl6-BZ#138	416	E	ug/kg	13.7	--	10
Cl7-BZ#187	150		ug/kg	13.7	--	10
Cl6-BZ#128	54.4		ug/kg	13.7	--	10
Cl7-BZ#180	83.5		ug/kg	13.7	--	10
Cl7-BZ#170	56.4		ug/kg	13.7	--	10
Cl8-BZ#195	ND		ug/kg	13.7	--	10
Cl9-BZ#206	17.1		ug/kg	13.7	--	10
Cl10-BZ#209	ND		ug/kg	13.7	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	145		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-16	Date Collected:	09/15/10 13:45
Client ID:	S-10S-C016-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 08:35	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1570	E	ug/kg	13.7	--	10
Cl5-BZ#101	537	E	ug/kg	13.7	--	10
Cl6-BZ#153	423	E	ug/kg	13.7	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	145		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-16 D	Date Collected:	09/15/10 13:45
Client ID:	S-10S-C016-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 05:12	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7550		ug/kg	1370	--	1000
Cl3-BZ#18	15500		ug/kg	1370	--	1000
Cl4-BZ#52	21200		ug/kg	1370	--	1000
Cl4-BZ#44	4850		ug/kg	1370	--	1000
Cl4-BZ#66	4450		ug/kg	1370	--	1000
Cl6-BZ#138	ND		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-16 D	Date Collected:	09/15/10 13:45
Client ID:	S-10S-C016-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 05:12	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	12000		ug/kg	1370	--	1000
Cl5-BZ#101	1960		ug/kg	1370	--	1000
Cl6-BZ#153	1690		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-17	Date Collected:	09/15/10 13:57
Client ID:	S-10S-C017-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 12:12	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	12300		ug/kg	1440	--	1000
Cl3-BZ#18	25500		ug/kg	1440	--	1000
Cl4-BZ#52	43300		ug/kg	1440	--	1000
Cl4-BZ#66	10600		ug/kg	1440	--	1000
Cl5-BZ#118	2180		ug/kg	1440	--	1000
Cl5-BZ#105	ND		ug/kg	1440	--	1000
Cl6-BZ#138	3460		ug/kg	1440	--	1000
Cl7-BZ#187	ND		ug/kg	1440	--	1000
Cl6-BZ#128	ND		ug/kg	1440	--	1000
Cl7-BZ#180	ND		ug/kg	1440	--	1000
Cl7-BZ#170	ND		ug/kg	1440	--	1000
Cl8-BZ#195	ND		ug/kg	1440	--	1000
Cl9-BZ#206	ND		ug/kg	1440	--	1000
Cl10-BZ#209	ND		ug/kg	1440	--	1000

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-17	Date Collected:	09/15/10 13:57
Client ID:	S-10S-C017-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 12:12	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	23400		ug/kg	1440	--	1000
Cl4-BZ#44	12300		ug/kg	1440	--	1000
Cl5-BZ#101	4230		ug/kg	1440	--	1000
Cl6-BZ#153	4510		ug/kg	1440	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-18	Date Collected:	09/15/10 14:09
Client ID:	S-10S-C018-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 06:34	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	84%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	13400		ug/kg	3910	--	2500
Cl3-BZ#18	28200		ug/kg	3910	--	2500
Cl4-BZ#52	44900		ug/kg	3910	--	2500
Cl4-BZ#44	10600		ug/kg	3910	--	2500
Cl4-BZ#66	9490		ug/kg	3910	--	2500
Cl5-BZ#118	ND		ug/kg	3910	--	2500
Cl5-BZ#105	ND		ug/kg	3910	--	2500
Cl6-BZ#138	ND		ug/kg	3910	--	2500
Cl7-BZ#187	ND		ug/kg	3910	--	2500
Cl6-BZ#128	ND		ug/kg	3910	--	2500
Cl7-BZ#180	ND		ug/kg	3910	--	2500
Cl7-BZ#170	ND		ug/kg	3910	--	2500
Cl8-BZ#195	ND		ug/kg	3910	--	2500
Cl9-BZ#206	ND		ug/kg	3910	--	2500
Cl10-BZ#209	ND		ug/kg	3910	--	2500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-18	Date Collected:	09/15/10 14:09
Client ID:	S-10S-C018-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/09/10 06:34	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	84%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	23800		ug/kg	3910	--	2500
Cl5-BZ#101	4380		ug/kg	3910	--	2500
Cl6-BZ#153	4520		ug/kg	3910	--	2500

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-19	Date Collected:	09/15/10 14:20
Client ID:	S-10S-C019-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 08:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7260		ug/kg	1490	--	1000
Cl3-BZ#18	13200		ug/kg	1490	--	1000
Cl4-BZ#52	18200		ug/kg	1490	--	1000
Cl4-BZ#44	4520		ug/kg	1490	--	1000
Cl4-BZ#66	5080		ug/kg	1490	--	1000
Cl5-BZ#118	1650		ug/kg	1490	--	1000
Cl5-BZ#105	ND		ug/kg	1490	--	1000
Cl6-BZ#138	ND		ug/kg	1490	--	1000
Cl7-BZ#187	ND		ug/kg	1490	--	1000
Cl6-BZ#128	ND		ug/kg	1490	--	1000
Cl7-BZ#180	ND		ug/kg	1490	--	1000
Cl7-BZ#170	ND		ug/kg	1490	--	1000
Cl8-BZ#195	ND		ug/kg	1490	--	1000
Cl9-BZ#206	ND		ug/kg	1490	--	1000
Cl10-BZ#209	ND		ug/kg	1490	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-19	Date Collected:	09/15/10 14:20
Client ID:	S-10S-C019-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/08/10 08:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	11000		ug/kg	1490	--	1000
Cl5-BZ#101	2420		ug/kg	1490	--	1000
Cl6-BZ#153	1950		ug/kg	1490	--	1000

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-20	Date Collected:	09/15/10 14:33
Client ID:	S-10S-C020-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 02:25	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	520	E	ug/kg	13.6	--	10
Cl3-BZ#18	873	E	ug/kg	13.6	--	10
Cl4-BZ#52	1400	E	ug/kg	13.6	--	10
Cl4-BZ#66	431	E	ug/kg	13.6	--	10
Cl5-BZ#118	114		ug/kg	13.6	--	10
Cl6-BZ#138	148		ug/kg	13.6	--	10
Cl7-BZ#187	44.3		ug/kg	13.6	--	10
Cl6-BZ#128	22.6		ug/kg	13.6	--	10
Cl7-BZ#180	31.4		ug/kg	13.6	--	10
Cl7-BZ#170	21.2		ug/kg	13.6	--	10
Cl8-BZ#195	ND		ug/kg	13.6	--	10
Cl9-BZ#206	ND		ug/kg	13.6	--	10
Cl10-BZ#209	ND		ug/kg	13.6	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	88		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-20	Date Collected:	09/15/10 14:33
Client ID:	S-10S-C020-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 02:25	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	994	E	ug/kg	13.6	--	10
Cl4-BZ#44	468	E	ug/kg	13.6	--	10
Cl5-BZ#101	227		ug/kg	13.6	--	10
Cl6-BZ#153	158		ug/kg	13.6	--	10
Cl5-BZ#105	27.7		ug/kg	13.6	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	88		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1014584
Project Number: TO-0010-03
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-20 D	Date Collected:	09/15/10 14:33
Client ID:	S-10S-C020-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 21:59	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	878		ug/kg	136	--	100
Cl3-BZ#18	1260		ug/kg	136	--	100
Cl4-BZ#66	684		ug/kg	136	--	100

Project Name: NEW BEDFORD HARBOR
Lab Number: L1014584
Project Number: TO-0010-03
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID:	L1014584-20 D	Date Collected:	09/15/10 14:33
Client ID:	S-10S-C020-0-0.5	Date Received:	09/16/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/28/10 08:28
Analytical Date:	10/07/10 21:59	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/05/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1750		ug/kg	136	--	100
Cl4-BZ#52	2300		ug/kg	136	--	100
Cl4-BZ#44	810		ug/kg	136	--	100

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1014584

Project Number: TO-0010-03 **Report Date:** 10/13/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 10/06/10 16:09
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 09/28/10 08:28
Cleanup Method1: EPA 3630
Cleanup Date1: 10/05/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG434380-1					
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	90		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 10/06/10 16:09
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 09/28/10 08:28
Cleanup Method1: EPA 3630
Cleanup Date1: 10/05/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG434380-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	90		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

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: WG434380-2 WG434380-3							
Cl2-BZ#8	61		66		40-140	8		30
Cl3-BZ#18	70		68		40-140	3		30
Cl3-BZ#28	78		68		40-140	14		30
Cl4-BZ#52	80		74		40-140	8		30
Cl4-BZ#44	75		73		40-140	3		30
Cl4-BZ#66	76		72		40-140	5		30
Cl5-BZ#101	77		75		40-140	3		30
Cl5-BZ#118	81		80		40-140	1		30
Cl5-BZ#105	76		72		40-140	5		30
Cl6-BZ#138	80		76		40-140	5		30
Cl7-BZ#187	77		72		40-140	7		30
Cl6-BZ#128	81		77		40-140	5		30
Cl7-BZ#180	81		76		40-140	6		30
Cl7-BZ#170	81		76		40-140	6		30
Cl8-BZ#195	80		79		40-140	1		30
Cl9-BZ#206	88		83		40-140	6		30
Cl10-BZ#209	80		77		40-140	4		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

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: WG434380-2		WG434380-3			

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	80		79		30-150
BZ 198	83		73		30-150

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-20		Batch: WG434380-2		WG434380-3			
Cl6-BZ#153	78		74		40-140	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	80		79		30-150
BZ 198	83		73		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-01
Client ID: S-10S-C001-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 09:37
Date Received: 09/16/10
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	89.9		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-02
Client ID: S-10S-C002-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 09:50
Date Received: 09/16/10
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	86.9		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-03
Client ID: S-10S-C003-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 10:09
Date Received: 09/16/10
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	92.2		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-04
Client ID: S-10S-C004-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 10:23
Date Received: 09/16/10
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	93.0		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-05
Client ID: S-10S-C005-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 10:34
Date Received: 09/16/10
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	95.4		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-06
Client ID: S-10S-C006-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 10:45
Date Received: 09/16/10
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	86.6		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-07
Client ID: S-10S-C007-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 10:57
Date Received: 09/16/10
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	95.4		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-08
Client ID: S-10S-C008-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 11:11
Date Received: 09/16/10
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	93.5		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-09
Client ID: S-10S-C009-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 11:25
Date Received: 09/16/10
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	91.9		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-10
Client ID: S-10S-C010-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 11:37
Date Received: 09/16/10
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	90.6		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-11
Client ID: S-10S-C011-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 12:36
Date Received: 09/16/10
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	89.1		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-12
Client ID: S-10S-C012-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 12:57
Date Received: 09/16/10
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	98.5		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-13
Client ID: S-10S-C013-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 13:10
Date Received: 09/16/10
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	93.1		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-14
Client ID: S-10S-C014-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 13:21
Date Received: 09/16/10
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	95.0		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-15
Client ID: S-10S-C015-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 13:33
Date Received: 09/16/10
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	87.7		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-16
Client ID: S-10S-C016-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 13:45
Date Received: 09/16/10
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	94.9		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-17
Client ID: S-10S-C017-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 13:57
Date Received: 09/16/10
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	90.6		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-18
Client ID: S-10S-C018-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 14:09
Date Received: 09/16/10
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	83.5		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-19
Client ID: S-10S-C019-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 14:20
Date Received: 09/16/10
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	87.4		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1014584
Report Date: 10/13/10

SAMPLE RESULTS

Lab ID: L1014584-20
Client ID: S-10S-C020-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/15/10 14:33
Date Received: 09/16/10
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	95.4		%	0.100	--	1	-	09/22/10 09:40	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1014584
Report Date: 10/13/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG433606-1 QC Sample: L1014584-01 Client ID: S-10S-C001-0-0.5						
Solids, Total	89.9	87.8	%	1		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1014584
Report Date: 10/13/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1014584-01A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-02A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-03A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-MS/MSD()
L1014584-03B	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-MS/MSD()
L1014584-04A	Glass 250ml unpreserved	B	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-05A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-06A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-07A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-08A	Glass 250ml unpreserved	B	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-09A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-10A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-11A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-12A	Glass 250ml unpreserved	B	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-13A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-14A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-15A	Glass 250ml unpreserved	B	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-16A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-17A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1014584
Report Date: 10/13/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1014584-18A	Glass 250ml unpreserved	B	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-19A	Glass 250ml unpreserved	B	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)
L1014584-20A	Glass 250ml unpreserved	B	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1014584
Project Number:	TO-0010-03	**Report Date:**	10/13/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1014584
Project Number:	TO-0010-03	**Report Date:**	10/13/10

Data Qualifiers

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	**Lab Number:**	L1014584
Project Number:	TO-0010-03	**Report Date:**	10/13/10

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.

ALPHA ANALYTICAL LABS

WET CHEMISTRY DEPARTMENT

PERCENT TOTAL SOLIDS

Last Change 04/09/09 GFF
File A2-TS_S.xlt

Sample Number: _____

Client: _____

Analysis: %TOTAL SOLIDS in solids

Method: STM 2540-B

Product: A2-TS
Analyte: Solids, Total
Analysis Date: 9/22/2010 9:40
Technician: KB
Work group: WG433606
MDL: 0.10%

		105 degrees C							
	Sample Number	Tare Weight (gm)	Gross Weight (gm)	Net Weight(1) (gm)	Net Weight(2) (gm)	Net Weight(3) (gm)	Net Weight(4) (gm)	Net Weight(5) (gm)	RESULT %
DUP	WG433606-1	1.34	7.85	4.49	4.49				48.39
	L1014584-01	1.34	7.86	4.53	4.53				48.93
	L1014584-02	1.33	8.39	4.67	4.67				47.31
	L1014584-03	1.33	9.47	4.96	4.96				44.59
	L1014584-04	1.32	7.87	4.57	4.57				49.62
	L1014584-05	1.34	10.9	6.33	6.33				52.20
	L1014584-06	1.33	8.49	5	5				51.26
	L1014584-07	1.31	11.03	6.11	6.11				49.38
	L1014584-08	1.32	10.17	5.65	5.65				48.93
	L1014584-09	1.32	9.01	4.65	4.65				43.30
	L1014584-10	1.33	5.74	3.26	3.26				43.76
	L1014584-11	1.33	8.89	4.47	4.47				41.53
	L1014584-12	1.33	9.39	7.03	7.03				70.72
	L1014584-13	1.35	6.27	3.59	3.59				45.53
	L1014584-14	1.34	8.03	4.43	4.43				46.19
	L1014584-15	1.31	8.02	4.18	4.18				42.77
	L1014584-16	1.31	11.1	5.92	5.92				47.09
	L1014584-17	1.35	8.65	4.27	4.27				40.00
	L1014584-18	1.3	8.76	4.25	4.25				39.54
	L1014584-19	1.32	7.13	3.65	3.65				40.10
	L1014584-20	1.34	7.82	4.45	4.45				47.99

Comments:

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

CHAIN OF CUSTODY

PAGE 1 OF 3

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

Date Rec'd in Lab:

ALPHA Job #: L1014584

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environ. Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report and project specific EDD
*please homogenize each sample before analysis

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB Congeners	SAMPLE HANDLING	Total # Bottles
L1014584-1	S-1ΦS-CΦΦ1-Φ-Φ.5	9/15/10	09:37	SE	KGM	X	JM2	1
2	S-1ΦS-CΦΦ2-Φ-Φ.5		09:50			X	JQ2	1
3	S-1ΦS-CΦΦ3-Φ-Φ.5		10:09			X	JB3	1
4	S-1ΦS-CΦΦ3-Φ-Φ.5MSMSD		10:10			X	JB3 - MSMSD	1
5	S-1ΦS-CΦΦ4-Φ-Φ.5		10:23			X	JK3	1
6	S-1ΦS-CΦΦ5-Φ-Φ.5		10:34			X	JE6	1
7	S-1ΦS-CΦΦ6-Φ-Φ.5		10:45			X	JI6	1
8	S-1ΦS-CΦΦ7-Φ-Φ.5		10:57			X	JK9	1
9	S-1ΦS-CΦΦ8-Φ-Φ.5		11:11			X	JG9	1
	S-1ΦS-CΦΦ9-Φ-Φ.5	↓	11:25	↓	↓	X	JK11	1

SAMPLE HANDLING: Filtration ☐ Done ☐ Not needed ☐ Lab to do; Preservation ☐ Lab to do (Please specify below); Sample Specific Comments

Container Type	A
Preservative	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
P. Gillett	9/16/10 13:00	P. Gillett	9/16/10 13:00
P. Gillett	9/16/10 17:35	[illegible]	9/16/10 1725

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

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

Serial No:10131011:02
Delivery Order-0010-03 April 2011
B-110
Sediment Monitoring Summary Report W912WJ-09-D-0001

CHAIN OF CUSTODY

PAGE 2 OF 3

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

Serial No:10131011:02

Client Information

Client: Woods Hole Grop
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalch@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environ. monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
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 #:

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

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report and project specific EDD
*please homogenize each sample before analysis

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB congeners	SAMPLE HANDLING	TOTAL # BOTTLES
10	S-1ΦS-CΦ1Φ-Φ-Φ.5	9/15/10	11:37	SE	K6M	X	JK12	1
11	S-1ΦS-CΦ11-Φ-Φ.5		12:36			X	JF13	1
12	S-1ΦS-CΦ12-Φ-Φ.5		12:57			X	JB13	1
13	S-1ΦS-CΦ13-Φ-Φ.5		13:10			X	JI14	1
14	S-1ΦS-CΦ14-Φ-Φ.5		13:21			X	JO14	1
15	S-1ΦS-CΦ15-Φ-Φ.5		13:33			X	JG16	1
16	S-1ΦS-CΦ16-Φ-Φ.5		13:45			X	JB19	1
17	S-1ΦS-CΦ17-Φ-Φ.5		13:57			X	JN20	1
18	S-1ΦS-CΦ18-Φ-Φ.5		14:09			X	JI21	1
19	S-1ΦS-CΦ19-Φ-Φ.5		14:20			X	JD22	1

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

Sample Specific Comments

Container Type	A
Preservative	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
K P Gilbert	9/16/10 13:00	P. Gilbert	9/16/10 17:00
	9/16/10 17:25		9/16/10 1725

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

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

Delivery Order-0010-03
April 2011
B-111
Sediment Monitoring Summary Report
W912WJ-09-D-0001

CHAIN OF CUSTODY

PAGE 3 OF 3

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

Serial No:10131011:02

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environ. Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
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:
Level III data report and project specific EDDs
*please homogenize each sample before analysis

Date Rec'd in Lab:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

ALPHA Job #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB Congeners	SAMPLE HANDLING	Total # Bottles
20	S-1ΦS-CΦ2Φ-Φ-Φ.5	9/15/10	14:33	SE	KGM	X	JD24	1

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

Container Type: A
Preservative: A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
R Gillett	9/16/10 13:00	P. Gillett	9/16/10 1300
R Gillett	9/16/10 17:25		9/16/10 1725

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

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

ANALYTICAL REPORT

Lab Number:	L1017458
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-0010-03
Report Date:	11/19/10

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

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017458
Report Date: 11/19/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1017458-01	S-10O-C016-0-0.5	NEW BEDFORD, MA	10/19/10 10:12
L1017458-02	S-10O-C017-0-0.5	NEW BEDFORD, MA	10/19/10 10:44
L1017458-03	S-10O-C018-0-0.5	NEW BEDFORD, MA	10/19/10 10:55
L1017458-04	S-10O-C019-0-0.5	NEW BEDFORD, MA	10/19/10 10:33
L1017458-05	S-10O-C020-0-0.5	NEW BEDFORD, MA	10/19/10 11:05
L1017458-06	S-10O-C021-0-0.5	NEW BEDFORD, MA	10/19/10 11:27
L1017458-07	S-10O-C022-0-0.5	NEW BEDFORD, MA	10/19/10 11:15
L1017458-08	S-10O-C023-0-0.5	NEW BEDFORD, MA	10/19/10 09:31
L1017458-09	S-10O-C024-0-0.5	NEW BEDFORD, MA	10/19/10 09:23
L1017458-10	S-10O-C025-0-0.5	NEW BEDFORD, MA	10/19/10 10:20
L1017458-11	S-10O-C026-0-0.5	NEW BEDFORD, MA	10/20/10 09:36
L1017458-12	S-10O-C027-0-0.5	NEW BEDFORD, MA	10/20/10 09:27
L1017458-13	S-10O-C028-0-0.5	NEW BEDFORD, MA	10/20/10 09:52
L1017458-14	S-10O-C029-0-0.5	NEW BEDFORD, MA	10/20/10 09:18
L1017458-15	S-10O-C030-0-0.5	NEW BEDFORD, MA	10/20/10 09:07

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017458
Project Number:	TO-0010-03	**Report Date:**	11/19/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on October 29, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until November 8, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017458
Project Number:	TO-0010-03	**Report Date:**	11/19/10

Case Narrative (continued)

whether it was the higher or lower value.

The surrogate recovery for L1017458-01 is outside the individual acceptance criteria for DBOB (261%), 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.

L1017458-01 through 15 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1017458-01through 15 were re-analyzed on additional dilution in order to quantitate the sample within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compound that exceeded the calibration on the initial analyses. The re-analyses were performed only for the compounds that exceeded the calibration range.

The WG441774-1 Method Blank, associated with L1017458-01 through -15, has a concentration above the reporting limit for several congeners. Since the associated sample concentrations are greater than 5x the blank concentration for these analytes, no qualification of the results was performed.

The WG441774-3 LCSD recovery, associated with L1017458-01 through -15, is above the individual acceptance criteria for Cl4-BZ#52 (141%), but within the overall method allowances and the LCS recovery was within limits.

In addition, the associated WG441774-3 LCSD RPD(s) are above the acceptance criteria for several congeners. The MS/MSD RPDs are all within QC limits proving extraction precision.

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017458
Project Number:	TO-0010-03	**Report Date:**	11/19/10

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: 11/19/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-01	Date Collected:	10/19/10 10:12
Client ID:	S-10O-C016-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 14:57	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4520	E	ug/kg	135	--	100
Cl3-BZ#18	8160	E	ug/kg	135	--	100
Cl4-BZ#52	17800	E	ug/kg	135	--	100
Cl4-BZ#66	3980	E	ug/kg	135	--	100
Cl5-BZ#118	1170		ug/kg	135	--	100
Cl6-BZ#138	1560		ug/kg	135	--	100
Cl7-BZ#187	599		ug/kg	135	--	100
Cl6-BZ#128	288		ug/kg	135	--	100
Cl7-BZ#180	361		ug/kg	135	--	100
Cl7-BZ#170	273		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**261**	Q	30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-01	Date Collected:	10/19/10 10:12
Client ID:	S-10O-C016-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 14:57	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	9130	E	ug/kg	135	--	100
Cl4-BZ#44	4910	E	ug/kg	135	--	100
Cl5-BZ#101	1960		ug/kg	135	--	100
Cl6-BZ#153	2070		ug/kg	135	--	100
Cl5-BZ#105	233		ug/kg	135	--	100

DBOB	**261**	Q	30-150	
BZ 198	79		30-150	

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-01 D	Date Collected:	10/19/10 10:12
Client ID:	S-10O-C016-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 02:35	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	10500		ug/kg	1350	--	1000
Cl4-BZ#66	4060		ug/kg	1350	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-01 D	Date Collected:	10/19/10 10:12
Client ID:	S-10O-C016-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 02:35	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4580		ug/kg	1350	--	1000
Cl3-BZ#28	11100		ug/kg	1350	--	1000
Cl4-BZ#52	19800		ug/kg	1350	--	1000
Cl4-BZ#44	5860		ug/kg	1350	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-02	Date Collected:	10/19/10 10:44
Client ID:	S-10O-C017-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 15:38	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	3840	E	ug/kg	132	--	100
Cl6-BZ#138	519		ug/kg	132	--	100
Cl6-BZ#128	ND		ug/kg	132	--	100
Cl7-BZ#180	ND		ug/kg	132	--	100
Cl7-BZ#170	ND		ug/kg	132	--	100
Cl8-BZ#195	ND		ug/kg	132	--	100
Cl9-BZ#206	ND		ug/kg	132	--	100
Cl10-BZ#209	ND		ug/kg	132	--	100

DBOB	141	30-150
BZ 198	84	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-02	Date Collected:	10/19/10 10:44
Client ID:	S-10O-C017-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 15:38	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1900		ug/kg	132	--	100
Cl3-BZ#28	4430	E	ug/kg	132	--	100
Cl4-BZ#52	7300	E	ug/kg	132	--	100
Cl4-BZ#44	2260		ug/kg	132	--	100
Cl4-BZ#66	1530		ug/kg	132	--	100
Cl5-BZ#101	802		ug/kg	132	--	100
Cl5-BZ#118	432		ug/kg	132	--	100
Cl6-BZ#153	836		ug/kg	132	--	100
Cl5-BZ#105	ND		ug/kg	132	--	100
Cl7-BZ#187	219		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	141		30-150
BZ 198	84		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-02 D	Date Collected:	10/19/10 10:44
Client ID:	S-10O-C017-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 03:16	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4210		ug/kg	1320	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-02 D	Date Collected:	10/19/10 10:44
Client ID:	S-10O-C017-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 03:16	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4040		ug/kg	1320	--	1000
Cl4-BZ#52	7380		ug/kg	1320	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-03	Date Collected:	10/19/10 10:55
Client ID:	S-10O-C018-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 16:19	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3870	E	ug/kg	134	--	100
Cl3-BZ#18	7570	E	ug/kg	134	--	100
Cl4-BZ#52	14900	E	ug/kg	134	--	100
Cl4-BZ#66	2380		ug/kg	134	--	100
Cl5-BZ#118	696		ug/kg	134	--	100
Cl6-BZ#138	880		ug/kg	134	--	100
Cl7-BZ#187	388		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl7-BZ#180	223		ug/kg	134	--	100
Cl7-BZ#170	169		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	130		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-03	Date Collected:	10/19/10 10:55
Client ID:	S-10O-C018-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 16:19	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	8100	E	ug/kg	134	--	100
Cl4-BZ#44	3540	E	ug/kg	134	--	100
Cl5-BZ#101	1200		ug/kg	134	--	100
Cl6-BZ#153	1380		ug/kg	134	--	100
Cl5-BZ#105	136		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	130		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-03 D	Date Collected:	10/19/10 10:55
Client ID:	S-10O-C018-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 03:57	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	6620		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-03 D	Date Collected:	10/19/10 10:55
Client ID:	S-10O-C018-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 03:57	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3680		ug/kg	1340	--	1000
Cl3-BZ#28	8000		ug/kg	1340	--	1000
Cl4-BZ#52	13700		ug/kg	1340	--	1000
Cl4-BZ#44	3360		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-04	Date Collected:	10/19/10 10:33
Client ID:	S-10O-C019-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 17:00	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2460		ug/kg	133	--	100
Cl5-BZ#105	ND		ug/kg	133	--	100
Cl6-BZ#138	416		ug/kg	133	--	100
Cl6-BZ#128	ND		ug/kg	133	--	100
Cl7-BZ#180	ND		ug/kg	133	--	100
Cl7-BZ#170	ND		ug/kg	133	--	100
Cl8-BZ#195	ND		ug/kg	133	--	100
Cl9-BZ#206	ND		ug/kg	133	--	100
Cl10-BZ#209	ND		ug/kg	133	--	100

DBOB	105	30-150
BZ 198	77	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-04	Date Collected:	10/19/10 10:33
Client ID:	S-10O-C019-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 17:00	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1160		ug/kg	133	--	100
Cl3-BZ#28	2980	E	ug/kg	133	--	100
Cl4-BZ#52	5340	E	ug/kg	133	--	100
Cl4-BZ#44	1580		ug/kg	133	--	100
Cl4-BZ#66	1110		ug/kg	133	--	100
Cl5-BZ#101	636		ug/kg	133	--	100
Cl5-BZ#118	359		ug/kg	133	--	100
Cl6-BZ#153	663		ug/kg	133	--	100
Cl7-BZ#187	169		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	105		30-150
BZ 198	77		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-04 D	Date Collected:	10/19/10 10:33
Client ID:	S-10O-C019-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 04:38	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2780		ug/kg	1330	--	1000
Cl4-BZ#52	5460		ug/kg	1330	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-05	Date Collected:	10/19/10 11:05
Client ID:	S-10O-C020-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 17:42	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2360		ug/kg	132	--	100
Cl5-BZ#118	446		ug/kg	132	--	100
Cl5-BZ#105	ND		ug/kg	132	--	100
Cl6-BZ#138	392		ug/kg	132	--	100
Cl6-BZ#128	ND		ug/kg	132	--	100
Cl7-BZ#180	ND		ug/kg	132	--	100
Cl7-BZ#170	ND		ug/kg	132	--	100
Cl8-BZ#195	ND		ug/kg	132	--	100
Cl9-BZ#206	ND		ug/kg	132	--	100
Cl10-BZ#209	ND		ug/kg	132	--	100

DBOB	106	30-150
BZ 198	82	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-05	Date Collected:	10/19/10 11:05
Client ID:	S-10O-C020-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 17:42	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1110		ug/kg	132	--	100
Cl3-BZ#28	2260		ug/kg	132	--	100
Cl4-BZ#52	4840	E	ug/kg	132	--	100
Cl4-BZ#44	1090		ug/kg	132	--	100
Cl4-BZ#66	971		ug/kg	132	--	100
Cl5-BZ#101	649		ug/kg	132	--	100
Cl6-BZ#153	634		ug/kg	132	--	100
Cl7-BZ#187	143		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	106		30-150
BZ 198	82		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-05 D	Date Collected:	10/19/10 11:05
Client ID:	S-10O-C020-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 05:20	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	4960		ug/kg	1320	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-06	Date Collected:	10/19/10 11:27
Client ID:	S-10O-C021-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 19:04	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7380	E	ug/kg	130	--	100
Cl3-BZ#18	14100	E	ug/kg	130	--	100
Cl4-BZ#52	20300	E	ug/kg	130	--	100
Cl4-BZ#66	4350	E	ug/kg	130	--	100
Cl5-BZ#118	1900		ug/kg	130	--	100
Cl6-BZ#138	1720		ug/kg	130	--	100
Cl7-BZ#187	543		ug/kg	130	--	100
Cl6-BZ#128	329		ug/kg	130	--	100
Cl7-BZ#180	370		ug/kg	130	--	100
Cl7-BZ#170	277		ug/kg	130	--	100
Cl8-BZ#195	ND		ug/kg	130	--	100
Cl9-BZ#206	ND		ug/kg	130	--	100
Cl10-BZ#209	ND		ug/kg	130	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	71		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-06	Date Collected:	10/19/10 11:27
Client ID:	S-10O-C021-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 19:04	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	11400	E	ug/kg	130	--	100
Cl4-BZ#44	4620	E	ug/kg	130	--	100
Cl5-BZ#101	2430		ug/kg	130	--	100
Cl6-BZ#153	2250		ug/kg	130	--	100
Cl5-BZ#105	308		ug/kg	130	--	100

DBOB	79	30-150
BZ 198	71	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-06 D	Date Collected:	10/19/10 11:27
Client ID:	S-10O-C021-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 06:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	13400		ug/kg	1300	--	1000
Cl4-BZ#66	4380		ug/kg	1300	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-06 D	Date Collected:	10/19/10 11:27
Client ID:	S-10O-C021-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 06:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7840		ug/kg	1300	--	1000
Cl3-BZ#28	14400		ug/kg	1300	--	1000
Cl4-BZ#52	22200		ug/kg	1300	--	1000
Cl4-BZ#44	5640		ug/kg	1300	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-07	Date Collected:	10/19/10 11:15
Client ID:	S-10O-C022-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 19:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	8570	E	ug/kg	132	--	100
Cl3-BZ#18	17200	E	ug/kg	132	--	100
Cl4-BZ#52	39600	E	ug/kg	132	--	100
Cl4-BZ#66	8140	E	ug/kg	132	--	100
Cl5-BZ#118	2800	E	ug/kg	132	--	100
Cl6-BZ#138	2960	E	ug/kg	132	--	100
Cl7-BZ#187	994		ug/kg	132	--	100
Cl6-BZ#128	456		ug/kg	132	--	100
Cl7-BZ#180	504		ug/kg	132	--	100
Cl7-BZ#170	397		ug/kg	132	--	100
Cl8-BZ#195	ND		ug/kg	132	--	100
Cl9-BZ#206	ND		ug/kg	132	--	100
Cl10-BZ#209	ND		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	63		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-07	Date Collected:	10/19/10 11:15
Client ID:	S-10O-C022-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 19:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	13500	E	ug/kg	132	--	100
Cl4-BZ#44	8430	E	ug/kg	132	--	100
Cl5-BZ#101	4420	E	ug/kg	132	--	100
Cl6-BZ#153	4320	E	ug/kg	132	--	100
Cl5-BZ#105	397		ug/kg	132	--	100

DBOB	81	30-150
BZ 198	63	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-07 D	Date Collected:	10/19/10 11:15
Client ID:	S-10O-C022-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/17/10 15:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	11300		ug/kg	5300	--	4000
Cl3-BZ#18	22100		ug/kg	5300	--	4000
Cl4-BZ#66	10000		ug/kg	5300	--	4000
Cl6-BZ#138	ND		ug/kg	5300	--	4000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-07 D	Date Collected:	10/19/10 11:15
Client ID:	S-10O-C022-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/17/10 15:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	19200		ug/kg	5300	--	4000
Cl4-BZ#52	52900		ug/kg	5300	--	4000
Cl4-BZ#44	11800		ug/kg	5300	--	4000
Cl5-BZ#101	6110		ug/kg	5300	--	4000
Cl5-BZ#118	ND		ug/kg	5300	--	4000
Cl6-BZ#153	6060		ug/kg	5300	--	4000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-08	Date Collected:	10/19/10 09:31
Client ID:	S-10O-C023-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 20:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	20300	E	ug/kg	136	--	100
Cl3-BZ#18	34700	E	ug/kg	136	--	100
Cl4-BZ#52	46100	E	ug/kg	136	--	100
Cl4-BZ#66	13200	E	ug/kg	136	--	100
Cl5-BZ#118	2140		ug/kg	136	--	100
Cl6-BZ#138	3700	E	ug/kg	136	--	100
Cl7-BZ#187	1410		ug/kg	136	--	100
Cl6-BZ#128	354		ug/kg	136	--	100
Cl7-BZ#180	728		ug/kg	136	--	100
Cl7-BZ#170	475		ug/kg	136	--	100
Cl8-BZ#195	ND		ug/kg	136	--	100
Cl9-BZ#206	167		ug/kg	136	--	100
Cl10-BZ#209	ND		ug/kg	136	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	89		30-150
BZ 198	76		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-08	Date Collected:	10/19/10 09:31
Client ID:	S-10O-C023-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 20:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	15200	E	ug/kg	136	--	100
Cl4-BZ#44	14100	E	ug/kg	136	--	100
Cl5-BZ#101	5280	E	ug/kg	136	--	100
Cl6-BZ#153	3760	E	ug/kg	136	--	100
Cl5-BZ#105	404		ug/kg	136	--	100

DBOB	89	30-150
BZ 198	76	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-08 D	Date Collected:	10/19/10 09:31
Client ID:	S-10O-C023-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/17/10 15:43	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	26100		ug/kg	5450	--	4000
Cl3-BZ#18	43900		ug/kg	5450	--	4000
Cl6-BZ#138	ND		ug/kg	5450	--	4000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-08 D	Date Collected:	10/19/10 09:31
Client ID:	S-10O-C023-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/17/10 15:43	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	46000		ug/kg	5450	--	4000
Cl4-BZ#52	61800		ug/kg	5450	--	4000
Cl4-BZ#44	21900		ug/kg	5450	--	4000
Cl4-BZ#66	15900		ug/kg	5450	--	4000
Cl5-BZ#101	7690		ug/kg	5450	--	4000
Cl6-BZ#153	5640		ug/kg	5450	--	4000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-09	Date Collected:	10/19/10 09:23
Client ID:	S-10O-C024-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 21:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	19300	E	ug/kg	135	--	100
Cl3-BZ#18	20600	E	ug/kg	135	--	100
Cl4-BZ#52	24100	E	ug/kg	135	--	100
Cl4-BZ#66	8300	E	ug/kg	135	--	100
Cl5-BZ#118	2120		ug/kg	135	--	100
Cl6-BZ#138	1480		ug/kg	135	--	100
Cl7-BZ#187	540		ug/kg	135	--	100
Cl6-BZ#128	210		ug/kg	135	--	100
Cl7-BZ#180	380		ug/kg	135	--	100
Cl7-BZ#170	254		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	63		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-09	Date Collected:	10/19/10 09:23
Client ID:	S-10O-C024-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 21:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	17600	E	ug/kg	135	--	100
Cl4-BZ#44	6900	E	ug/kg	135	--	100
Cl5-BZ#101	3180	E	ug/kg	135	--	100
Cl6-BZ#153	1850		ug/kg	135	--	100
Cl5-BZ#105	313		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	63		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-09 D	Date Collected:	10/19/10 09:23
Client ID:	S-10O-C024-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/17/10 16:24	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	25500		ug/kg	2690	--	2000
Cl3-BZ#18	35300		ug/kg	2690	--	2000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-09 D	Date Collected:	10/19/10 09:23
Client ID:	S-10O-C024-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/17/10 16:24	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	33200		ug/kg	2690	--	2000
Cl4-BZ#52	34200		ug/kg	2690	--	2000
Cl4-BZ#44	9670		ug/kg	2690	--	2000
Cl4-BZ#66	9570		ug/kg	2690	--	2000
Cl5-BZ#101	4310		ug/kg	2690	--	2000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-10	Date Collected:	10/19/10 10:20
Client ID:	S-10O-C025-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 21:49	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2800	E	ug/kg	133	--	100
Cl6-BZ#138	515		ug/kg	133	--	100
Cl6-BZ#128	ND		ug/kg	133	--	100
Cl7-BZ#180	ND		ug/kg	133	--	100
Cl7-BZ#170	ND		ug/kg	133	--	100
Cl8-BZ#195	ND		ug/kg	133	--	100
Cl9-BZ#206	ND		ug/kg	133	--	100
Cl10-BZ#209	ND		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	75		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-10	Date Collected:	10/19/10 10:20
Client ID:	S-10O-C025-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 21:49	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1190		ug/kg	133	--	100
Cl3-BZ#28	3780	E	ug/kg	133	--	100
Cl4-BZ#52	5760	E	ug/kg	133	--	100
Cl4-BZ#44	1800		ug/kg	133	--	100
Cl4-BZ#66	1330		ug/kg	133	--	100
Cl5-BZ#101	842		ug/kg	133	--	100
Cl5-BZ#118	502		ug/kg	133	--	100
Cl6-BZ#153	863		ug/kg	133	--	100
Cl5-BZ#105	ND		ug/kg	133	--	100
Cl7-BZ#187	204		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	75		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-10 D	Date Collected:	10/19/10 10:20
Client ID:	S-10O-C025-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 08:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2380		ug/kg	1330	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-10 D	Date Collected:	10/19/10 10:20
Client ID:	S-10O-C025-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 08:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3340		ug/kg	1330	--	1000
Cl4-BZ#52	5840		ug/kg	1330	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-11	Date Collected:	10/20/10 09:36
Client ID:	S-10O-C026-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 22:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1230		ug/kg	136	--	100
Cl3-BZ#18	3420	E	ug/kg	136	--	100
Cl4-BZ#52	8060	E	ug/kg	136	--	100
Cl4-BZ#66	1810		ug/kg	136	--	100
Cl5-BZ#118	765		ug/kg	136	--	100
Cl6-BZ#138	734		ug/kg	136	--	100
Cl7-BZ#187	240		ug/kg	136	--	100
Cl6-BZ#128	139		ug/kg	136	--	100
Cl7-BZ#180	142		ug/kg	136	--	100
Cl7-BZ#170	ND		ug/kg	136	--	100
Cl8-BZ#195	ND		ug/kg	136	--	100
Cl9-BZ#206	ND		ug/kg	136	--	100
Cl10-BZ#209	ND		ug/kg	136	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	103		30-150
BZ 198	80		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-11	Date Collected:	10/20/10 09:36
Client ID:	S-10O-C026-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 22:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3060	E	ug/kg	136	--	100
Cl4-BZ#44	1560		ug/kg	136	--	100
Cl5-BZ#101	1160		ug/kg	136	--	100
Cl6-BZ#153	1050		ug/kg	136	--	100
Cl5-BZ#105	153		ug/kg	136	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	103		30-150
BZ 198	80		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-11 D	Date Collected:	10/20/10 09:36
Client ID:	S-10O-C026-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 10:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	3700		ug/kg	1360	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-11 D	Date Collected:	10/20/10 09:36
Client ID:	S-10O-C026-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 10:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3100		ug/kg	1360	--	1000
Cl4-BZ#52	8900		ug/kg	1360	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-12	Date Collected:	10/20/10 09:27
Client ID:	S-10O-C027-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/13/10 00:33	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1840		ug/kg	132	--	100
Cl6-BZ#138	408		ug/kg	132	--	100
Cl6-BZ#128	ND		ug/kg	132	--	100
Cl7-BZ#170	ND		ug/kg	132	--	100
Cl8-BZ#195	ND		ug/kg	132	--	100
Cl9-BZ#206	ND		ug/kg	132	--	100
Cl10-BZ#209	ND		ug/kg	132	--	100

DBOB	91	30-150
BZ 198	83	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-12	Date Collected:	10/20/10 09:27
Client ID:	S-10O-C027-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/13/10 00:33	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	783		ug/kg	132	--	100
Cl3-BZ#28	1920		ug/kg	132	--	100
Cl4-BZ#52	5350	E	ug/kg	132	--	100
Cl4-BZ#44	1220		ug/kg	132	--	100
Cl4-BZ#66	1230		ug/kg	132	--	100
Cl5-BZ#101	868		ug/kg	132	--	100
Cl5-BZ#118	530		ug/kg	132	--	100
Cl6-BZ#153	730		ug/kg	132	--	100
Cl5-BZ#105	ND		ug/kg	132	--	100
Cl7-BZ#187	156		ug/kg	132	--	100
Cl7-BZ#180	ND		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	83		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-12 D	Date Collected:	10/20/10 09:27
Client ID:	S-10O-C027-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 12:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	6370		ug/kg	1320	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-13	Date Collected:	10/20/10 09:52
Client ID:	S-10O-C028-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/13/10 01:14	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5650	E	ug/kg	133	--	100
Cl3-BZ#18	8280	E	ug/kg	133	--	100
Cl6-BZ#138	530		ug/kg	133	--	100
Cl6-BZ#128	ND		ug/kg	133	--	100
Cl7-BZ#180	ND		ug/kg	133	--	100
Cl7-BZ#170	ND		ug/kg	133	--	100
Cl8-BZ#195	ND		ug/kg	133	--	100
Cl9-BZ#206	ND		ug/kg	133	--	100
Cl10-BZ#209	ND		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	82		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-13	Date Collected:	10/20/10 09:52
Client ID:	S-10O-C028-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/13/10 01:14	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	9320	E	ug/kg	133	--	100
Cl4-BZ#52	8890	E	ug/kg	133	--	100
Cl4-BZ#44	3150	E	ug/kg	133	--	100
Cl4-BZ#66	2290		ug/kg	133	--	100
Cl5-BZ#101	1120		ug/kg	133	--	100
Cl5-BZ#118	695		ug/kg	133	--	100
Cl6-BZ#153	875		ug/kg	133	--	100
Cl5-BZ#105	134		ug/kg	133	--	100
Cl7-BZ#187	185		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	82		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-13 D	Date Collected:	10/20/10 09:52
Client ID:	S-10O-C028-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 12:53	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	11500		ug/kg	1330	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-13 D	Date Collected:	10/20/10 09:52
Client ID:	S-10O-C028-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/12/10 12:53	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	6810		ug/kg	1330	--	1000
Cl3-BZ#28	11000		ug/kg	1330	--	1000
Cl4-BZ#52	9870		ug/kg	1330	--	1000
Cl4-BZ#44	3450		ug/kg	1330	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-14	Date Collected:	10/20/10 09:18
Client ID:	S-10O-C029-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/13/10 01:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3730	E	ug/kg	135	--	100
Cl3-BZ#18	8610	E	ug/kg	135	--	100
Cl4-BZ#52	29600	E	ug/kg	135	--	100
Cl4-BZ#66	5420	E	ug/kg	135	--	100
Cl5-BZ#118	1850		ug/kg	135	--	100
Cl6-BZ#138	2130		ug/kg	135	--	100
Cl7-BZ#187	711		ug/kg	135	--	100
Cl6-BZ#128	312		ug/kg	135	--	100
Cl7-BZ#180	376		ug/kg	135	--	100
Cl7-BZ#170	281		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	107		30-150
BZ 198	94		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-14	Date Collected:	10/20/10 09:18
Client ID:	S-10O-C029-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/13/10 01:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	7120	E	ug/kg	135	--	100
Cl4-BZ#44	5820	E	ug/kg	135	--	100
Cl5-BZ#101	3370	E	ug/kg	135	--	100
Cl6-BZ#153	3110	E	ug/kg	135	--	100
Cl5-BZ#105	297		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	107		30-150
BZ 198	94		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017458
Project Number: TO-0010-03
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-14 D	Date Collected:	10/20/10 09:18
Client ID:	S-10O-C029-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/17/10 17:05	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	13900		ug/kg	2700	--	2000
Cl4-BZ#66	7910		ug/kg	2700	--	2000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-14 D	Date Collected:	10/20/10 09:18
Client ID:	S-10O-C029-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/17/10 17:05	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5200		ug/kg	2700	--	2000
Cl3-BZ#28	10200		ug/kg	2700	--	2000
Cl4-BZ#52	43400		ug/kg	2700	--	2000
Cl4-BZ#44	8250		ug/kg	2700	--	2000
Cl5-BZ#101	4760		ug/kg	2700	--	2000
Cl6-BZ#153	4350		ug/kg	2700	--	2000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-15	Date Collected:	10/20/10 09:07
Client ID:	S-10O-C030-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/13/10 02:37	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	520		ug/kg	134	--	100
Cl5-BZ#105	ND		ug/kg	134	--	100
Cl6-BZ#138	192		ug/kg	134	--	100
Cl7-BZ#187	ND		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl7-BZ#180	ND		ug/kg	134	--	100
Cl7-BZ#170	ND		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

DBOB	112	30-150
BZ 198	102	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

SAMPLE RESULTS

Lab ID:	L1017458-15	Date Collected:	10/20/10 09:07
Client ID:	S-10O-C030-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/08/10 10:05
Analytical Date:	11/13/10 02:37	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/10/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	263		ug/kg	134	--	100
Cl3-BZ#28	658		ug/kg	134	--	100
Cl4-BZ#52	2220		ug/kg	134	--	100
Cl4-BZ#44	528		ug/kg	134	--	100
Cl4-BZ#66	543		ug/kg	134	--	100
Cl5-BZ#101	451		ug/kg	134	--	100
Cl5-BZ#118	298		ug/kg	134	--	100
Cl6-BZ#153	363		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	112		30-150
BZ 198	102		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/12/10 00:32
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 11/08/10 10:05
Cleanup Method1: EPA 3630
Cleanup Date1: 11/10/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-15 Batch: WG441774-1					
Cl3-BZ#18	2.98		ug/kg	1.33	--
Cl4-BZ#66	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	103		30-150
BZ 198	102		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017458

Project Number: TO-0010-03 **Report Date:** 11/19/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/12/10 00:32
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 11/08/10 10:05
Cleanup Method1: EPA 3630
Cleanup Date1: 11/10/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-15 Batch: WG441774-1					
Cl2-BZ#8	2.18		ug/kg	1.33	--
Cl3-BZ#28	3.95		ug/kg	1.33	--
Cl4-BZ#52	6.46		ug/kg	1.33	--
Cl4-BZ#44	1.98		ug/kg	1.33	--
Cl5-BZ#101	ND		ug/kg	1.33	--
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	103		30-150
BZ 198	102		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017458
Report Date: 11/19/10

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: WG441774-4 WG441774-5 QC Sample: L1017458-11 Client ID: S-10O-C026-0-0.5												
Cl2-BZ#8	1230	1690	2120	53		2140	54		40-140	1		30
Cl3-BZ#18	3700	1690	4770	63		4820	67		40-140	1		30
Cl4-BZ#66	1810	1690	3060	74		3100	77		40-140	1		30
Cl5-BZ#118	765	1690	2050	76		2010	74		40-140	2		30
Cl6-BZ#138	734	1690	1880	68		1810	64		40-140	4		30
Cl7-BZ#187	240	1690	1350	66		1310	64		40-140	3		30
Cl6-BZ#128	139	1690	1390	74		1340	71		40-140	4		30
Cl7-BZ#180	142	1690	1340	71		1290	68		40-140	4		30
Cl7-BZ#170	ND	1690	1340	79		1280	76		40-140	5		30
Cl8-BZ#195	ND	1690	1280	76		1220	73		40-140	5		30
Cl9-BZ#206	ND	1690	1450	86		1340	80		40-140	8		30
Cl10-BZ#209	ND	1690	1260	74		1190	71		40-140	6		30
Cl3-BZ#28	3100	1690	4700	95		4410	78		40-140	6		30
Cl4-BZ#52	8900	1690	10100	71		10000	65		40-140	1		30
Cl4-BZ#44	1560	1690	2830	75		2790	73		40-140	1		30
Cl5-BZ#101	1160	1690	2540	82		2460	77		40-140	3		30
Cl6-BZ#153	1050	1690	2400	80		2220	70		40-140	8		30
Cl5-BZ#105	153	1690	1640	88		1520	81		40-140	8		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017458
Report Date: 11/19/10

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: WG441774-4 WG441774-5 QC Sample: L1017458-11 Client ID: S-10O-C026-0-0.5												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	89		81		30-150
DBOB	94		90		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

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: WG441774-2 WG441774-3							
Cl2-BZ#8	43		80		40-140	**60**	Q	30
Cl3-BZ#18	56		94		40-140	**51**	Q	30
Cl3-BZ#28	70		126		40-140	**57**	Q	30
Cl4-BZ#52	66		**141**	Q	40-140	**72**	Q	30
Cl4-BZ#44	49		91		40-140	**60**	Q	30
Cl4-BZ#66	52		101		40-140	**64**	Q	30
Cl5-BZ#101	50		94		40-140	**61**	Q	30
Cl5-BZ#118	49		87		40-140	**56**	Q	30
Cl5-BZ#105	44		79		40-140	**57**	Q	30
Cl6-BZ#138	51		85		40-140	**50**	Q	30
Cl7-BZ#187	50		75		40-140	**40**	Q	30
Cl6-BZ#128	47		81		40-140	**53**	Q	30
Cl7-BZ#180	47		81		40-140	**53**	Q	30
Cl7-BZ#170	51		82		40-140	**47**	Q	30
Cl8-BZ#195	47		80		40-140	**52**	Q	30
Cl9-BZ#206	52		90		40-140	**54**	Q	30
Cl10-BZ#209	48		81		40-140	**51**	Q	30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

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: WG441774-2		WG441774-3			

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	45		78		30-150
BZ 198	47		83		30-150

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: WG441774-2		WG441774-3			
Cl6-BZ#153	61		86		40-140	**34**	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	45		78		30-150
BZ 198	47		83		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-01
Client ID: S-10O-C016-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 10:12
Date Received: 10/29/10
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	97.4		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	36.6		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-02
Client ID: S-10O-C017-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 10:44
Date Received: 10/29/10
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	98.0		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	45.5		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-03
Client ID: S-10O-C018-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 10:55
Date Received: 10/29/10
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	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	44.2		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-04
Client ID: S-10O-C019-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 10:33
Date Received: 10/29/10
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	97.9		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	44.4		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-05
Client ID: S-10O-C020-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 11:05
Date Received: 10/29/10
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	98.5		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	49.1		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-06
Client ID: S-10O-C021-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 11:27
Date Received: 10/29/10
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	98.9		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	48.9		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-07
Client ID: S-10O-C022-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 11:15
Date Received: 10/29/10
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	97.9		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	43.6		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-08
Client ID: S-10O-C023-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 09:31
Date Received: 10/29/10
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	96.9		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	31.8		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-09
Client ID: S-10O-C024-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 09:23
Date Received: 10/29/10
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	97.8		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	40.7		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-10
Client ID: S-10O-C025-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 10:20
Date Received: 10/29/10
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	98.4		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	45.1		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-11
Client ID: S-10O-C026-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 09:36
Date Received: 10/29/10
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	96.7		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	45.2		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-12
Client ID: S-10O-C027-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 09:27
Date Received: 10/29/10
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	97.9		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	41.6		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-13
Client ID: S-10O-C028-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 09:52
Date Received: 10/29/10
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	97.9		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	40.9		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-14
Client ID: S-10O-C029-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 09:18
Date Received: 10/29/10
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	97.8		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	35.4		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017458
Report Date: 11/19/10

SAMPLE RESULTS

Lab ID: L1017458-15
Client ID: S-10O-C030-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 09:07
Date Received: 10/29/10
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	98.0		%	0.100	--	1	-	11/08/10 10:30	30,2540G	KB
Solids, Total (Pre-Dried)	47.2		%	0.100	NA	1	-	11/04/10 17:00	30,2540G	NR

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017458
Report Date: 11/19/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-15 QC Batch ID: WG441769-1 QC Sample: L1017458-15 Client ID: S-10O-C030-0-0.5						
Solids, Total	98.0	98.0	%	0		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017458
Report Date: 11/19/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1017458-01A	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-02A	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-03A	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-04A	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-05A	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-06A	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-07A	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-08A	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-09A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-10A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-11A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-MS/MSD(),A2-TS-PREDRIED(7)
L1017458-11B	Glass 250ml unpreserved	B	NA	-3	NA	Absent	A2-MS/MSD()
L1017458-12A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-13A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-14A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017458-15A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017458
Project Number:	TO-0010-03	**Report Date:**	11/19/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017458
Project Number:	TO-0010-03	**Report Date:**	11/19/10

Data Qualifiers

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	**Lab Number:**	L1017458
Project Number:	TO-0010-03	**Report Date:**	11/19/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

L1017458

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: | ALPHA Job #: L1017458-10

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

☐ These samples have been Previously analyzed by Alpha

Due Date: Time:

Report Information

☐ FAX ☒ ADEx

Data Deliverables

☒ EMAIL ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

ANALYSIS

PCB congeners - NOAA 18

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
11	S-10O-C011-0-0.5	10/18/10	11:20	SED	KGM	☒	KII6	1
12	S-10O-C012-0-0.5	10/18/10	11:46	SED	KGM	☒	KHH8	1
13	S-10O-C013-0-0.5	10/18/10	11:30	SED	KGM	☒	KKK7	1
14	S-10O-C014-0-0.5	10/19/10	09:47	SED	KGM	☒	KKK9	1
15	S-10O-C015-0-0.5	10/19/10	10:02	SED	KGM	☒	KGG11	1
L1017458-1 16	S-10O-C016-0-0.5	10/19/10	10:12	SED	KGM	☒	KII12	1
-2 17	S-10O-C017-0-0.5	10/19/10	10:44	SED	KGM	☒	KII14	1
-3 18	S-10O-C018-0-0.5	10/19/10	10:55	SED	KGM	☒	KFF15	1
-4 19	S-10O-C019-0-0.5	10/19/10	10:33	SED	KGM	☒	KKK15	1
-5 20	S-10O-C020-0-0.5	10/19/10	11:05	SED	KGM	☒	KII17	1
	Container Type					A		
	Preservative					A		

Relinquished By:	Date/Time	Received By:	Date/Time
	10/29/10 18:00		10/29/10 18:00

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-204
Sediment Monitoring Summary Report
W912WJ-09-D-0001

L1017458

CHAIN OF CUSTODY

PAGE 3 OF 5

ALPHA ANALYTICAL

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

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

Date Rec'd in Lab:

ALPHA Job #: ~~L1017218~~

Project Information

Project Name: NBH Environmental Monitoring

Project Location: New Bedford, MA

Project #: TO-0010-03

Project Manager: Dave Walsh

ALPHA Quote #:

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Drive

E. Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information

☐ FAX
☒ ADEx

Data Deliverables

☒ EMAIL
☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
-6 21	S-10O-C021-0-0.5	10/19/10	11:27	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KGG19	1
-7 22	S-10O-C022-0-0.5	10/19/10	11:15	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KJJ19	1
-8 23	S-10O-C023-0-0.5	10/19/10	09:31	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KCC6	1
-9 24	S-10O-C024-0-0.5	10/19/10	09:23	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KY7	1
-10 25	S-10O-C025-0-0.5	10/19/10	10:20	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KKK13	1
-11 26	S-10O-C026-0-0.5	10/20/10	09:36	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GD30	1
-12 27	S-10O-C027-0-0.5	10/20/10	09:27	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GD34	1
-13 28	S-10O-C028-0-0.5	10/20/10	09:52	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GJ29	1
-14 29	S-10O-C029-0-0.5	10/20/10	09:18	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GH34	1
-15 30	S-10O-C030-0-0.5	10/20/10	09:07	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GI36	1
					Container Type	A	-	-	-	-	-	-	-	-	-	-	-		
					Preservative	A	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/29/10 16:00	[signature]	10/29/10 18:00

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

FORM NO: 01-01(I-NJ)
(rev. 29-APR-09)

L1017458

CHAIN OF CUSTODY

PAGE 5 OF 5

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Serial No: 1910511:59

Date Rec'd in Lab:

ALPHA Job #: ~~L1017218~~ km

Project Information

Project Name: NBH Environmental Monitoring

Project Location: New Bedford, MA

Project #: TO-0010-03

Project Manager: Dave Walsh

ALPHA Quote #:

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Drive

E. Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information

☐ FAX ☒ ADEx

Data Deliverables

☒ EMAIL ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:

Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
41	S-10O-C041-0-0.5	10/21/10	09:32	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA7	1
42	S-10O-C042-0-0.5	10/21/10	09:44	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MB8	1
43	S-10O-C043-0-0.5	10/21/10	10:27	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA9	1
44	S-10O-C044-0-0.5	10/21/10	09:57	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MB11	1
45	S-10O-C045-0-0.5	10/21/10	09:11	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	ME7	1
46	S-10O-C046-0-0.5	08/18/10	08:20	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	JL24	1
14	S-10O-C014-0-0.5MSMSD	10/19/10	09:47	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KKK9	1
26	S-10O-C026-0-0.5MSMSD	10/20/10	09:36	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GD30	1
41	S-10O-C041-0-0.5MSMSD	10/21/10	09:32	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA7	1
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		0
					Container Type	A	-	-	-	-	-	-	-	-	-	-	-		
					Preservative	A	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/29/10 18:00	[signature]	10/29/10 18:00

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

FORM NO: 01-01(I-NJ)
(rev. 29-APR-09)

ALPHA ANALYTICAL

L1017458 Sample Delivery Group Form

Laboratory Job No: L1017218 Client: WHG

Receipt Date/Time: 10/29/10 16:00 SDG Reviewer:

Samples Delivered By:

[ ] Alpha Courier [X] Client [ ] UPS [ ] FedEx [ ] Other

Bill of Laden: [ ]Yes [ ] Unavailable Tracking #:

Chain of Custody: [X] Present [ ] Absent:

Custody Seals: [X] Absent [ ] Present/Intact [ ] Present/Broken

Cooler/Sample Temperature:

Is Ice/Blue Ice present? [ ] Yes [X] No [ ] N/A

Temp taken from: Temp Blank:(a)____ (b)____ (c)____ (d)____ (e)____

IR Gun: (a) -2°C (b) -3°C (c) 0°C (d) -1°C (e)____

IR Gun SN: 4006201

Was Temp: [ ]2-6 Celsius

[X] <2 Celsius ... were samples frozen upon receipt? [X] Yes [ ] No

[ ] >6 Celsius ... were samples delivered direct from site? [ ] Yes [ ] No

Containers Received: [ ] Intact

[ ] Broken/Leaking Sample IDs:

Sample IDs:

All Containers Accounted For? [ ] Yes

[ ] No:

Extra Samples Received? [ ] No

[ ] Yes:

Do Sample Labels and COC agree? [ ] Yes

[ ] No:

Are Samples in Appropriate Containers? [ ] Yes

[ ] No:

Are samples rec'd within holding time? [ ] Yes

[ ] No:

* Please note: the analysis of pH will always be performed beyond the regulatory-required holding time of 15 min. from the time of collection.

pH of samples upon receipt: [ ] N/A [ ] <2 [ ] >12 and/or [ ]

Are samples properly preserved? [ ] Yes [ ] No If No then.....

Initial pH= ____ preserved In-House with [ ] HCL [ ] H_2SO_4 [ ] HNO_3 [ ] NAOH <<Final pH = ____>>

Other Issues:

Chlorine Check: [ ] N/A [ ] Present [ ] Absent

VOA/VPH vials: [ ] Yes [ ] No Preserved? [ ] Yes [ ] No If yes: [ ] HCL, [ ]

Aqueous: vials contain head space? [ ] No [ ] Yes :

Soils: MeOH covering soil? [ ] Yes [ ] No :

Reagent H_2O Preserved vials Frozen @ date/time:

Frozen by Client? [ ] No [ ] Yes @ date/time:

Was Client notified of any discrepancies listed above? [ ] Yes [ ] No [ ] N/A

If Yes: Call Tracker #

Form No.: 01-02 08/11/2010

ANALYTICAL REPORT

Lab Number:	L1017218
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NBH
Project Number:	TO-0010-03
Report Date:	11/29/10

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

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NBH
Project Number: TO-0010-03

Lab Number: L1017218
Report Date: 11/29/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1017218-01	S-10O-C001-0-0.5	NEW BEDFORD, MA	10/18/10 09:20
L1017218-02	S-10O-C002-0-0.5	NEW BEDFORD, MA	10/18/10 09:38
L1017218-03	S-10O-C003-0-0.5	NEW BEDFORD, MA	10/18/10 09:48
L1017218-04	S-10O-C004-0-0.5	NEW BEDFORD, MA	10/18/10 10:00
L1017218-05	S-10O-C005-0-0.5	NEW BEDFORD, MA	10/18/10 10:16
L1017218-06	S-10O-C006-0-0.5	NEW BEDFORD, MA	10/18/10 10:32
L1017218-07	S-10O-C007-0-0.5	NEW BEDFORD, MA	10/18/10 10:42
L1017218-08	S-10O-C008-0-0.5	NEW BEDFORD, MA	10/18/10 10:55
L1017218-09	S-10O-C009-0-0.5	NEW BEDFORD, MA	10/18/10 11:06
L1017218-10	S-10O-C010-0-0.5	NEW BEDFORD, MA	10/18/10 11:57
L1017218-11	S-10O-C011-0-0.5	NEW BEDFORD, MA	10/18/10 11:20
L1017218-12	S-10O-C012-0-0.5	NEW BEDFORD, MA	10/18/10 11:46
L1017218-13	S-10O-C013-0-0.5	NEW BEDFORD, MA	10/18/10 11:30
L1017218-14	S-10O-C014-0-0.5	NEW BEDFORD, MA	10/19/10 09:47
L1017218-15	S-10O-C015-0-0.5	NEW BEDFORD, MA	10/19/10 10:02

Project Name:	NBH	**Lab Number:**	L1017218
Project Number:	TO-0010-03	**Report Date:**	11/29/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on October 29, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until November 4, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NBH	**Lab Number:**	L1017218
Project Number:	TO-0010-03	**Report Date:**	11/29/10

Case Narrative (continued)

whether it was the higher or lower value.

L1017218-01 through 15 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1017218-01 through 15 with the exception of -06, were re-analyzed on additional dilution in order to quantitate the sample within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compound that exceeded the calibration on the initial analyses. The re-analyses were performed only for the compounds that exceeded the calibration range.

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: 11/29/10

ORGANICS

PCBS

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-01	Date Collected:	10/18/10 09:20
Client ID:	S-10O-C001-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 11:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	6410	E	ug/kg	135	--	100
Cl3-BZ#18	12900	E	ug/kg	135	--	100
Cl4-BZ#52	17400	E	ug/kg	135	--	100
Cl4-BZ#66	3820	E	ug/kg	135	--	100
Cl5-BZ#118	772		ug/kg	135	--	100
Cl6-BZ#138	1250		ug/kg	135	--	100
Cl7-BZ#187	511		ug/kg	135	--	100
Cl6-BZ#128	182		ug/kg	135	--	100
Cl7-BZ#180	269		ug/kg	135	--	100
Cl7-BZ#170	183		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	64		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-01	Date Collected:	10/18/10 09:20
Client ID:	S-10O-C001-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 11:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	11000	E	ug/kg	135	--	100
Cl4-BZ#44	5100	E	ug/kg	135	--	100
Cl5-BZ#101	1780		ug/kg	135	--	100
Cl6-BZ#153	1440		ug/kg	135	--	100
Cl5-BZ#105	173		ug/kg	135	--	100

DBOB	70	30-150
BZ 198	64	30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-01 D	Date Collected:	10/18/10 09:20
Client ID:	S-10O-C001-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 06:02	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7480		ug/kg	1350	--	1000
Cl3-BZ#18	13000		ug/kg	1350	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-01 D	Date Collected:	10/18/10 09:20
Client ID:	S-10O-C001-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 06:02	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	15200		ug/kg	1350	--	1000
Cl4-BZ#52	20700		ug/kg	1350	--	1000
Cl4-BZ#44	6030		ug/kg	1350	--	1000
Cl4-BZ#66	4210		ug/kg	1350	--	1000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-02	Date Collected:	10/18/10 09:38
Client ID:	S-10O-C002-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 12:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	26800	E	ug/kg	133	--	100
Cl3-BZ#18	46600	E	ug/kg	133	--	100
Cl4-BZ#52	41000	E	ug/kg	133	--	100
Cl4-BZ#66	8670	E	ug/kg	133	--	100
Cl5-BZ#118	1620		ug/kg	133	--	100
Cl6-BZ#138	1970		ug/kg	133	--	100
Cl7-BZ#187	922		ug/kg	133	--	100
Cl6-BZ#128	186		ug/kg	133	--	100
Cl7-BZ#180	451		ug/kg	133	--	100
Cl7-BZ#170	302		ug/kg	133	--	100
Cl8-BZ#195	ND		ug/kg	133	--	100
Cl9-BZ#206	ND		ug/kg	133	--	100
Cl10-BZ#209	ND		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	78		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-02	Date Collected:	10/18/10 09:38
Client ID:	S-10O-C002-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 12:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	18700	E	ug/kg	133	--	100
Cl4-BZ#44	6470	E	ug/kg	133	--	100
Cl5-BZ#101	2780	E	ug/kg	133	--	100
Cl6-BZ#153	2140		ug/kg	133	--	100
Cl5-BZ#105	274		ug/kg	133	--	100

DBOB	83	30-150
BZ 198	78	30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-02 D	Date Collected:	10/18/10 09:38
Client ID:	S-10O-C002-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/17/10 17:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	34800		ug/kg	5320	--	4000
Cl3-BZ#18	57300		ug/kg	5320	--	4000
Cl4-BZ#66	10300		ug/kg	5320	--	4000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-02 D	Date Collected:	10/18/10 09:38
Client ID:	S-10O-C002-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/17/10 17:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	40500		ug/kg	5320	--	4000
Cl4-BZ#52	54000		ug/kg	5320	--	4000
Cl4-BZ#44	8460		ug/kg	5320	--	4000
Cl5-BZ#101	ND		ug/kg	5320	--	4000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-03	Date Collected:	10/18/10 09:48
Client ID:	S-10O-C003-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 12:52	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	15600	E	ug/kg	135	--	100
Cl3-BZ#18	25100	E	ug/kg	135	--	100
Cl4-BZ#52	37800	E	ug/kg	135	--	100
Cl4-BZ#66	10300	E	ug/kg	135	--	100
Cl6-BZ#138	2990	E	ug/kg	135	--	100
Cl7-BZ#187	1140		ug/kg	135	--	100
Cl6-BZ#128	304		ug/kg	135	--	100
Cl7-BZ#180	559		ug/kg	135	--	100
Cl7-BZ#170	383		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	78		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-03	Date Collected:	10/18/10 09:48
Client ID:	S-10O-C003-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 12:52	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	17500	E	ug/kg	135	--	100
Cl4-BZ#44	12500	E	ug/kg	135	--	100
Cl5-BZ#101	4540	E	ug/kg	135	--	100
Cl5-BZ#118	1720		ug/kg	135	--	100
Cl6-BZ#153	3350	E	ug/kg	135	--	100
Cl5-BZ#105	385		ug/kg	135	--	100
Cl9-BZ#206	136		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	78		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-03 D	Date Collected:	10/18/10 09:48
Client ID:	S-10O-C003-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/17/10 18:28	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	27300		ug/kg	5390	--	4000
Cl6-BZ#138	ND		ug/kg	5390	--	4000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-03 D	Date Collected:	10/18/10 09:48
Client ID:	S-10O-C003-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/17/10 18:28	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	20500		ug/kg	5390	--	4000
Cl3-BZ#28	36700		ug/kg	5390	--	4000
Cl4-BZ#52	52200		ug/kg	5390	--	4000
Cl4-BZ#44	17400		ug/kg	5390	--	4000
Cl4-BZ#66	14600		ug/kg	5390	--	4000
Cl5-BZ#101	5980		ug/kg	5390	--	4000
Cl6-BZ#153	ND		ug/kg	5390	--	4000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-04	Date Collected:	10/18/10 10:00
Client ID:	S-10O-C004-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 13:33	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2800	E	ug/kg	135	--	100
Cl6-BZ#138	249		ug/kg	135	--	100
Cl6-BZ#128	ND		ug/kg	135	--	100
Cl7-BZ#170	ND		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

DBOB	88	30-150
BZ 198	75	30-150

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-04	Date Collected:	10/18/10 10:00
Client ID:	S-10O-C004-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 13:33	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1760		ug/kg	135	--	100
Cl3-BZ#28	3250	E	ug/kg	135	--	100
Cl4-BZ#52	4980	E	ug/kg	135	--	100
Cl4-BZ#44	1200		ug/kg	135	--	100
Cl4-BZ#66	812		ug/kg	135	--	100
Cl5-BZ#101	458		ug/kg	135	--	100
Cl5-BZ#118	196		ug/kg	135	--	100
Cl6-BZ#153	402		ug/kg	135	--	100
Cl5-BZ#105	ND		ug/kg	135	--	100
Cl7-BZ#187	ND		ug/kg	135	--	100
Cl7-BZ#180	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	75		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-04 D	Date Collected:	10/18/10 10:00
Client ID:	S-10O-C004-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 08:05	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	3870		ug/kg	1350	--	1000
Cl4-BZ#52	5060		ug/kg	1350	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-04 D	Date Collected:	10/18/10 10:00
Client ID:	S-10O-C004-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 08:05	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3220		ug/kg	1350	--	1000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-05	Date Collected:	10/18/10 10:16
Client ID:	S-10O-C005-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 14:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7510	E	ug/kg	135	--	100
Cl3-BZ#18	14700	E	ug/kg	135	--	100
Cl4-BZ#52	22900	E	ug/kg	135	--	100
Cl4-BZ#66	5920	E	ug/kg	135	--	100
Cl5-BZ#118	1710		ug/kg	135	--	100
Cl6-BZ#138	2030		ug/kg	135	--	100
Cl7-BZ#187	764		ug/kg	135	--	100
Cl6-BZ#128	280		ug/kg	135	--	100
Cl7-BZ#180	414		ug/kg	135	--	100
Cl7-BZ#170	305		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	77		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-05	Date Collected:	10/18/10 10:16
Client ID:	S-10O-C005-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 14:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	12200	E	ug/kg	135	--	100
Cl4-BZ#44	7280	E	ug/kg	135	--	100
Cl5-BZ#101	3220	E	ug/kg	135	--	100
Cl6-BZ#153	2860	E	ug/kg	135	--	100
Cl5-BZ#105	277		ug/kg	135	--	100

DBOB	86	30-150
BZ 198	77	30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-05 D	Date Collected:	10/18/10 10:16
Client ID:	S-10O-C005-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/17/10 19:09	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	14600		ug/kg	2700	--	2000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-05 D	Date Collected:	10/18/10 10:16
Client ID:	S-10O-C005-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/17/10 19:09	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	9970		ug/kg	2700	--	2000
Cl3-BZ#28	20200		ug/kg	2700	--	2000
Cl4-BZ#52	28900		ug/kg	2700	--	2000
Cl4-BZ#44	9670		ug/kg	2700	--	2000
Cl4-BZ#66	8410		ug/kg	2700	--	2000
Cl5-BZ#101	4080		ug/kg	2700	--	2000
Cl6-BZ#153	3570		ug/kg	2700	--	2000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-06	Date Collected:	10/18/10 10:32
Client ID:	S-10O-C006-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 14:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	574		ug/kg	134	--	100
Cl5-BZ#118	ND		ug/kg	134	--	100
Cl5-BZ#105	ND		ug/kg	134	--	100
Cl6-BZ#138	ND		ug/kg	134	--	100
Cl7-BZ#187	ND		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl7-BZ#180	ND		ug/kg	134	--	100
Cl7-BZ#170	ND		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

DBOB	87	30-150
BZ 198	82	30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-06	Date Collected:	10/18/10 10:32
Client ID:	S-10O-C006-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 14:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	303		ug/kg	134	--	100
Cl3-BZ#28	674		ug/kg	134	--	100
Cl4-BZ#52	1080		ug/kg	134	--	100
Cl4-BZ#44	316		ug/kg	134	--	100
Cl4-BZ#66	233		ug/kg	134	--	100
Cl5-BZ#101	135		ug/kg	134	--	100
Cl6-BZ#153	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	87		30-150
BZ 198	82		30-150

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-07	Date Collected:	10/18/10 10:42
Client ID:	S-10O-C007-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 15:37	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1080		ug/kg	134	--	100
Cl3-BZ#18	2210		ug/kg	134	--	100
Cl4-BZ#66	1040		ug/kg	134	--	100
Cl5-BZ#118	351		ug/kg	134	--	100
Cl5-BZ#105	ND		ug/kg	134	--	100
Cl6-BZ#138	392		ug/kg	134	--	100
Cl7-BZ#187	154		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl7-BZ#180	ND		ug/kg	134	--	100
Cl7-BZ#170	ND		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	75		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-07	Date Collected:	10/18/10 10:42
Client ID:	S-10O-C007-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 15:37	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2600		ug/kg	134	--	100
Cl4-BZ#52	4330	E	ug/kg	134	--	100
Cl4-BZ#44	1450		ug/kg	134	--	100
Cl5-BZ#101	605		ug/kg	134	--	100
Cl6-BZ#153	604		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	75		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-07 D	Date Collected:	10/18/10 10:42
Client ID:	S-10O-C007-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/13/10 10:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	4570		ug/kg	1340	--	1000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-08	Date Collected:	10/18/10 10:55
Client ID:	S-10O-C008-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 18:36	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4570	E	ug/kg	134	--	100
Cl3-BZ#18	7790	E	ug/kg	134	--	100
Cl4-BZ#52	13500	E	ug/kg	134	--	100
Cl4-BZ#66	3240	E	ug/kg	134	--	100
Cl5-BZ#118	869		ug/kg	134	--	100
Cl6-BZ#138	1130		ug/kg	134	--	100
Cl7-BZ#187	449		ug/kg	134	--	100
Cl6-BZ#128	178		ug/kg	134	--	100
Cl7-BZ#180	251		ug/kg	134	--	100
Cl7-BZ#170	184		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	80		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-08	Date Collected:	10/18/10 10:55
Client ID:	S-10O-C008-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 18:36	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	8680	E	ug/kg	134	--	100
Cl4-BZ#44	4460	E	ug/kg	134	--	100
Cl5-BZ#101	1720		ug/kg	134	--	100
Cl6-BZ#153	1640		ug/kg	134	--	100
Cl5-BZ#105	161		ug/kg	134	--	100

DBOB	90	30-150
BZ 198	80	30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-08 D	Date Collected:	10/18/10 10:55
Client ID:	S-10O-C008-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 11:03	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	9610		ug/kg	1340	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-08 D	Date Collected:	10/18/10 10:55
Client ID:	S-10O-C008-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 11:03	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5640		ug/kg	1340	--	1000
Cl3-BZ#28	10600		ug/kg	1340	--	1000
Cl4-BZ#52	16600		ug/kg	1340	--	1000
Cl4-BZ#44	5420		ug/kg	1340	--	1000
Cl4-BZ#66	3510		ug/kg	1340	--	1000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-09	Date Collected:	10/18/10 11:06
Client ID:	S-10O-C009-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 19:17	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7040	E	ug/kg	135	--	100
Cl3-BZ#18	14300	E	ug/kg	135	--	100
Cl4-BZ#52	20400	E	ug/kg	135	--	100
Cl4-BZ#66	4920	E	ug/kg	135	--	100
Cl5-BZ#118	1150		ug/kg	135	--	100
Cl6-BZ#138	1660		ug/kg	135	--	100
Cl7-BZ#187	655		ug/kg	135	--	100
Cl6-BZ#128	239		ug/kg	135	--	100
Cl7-BZ#180	354		ug/kg	135	--	100
Cl7-BZ#170	254		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	70		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-09	Date Collected:	10/18/10 11:06
Client ID:	S-10O-C009-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 19:17	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	14600	E	ug/kg	135	--	100
Cl4-BZ#44	7010	E	ug/kg	135	--	100
Cl5-BZ#101	2710	E	ug/kg	135	--	100
Cl6-BZ#153	2350		ug/kg	135	--	100
Cl5-BZ#105	245		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	70		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-09 D	Date Collected:	10/18/10 11:06
Client ID:	S-10O-C009-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 11:45	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	15200		ug/kg	1350	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-09 D	Date Collected:	10/18/10 11:06
Client ID:	S-10O-C009-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 11:45	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	8800		ug/kg	1350	--	1000
Cl3-BZ#28	17700		ug/kg	1350	--	1000
Cl4-BZ#52	27000		ug/kg	1350	--	1000
Cl4-BZ#44	8800		ug/kg	1350	--	1000
Cl4-BZ#66	6570		ug/kg	1350	--	1000
Cl5-BZ#101	3270		ug/kg	1350	--	1000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-10	Date Collected:	10/18/10 11:57
Client ID:	S-10O-C010-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 19:58	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	10100	E	ug/kg	134	--	100
Cl3-BZ#18	19100	E	ug/kg	134	--	100
Cl4-BZ#52	28000	E	ug/kg	134	--	100
Cl4-BZ#66	6960	E	ug/kg	134	--	100
Cl5-BZ#118	1440		ug/kg	134	--	100
Cl6-BZ#138	2270		ug/kg	134	--	100
Cl7-BZ#187	910		ug/kg	134	--	100
Cl6-BZ#128	273		ug/kg	134	--	100
Cl7-BZ#180	472		ug/kg	134	--	100
Cl7-BZ#170	339		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

DBOB	114	30-150
BZ 198	74	30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-10	Date Collected:	10/18/10 11:57
Client ID:	S-10O-C010-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/15/10 19:58	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	13700	E	ug/kg	134	--	100
Cl4-BZ#44	9190	E	ug/kg	134	--	100
Cl5-BZ#101	3360	E	ug/kg	134	--	100
Cl6-BZ#153	2910	E	ug/kg	134	--	100
Cl5-BZ#105	289		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	114		30-150
BZ 198	74		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-10 D	Date Collected:	10/18/10 11:57
Client ID:	S-10O-C010-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/17/10 19:50	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	27000		ug/kg	2670	--	2000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-10 D	Date Collected:	10/18/10 11:57
Client ID:	S-10O-C010-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 13:53
Analytical Date:	11/17/10 19:50	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	15800		ug/kg	2670	--	2000
Cl3-BZ#28	30000		ug/kg	2670	--	2000
Cl4-BZ#52	43100		ug/kg	2670	--	2000
Cl4-BZ#44	14200		ug/kg	2670	--	2000
Cl4-BZ#66	9530		ug/kg	2670	--	2000
Cl5-BZ#101	5010		ug/kg	2670	--	2000
Cl6-BZ#153	4310		ug/kg	2670	--	2000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-11	Date Collected:	10/18/10 11:20
Client ID:	S-10O-C011-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 20:39	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3840	E	ug/kg	133	--	100
Cl3-BZ#18	8080	E	ug/kg	133	--	100
Cl6-BZ#138	1260		ug/kg	133	--	100
Cl6-BZ#128	216		ug/kg	133	--	100
Cl7-BZ#180	288		ug/kg	133	--	100
Cl7-BZ#170	214		ug/kg	133	--	100
Cl8-BZ#195	ND		ug/kg	133	--	100
Cl9-BZ#206	ND		ug/kg	133	--	100
Cl10-BZ#209	ND		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	72		30-150

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-11	Date Collected:	10/18/10 11:20
Client ID:	S-10O-C011-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 20:39	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	8260	E	ug/kg	133	--	100
Cl4-BZ#52	14700	E	ug/kg	133	--	100
Cl4-BZ#44	4840	E	ug/kg	133	--	100
Cl4-BZ#66	3470	E	ug/kg	133	--	100
Cl5-BZ#101	1970		ug/kg	133	--	100
Cl5-BZ#118	1080		ug/kg	133	--	100
Cl6-BZ#153	2000		ug/kg	133	--	100
Cl5-BZ#105	212		ug/kg	133	--	100
Cl7-BZ#187	487		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	72		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-11 D	Date Collected:	10/18/10 11:20
Client ID:	S-10O-C011-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 13:07	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	10100		ug/kg	1330	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-11 D	Date Collected:	10/18/10 11:20
Client ID:	S-10O-C011-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 13:07	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5170		ug/kg	1330	--	1000
Cl3-BZ#28	11800		ug/kg	1330	--	1000
Cl4-BZ#52	19400		ug/kg	1330	--	1000
Cl4-BZ#44	6120		ug/kg	1330	--	1000
Cl4-BZ#66	4280		ug/kg	1330	--	1000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-12	Date Collected:	10/18/10 11:46
Client ID:	S-10O-C012-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 21:20	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5080	E	ug/kg	134	--	100
Cl3-BZ#18	9260	E	ug/kg	134	--	100
Cl4-BZ#52	17400	E	ug/kg	134	--	100
Cl4-BZ#66	4160	E	ug/kg	134	--	100
Cl6-BZ#138	1520		ug/kg	134	--	100
Cl7-BZ#187	577		ug/kg	134	--	100
Cl6-BZ#128	244		ug/kg	134	--	100
Cl7-BZ#170	243		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	74		30-150

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-12	Date Collected:	10/18/10 11:46
Client ID:	S-10O-C012-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 21:20	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	10800	E	ug/kg	134	--	100
Cl4-BZ#44	5700	E	ug/kg	134	--	100
Cl5-BZ#101	2330		ug/kg	134	--	100
Cl5-BZ#118	1250		ug/kg	134	--	100
Cl6-BZ#153	2310		ug/kg	134	--	100
Cl5-BZ#105	239		ug/kg	134	--	100
Cl7-BZ#180	336		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	74		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-12 D	Date Collected:	10/18/10 11:46
Client ID:	S-10O-C012-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 13:48	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	12900		ug/kg	1340	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-12 D	Date Collected:	10/18/10 11:46
Client ID:	S-10O-C012-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 13:48	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	6270		ug/kg	1340	--	1000
Cl3-BZ#28	14500		ug/kg	1340	--	1000
Cl4-BZ#52	23400		ug/kg	1340	--	1000
Cl4-BZ#44	7140		ug/kg	1340	--	1000
Cl4-BZ#66	5000		ug/kg	1340	--	1000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-13	Date Collected:	10/18/10 11:30
Client ID:	S-10O-C013-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 22:02	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4160	E	ug/kg	133	--	100
Cl3-BZ#18	6040	E	ug/kg	133	--	100
Cl4-BZ#52	17700	E	ug/kg	133	--	100
Cl4-BZ#66	4340	E	ug/kg	133	--	100
Cl6-BZ#138	1700		ug/kg	133	--	100
Cl7-BZ#187	621		ug/kg	133	--	100
Cl6-BZ#128	276		ug/kg	133	--	100
Cl7-BZ#170	269		ug/kg	133	--	100
Cl8-BZ#195	ND		ug/kg	133	--	100
Cl9-BZ#206	ND		ug/kg	133	--	100
Cl10-BZ#209	ND		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	72		30-150

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-13	Date Collected:	10/18/10 11:30
Client ID:	S-10O-C013-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 22:02	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	9940	E	ug/kg	133	--	100
Cl4-BZ#44	5750	E	ug/kg	133	--	100
Cl5-BZ#101	2470		ug/kg	133	--	100
Cl5-BZ#118	1410		ug/kg	133	--	100
Cl6-BZ#153	2510		ug/kg	133	--	100
Cl5-BZ#105	273		ug/kg	133	--	100
Cl7-BZ#180	360		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	72		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-13 D	Date Collected:	10/18/10 11:30
Client ID:	S-10O-C013-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 14:29	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5420		ug/kg	1330	--	1000
Cl3-BZ#18	12300		ug/kg	1330	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-13 D	Date Collected:	10/18/10 11:30
Client ID:	S-10O-C013-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 14:29	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	14500		ug/kg	1330	--	1000
Cl4-BZ#52	23400		ug/kg	1330	--	1000
Cl4-BZ#44	7430		ug/kg	1330	--	1000
Cl4-BZ#66	5290		ug/kg	1330	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-14	Date Collected:	10/19/10 09:47
Client ID:	S-10O-C014-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 22:43	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1540		ug/kg	133	--	100
Cl5-BZ#105	ND		ug/kg	133	--	100
Cl6-BZ#138	317		ug/kg	133	--	100
Cl6-BZ#128	ND		ug/kg	133	--	100
Cl7-BZ#180	ND		ug/kg	133	--	100
Cl7-BZ#170	ND		ug/kg	133	--	100
Cl8-BZ#195	ND		ug/kg	133	--	100
Cl9-BZ#206	ND		ug/kg	133	--	100
Cl10-BZ#209	ND		ug/kg	133	--	100

DBOB	78	30-150
BZ 198	74	30-150

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-14	Date Collected:	10/19/10 09:47
Client ID:	S-10O-C014-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 22:43	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	785		ug/kg	133	--	100
Cl3-BZ#28	2170		ug/kg	133	--	100
Cl4-BZ#52	3570	E	ug/kg	133	--	100
Cl4-BZ#44	1200		ug/kg	133	--	100
Cl4-BZ#66	868		ug/kg	133	--	100
Cl5-BZ#101	549		ug/kg	133	--	100
Cl5-BZ#118	327		ug/kg	133	--	100
Cl6-BZ#153	551		ug/kg	133	--	100
Cl7-BZ#187	ND		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	74		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-14 D	Date Collected:	10/19/10 09:47
Client ID:	S-10O-C014-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 15:10	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	3790		ug/kg	1330	--	1000

Project Name: NBH **Lab Number:** L1017218

Project Number: TO-0010-03 **Report Date:** 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-15	Date Collected:	10/19/10 10:02
Client ID:	S-10O-C015-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/16/10 00:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5710	E	ug/kg	134	--	100
Cl3-BZ#18	10600	E	ug/kg	134	--	100
Cl4-BZ#52	18400	E	ug/kg	134	--	100
Cl4-BZ#66	4110	E	ug/kg	134	--	100
Cl5-BZ#118	1120		ug/kg	134	--	100
Cl6-BZ#138	1500		ug/kg	134	--	100
Cl7-BZ#187	597		ug/kg	134	--	100
Cl6-BZ#128	227		ug/kg	134	--	100
Cl7-BZ#180	324		ug/kg	134	--	100
Cl7-BZ#170	250		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	76		30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-15	Date Collected:	10/19/10 10:02
Client ID:	S-10O-C015-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/16/10 00:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	11100	E	ug/kg	134	--	100
Cl4-BZ#44	5420	E	ug/kg	134	--	100
Cl5-BZ#101	2080		ug/kg	134	--	100
Cl6-BZ#153	2090		ug/kg	134	--	100
Cl5-BZ#105	219		ug/kg	134	--	100

DBOB	81	30-150
BZ 198	76	30-150

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-15 D	Date Collected:	10/19/10 10:02
Client ID:	S-10O-C015-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 17:14	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	6250		ug/kg	1340	--	1000
Cl3-BZ#18	13500		ug/kg	1340	--	1000
Cl4-BZ#66	4570		ug/kg	1340	--	1000

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID:	L1017218-15 D	Date Collected:	10/19/10 10:02
Client ID:	S-10O-C015-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/04/10 15:41
Analytical Date:	11/15/10 17:14	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/09/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	13600		ug/kg	1340	--	1000
Cl4-BZ#52	21900		ug/kg	1340	--	1000
Cl4-BZ#44	6410		ug/kg	1340	--	1000

Project Name: NBH
Project Number: TO-0010-03

Lab Number: L1017218
Report Date: 11/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/13/10 03:59
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 11/04/10 13:53
Cleanup Method1: EPA 3630
Cleanup Date1: 11/09/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-15 Batch: WG441250-1					
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: NBH
Project Number: TO-0010-03

Lab Number: L1017218
Report Date: 11/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/13/10 03:59
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 11/04/10 13:53
Cleanup Method1: EPA 3630
Cleanup Date1: 11/09/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-15 Batch: WG441250-1					
Cl6-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: NBH
Project Number: TO-0010-03

Lab Number: L1017218
Report Date: 11/29/10

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: WG441250-4 WG441250-5 QC Sample: L1017218-14 Client ID: S-10O-C014-0-0.5												
Cl3-BZ#18	1540	1680	3200	99		3180	98		40-140	1		30
Cl4-BZ#52	3790	1680	5620	109		5600	108		40-140	9		30
Cl5-BZ#105	ND	1680	1550	92		1520	91		40-140	2		30
Cl6-BZ#138	317	1680	1770	87		1740	85		40-140	2		30
Cl6-BZ#128	ND	1680	1500	89		1480	88		40-140	1		30
Cl7-BZ#180	ND	1680	1520	91		1500	89		40-140	1		30
Cl7-BZ#170	ND	1680	1470	88		1460	87		40-140	1		30
Cl8-BZ#195	ND	1680	1430	85		1420	85		40-140	1		30
Cl9-BZ#206	ND	1680	1580	94		1550	92		40-140	2		30
Cl10-BZ#209	ND	1680	1370	82		1360	81		40-140	1		30
Cl2-BZ#8	785	1680	2060	76		1970	71		40-140	4		30
Cl3-BZ#28	2170	1680	4120	116		4120	116		40-140	0		30
Cl4-BZ#44	1200	1680	2730	91		2620	85		40-140	4		30
Cl4-BZ#66	868	1680	2490	97		2410	92		40-140	3		30
Cl5-BZ#101	549	1680	2060	90		1990	86		40-140	3		30
Cl5-BZ#118	327	1680	1930	96		1870	92		40-140	3		30
Cl6-BZ#153	551	1680	1940	83		1890	80		40-140	3		30
Cl7-BZ#187	ND	1680	1470	88		1550	92		40-140	5		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH
Project Number: TO-0010-03

Lab Number: L1017218
Report Date: 11/29/10

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: WG441250-4 WG441250-5 QC Sample: L1017218-14 Client ID: S-10O-C014-0-0.5												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
DBOB	90		88		30-150
BZ 198	85		82		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

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: WG441250-2 WG441250-3							
Cl2-BZ#8	77		76		40-140	1		30
Cl3-BZ#18	76		81		40-140	6		30
Cl3-BZ#28	86		86		40-140	0		30
Cl4-BZ#52	87		82		40-140	6		30
Cl4-BZ#44	82		87		40-140	6		30
Cl4-BZ#66	87		84		40-140	4		30
Cl5-BZ#101	88		86		40-140	2		30
Cl5-BZ#118	89		86		40-140	3		30
Cl5-BZ#105	85		83		40-140	2		30
Cl6-BZ#138	88		86		40-140	2		30
Cl7-BZ#187	85		82		40-140	4		30
Cl6-BZ#128	88		86		40-140	2		30
Cl7-BZ#180	88		86		40-140	2		30
Cl7-BZ#170	85		84		40-140	1		30
Cl8-BZ#195	83		82		40-140	1		30
Cl9-BZ#206	94		91		40-140	3		30
Cl10-BZ#209	85		85		40-140	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

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: WG441250-2		WG441250-3			
DBOB	86		87		30-150			
BZ 198	89		85		30-150			

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-15		Batch: WG441250-2		WG441250-3		
Cl6-BZ#153	82		80		40-140	2	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	86		87		30-150
BZ 198	89		85		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-01
Client ID: S-10O-C001-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 09:20
Date Received: 10/29/10
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	97.8		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	43.6		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-02
Client ID: S-10O-C002-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 09:38
Date Received: 10/29/10
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	98.0		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	44.2		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-03
Client ID: S-10O-C003-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/18/10 09:48
Date Received: 10/29/10
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	97.8		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	33.2		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-04
Client ID: S-10O-C004-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 10:00
Date Received: 10/29/10
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	98.0		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	43.6		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-05
Client ID: S-10O-C005-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 10:16
Date Received: 10/29/10
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	96.8		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	36.1		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-06
Client ID: S-10O-C006-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 10:32
Date Received: 10/29/10
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	98.4		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	54.6		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-07
Client ID: S-10O-C007-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 10:42
Date Received: 10/29/10
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	98.7		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	48.6		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-08
Client ID: S-10O-C008-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 10:55
Date Received: 10/29/10
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	98.0		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	39.3		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-09
Client ID: S-10O-C009-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 11:06
Date Received: 10/29/10
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	97.3		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	34.0		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-10
Client ID: S-10O-C010-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 11:57
Date Received: 10/29/10
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	97.9		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	34.7		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-11
Client ID: S-10O-C011-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/18/10 11:20
Date Received: 10/29/10
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	97.8		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	40.0		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-12
Client ID: S-10O-C012-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/18/10 11:46
Date Received: 10/29/10
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	98.1		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	38.7		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-13
Client ID: S-10O-C013-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/18/10 11:30
Date Received: 10/29/10
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	97.8		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	38.1		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-14
Client ID: S-10O-C014-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/19/10 09:47
Date Received: 10/29/10
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	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	45.8		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Project Name: NBH
Project Number: TO-0010-03
Lab Number: L1017218
Report Date: 11/29/10

SAMPLE RESULTS

Lab ID: L1017218-15
Client ID: S-10O-C015-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/19/10 10:02
Date Received: 10/29/10
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	97.9		%	0.100	--	1	-	11/04/10 13:45	30,2540G	KB
Solids, Total (Pre-Dried)	38.4		%	0.100	NA	1	-	11/02/10 07:26	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NBH
Project Number: TO-0010-03

Lab Number: L1017218
Report Date: 11/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-15 QC Batch ID: WG441179-1 QC Sample: L1017218-01 Client ID: S-10O-C001-0-0.5						
Solids, Total	97.8	98.2	%	0		20

Project Name: NBH
Project Number: TO-0010-03

Lab Number: L1017218
Report Date: 11/29/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information	Custody Seal
Cooler	
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1017218-01A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-02A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-03A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-04A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-05A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-06A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-07A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-08A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-09A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-10A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-11A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-12A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-13A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-14A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-14B	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-MS/MSD()
L1017218-15A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017218-16A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-
L1017218-17A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-
L1017218-18A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-

*Values in parentheses indicate holding time in days

Project Name: NBH
Project Number: TO-0010-03

Lab Number: L1017218
Report Date: 11/29/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1017218-19A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-
L1017218-20A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-
L1017218-21A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-
L1017218-22A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-
L1017218-23A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-
L1017218-24A	Glass 250ml unpreserved	B	N/A	-3	Y	Absent	-
L1017218-25A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-26A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-26B	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-27A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-28A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-29A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-30A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-31A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-32A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-33A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-34A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-35A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-36A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-37A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-38A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-39A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-40A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-41A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-41B	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-42A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-43A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-44A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-45A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-
L1017218-46A	Glass 250ml unpreserved	A	N/A	-2	Y	Absent	-

*Values in parentheses indicate holding time in days

Project Name:	NBH	**Lab Number:**	L1017218
Project Number:	TO-0010-03	**Report Date:**	11/29/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NBH	**Lab Number:**	L1017218
Project Number:	TO-0010-03	**Report Date:**	11/29/10

Data Qualifiers

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:	NBH	**Lab Number:**	L1017218
Project Number:	TO-0010-03	**Report Date:**	11/29/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

CHAIN OF CUSTODY

PAGE 1 OF 5

Serial No: 91022:02

ALPHA ANALYTICAL

Westborough, 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 Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

Date Rec'd in Lab:

ALPHA Job #: L1017218

Report Information ☐ FAX ☒ ADEx
Data Deliverables ☒ EMAIL ☐ Add'l Deliverables
Billing Information ☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

ANALYSIS

PCB congeners - NOAA 18

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments	TOTAL # BOTTLES
L1017218-1	S-10O-C001-0-0.5	10/18/10	09:20	SED	KGM	KZ2	1
2	S-10O-C002-0-0.5	10/18/10	09:38	SED	KGM	KY5	1
3	S-10O-C003-0-0.5	10/18/10	09:48	SED	KGM	KBB4	1
4	S-10O-C004-0-0.5	10/18/10	10:00	SED	KGM	KDD2	1
5	S-10O-C005-0-0.5	10/18/10	10:16	SED	KGM	KHH2	1
6	S-10O-C006-0-0.5	10/18/10	10:32	SED	KGM	KKK2	1
7	S-10O-C007-0-0.5	10/18/10	10:42	SED	KGM	KKK4	1
8	S-10O-C008-0-0.5	10/18/10	10:55	SED	KGM	KHH4	1
9	S-10O-C009-0-0.5	10/18/10	11:06	SED	KGM	KFF4	1
10	S-10O-C010-0-0.5	10/18/10	11:57	SED	KGM	KFF8	1
	Container Type	A					
	Preservative	A					

Relinquished By:	Date/Time	Received By:	Date/Time
	10/29/10 18:20		10/29/10 18:00

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

CHAIN OF CUSTODY

PAGE 2 OF 5

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1017218

Project Information

Project Name: NBH Environmental Monitoring

Project Location: New Bedford, MA

Project #: TO-0010-03

Project Manager: Dave Walsh

ALPHA Quote #:

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Drive

E. Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information

☐ FAX ☒ ADEx

Data Deliverables

☒ EMAIL ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:

Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
11	S-10O-C011-0-0.5	10/18/10	11:20	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KII6	1
12	S-10O-C012-0-0.5	10/18/10	11:46	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KHH8	1
13	S-10O-C013-0-0.5	10/18/10	11:30	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KKK7	1
14	S-10O-C014-0-0.5	10/19/10	09:47	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KKK9	1
15	S-10O-C015-0-0.5	10/19/10	10:02	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KGG11	1
16	S-10O-C016-0-0.5	10/19/10	10:12	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KII12	1
17	S-10O-C017-0-0.5	10/19/10	10:44	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KII14	1
18	S-10O-C018-0-0.5	10/19/10	10:55	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KFF15	1
19	S-10O-C019-0-0.5	10/19/10	10:33	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KKK15	1
20	S-10O-C020-0-0.5	10/19/10	11:05	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KII17	1
					Container Type	A	-	-	-	-	-	-	-	-	-	-	-		
					Preservative	A	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/29/10 18:00	[signature]	10/29/10 18:00

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FORM NO: 01-01(I-NJ)
(rev. 29-APR-09)

CHAIN OF CUSTODY

PAGE 3 OF 5

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1017218

Project Information

Project Name: NBH Environmental Monitoring

Project Location: New Bedford, MA

Project #: TO-0010-03

Project Manager: Dave Walsh

ALPHA Quote #:

Report Information

☐ FAX
☒ ADEx

Data Deliverables

☒ EMAIL
☐ Add'l Deliverables

Billing Information

☒ Same as Client info
PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
21	S-10O-C021-0-0.5	10/19/10	11:27	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KGG19	1
22	S-10O-C022-0-0.5	10/19/10	11:15	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KJJ19	1
23	S-10O-C023-0-0.5	10/19/10	09:31	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KCC6	1
24	S-10O-C024-0-0.5	10/19/10	09:23	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KY7	1
25	S-10O-C025-0-0.5	10/19/10	10:20	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KKK13	1
26	S-10O-C026-0-0.5	10/20/10	09:36	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GD30	1
27	S-10O-C027-0-0.5	10/20/10	09:27	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GD34	1
28	S-10O-C028-0-0.5	10/20/10	09:52	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GJ29	1
29	S-10O-C029-0-0.5	10/20/10	09:18	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GH34	1
30	S-10O-C030-0-0.5	10/20/10	09:07	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GI36	1
					Container Type	A	-	-	-	-	-	-	-	-	-	-	-		
					Preservative	A	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/29/10 18:00	[signature]	10/29/10 18:00

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FORM NO: 01-01(I-NJ)
(rev. 29-APR-09)

CHAIN OF CUSTODY

PAGE 4 OF 5

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1017218

Project Information

Project Name: NBH Environmental Monitoring

Project Location: New Bedford, MA

Project #: TO-0010-03

Project Manager: Dave Walsh

ALPHA Quote #:

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Drive

E. Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information

☐ FAX ☒ ADEx

Data Deliverables

☒ EMAIL ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:

Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
31	S-10O-C031-0-0.5	10/20/10	09:56	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GN32	1
32	S-10O-C032-0-0.5	10/20/10	11:03	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GM37	1
33	S-10O-C033-0-0.5	10/20/10	10:09	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GS29	1
34	S-10O-C034-0-0.5	10/20/10	10:51	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GR35	1
35	S-10O-C035-0-0.5	10/20/10	10:31	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GV32	1
36	S-10O-C036-0-0.5	10/20/10	10:19	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GY29	1
37	S-10O-C037-0-0.5	10/20/10	10:39	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GW36	1
38	S-10O-C038-0-0.5	10/20/10	08:58	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MB3	1
39	S-10O-C039-0-0.5	10/21/10	10:41	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA4	1
40	S-10O-C040-0-0.5	10/21/10	09:22	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MB5	1
					Container Type	A	-	-	-	-	-	-	-	-	-	-	-		
					Preservative	A	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/29/10 18:00	[signature]	10/29/10 18:00

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FORM NO: 01-01(I-NJ)
(rev. 29-APR-09)

CHAIN OF CUSTODY

PAGE 5 OF 5

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Serial_No:20102202

Date Rec'd in Lab:

ALPHA Job #: L1017218

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
41	S-10O-C041-0-0.5	10/21/10	09:32	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA7	1
42	S-10O-C042-0-0.5	10/21/10	09:44	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MB8	1
43	S-10O-C043-0-0.5	10/21/10	10:27	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA9	1
44	S-10O-C044-0-0.5	10/21/10	09:57	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MB11	1
45	S-10O-C045-0-0.5	10/21/10	09:11	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	ME7	1
46	S-10O-C046-0-0.5	08/18/10	08:20	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	JL24	1
~ 14	S-10O-C014-0-0.5MSMSD	10/19/10	09:47	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KKK9	1
~ 26	S-10O-C026-0-0.5MSMSD	10/20/10	09:36	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GD30	1
~ 41	S-10O-C041-0-0.5MSMSD	10/21/10	09:32	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA7	1
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		0
					Container Type	A	-	-	-	-	-	-	-	-	-	-	-		
					Preservative	A	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
	10/29/10 18:00		10/29/10 18:00

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FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

ANALYTICAL REPORT

Lab Number:	L1017460
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-0010-03
Report Date:	11/30/10

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

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017460
Report Date: 11/30/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1017460-01	S-10O-C031-0-0.5	NEW BEDFORD, MA	10/20/10 09:56
L1017460-02	S-10O-C032-0-0.5	NEW BEDFORD, MA	10/20/10 11:03
L1017460-03	S-10O-C033-0-0.5	NEW BEDFORD, MA	10/20/10 10:09
L1017460-04	S-10O-C034-0-0.5	NEW BEDFORD, MA	10/20/10 10:51
L1017460-05	S-10O-C035-0-0.5	NEW BEDFORD, MA	10/20/10 10:31
L1017460-06	S-10O-C036-0-0.5	NEW BEDFORD, MA	10/20/10 10:19
L1017460-07	S-10O-C037-0-0.5	NEW BEDFORD, MA	10/20/10 10:39
L1017460-08	S-10O-C038-0-0.5	NEW BEDFORD, MA	10/20/10 08:58
L1017460-09	S-10O-C039-0-0.5	NEW BEDFORD, MA	10/21/10 10:41
L1017460-10	S-10O-C040-0-0.5	NEW BEDFORD, MA	10/21/10 09:22
L1017460-11	S-10O-C041-0-0.5	NEW BEDFORD, MA	10/21/10 09:32
L1017460-12	S-10O-C042-0-0.5	NEW BEDFORD, MA	10/21/10 09:44
L1017460-13	S-10O-C043-0-0.5	NEW BEDFORD, MA	10/21/10 10:27
L1017460-14	S-10O-C044-0-0.5	NEW BEDFORD, MA	10/21/10 09:57
L1017460-15	S-10O-C045-0-0.5	NEW BEDFORD, MA	10/21/10 09:11
L1017460-16	S-10O-C046-0-0.5	NEW BEDFORD, MA	08/18/10 08:20

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017460
Project Number:	TO-0010-03	**Report Date:**	11/30/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on October 29, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage on November 4 until they were removed and placed in refrigerated storage November 8 until November 11, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017460
Project Number:	TO-0010-03	**Report Date:**	11/30/10

Case Narrative (continued)

whether it was the higher or lower value.

L1017460-01 through 16 were analyzed at the dilution required by the elevated concentrations of target compounds in the sample.

L1017460-01 through 16 (except for 07 & 10) were re-analyzed on further dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

The WG442523-4 MS recoveries, performed on L1017460-11, are outside the acceptance criteria for Cl3-BZ#18 (32%). The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the sample utilized for the MS/MSD.

The WG442523-5 MSD recoveries, performed on L1017460-11, are outside the acceptance criteria for Cl2-BZ#8 (19%), Cl3-BZ#18 (0%), Cl3-BZ#28 (6%), Cl4-BZ#52(0%), Cl2-BZ#138 (38%), Cl4-BZ#44 (20%), Cl4-BZ#66 (29%) and Cl6-BZ#153 (35%). The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the sample utilized for the MS/MSD.

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: 11/30/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-01	Date Collected:	10/20/10 09:56
Client ID:	S-10O-C031-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 12:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3010	E	ug/kg	136	--	100
Cl3-BZ#18	5570	E	ug/kg	136	--	100
Cl4-BZ#52	8920	E	ug/kg	136	--	100
Cl4-BZ#66	2060		ug/kg	136	--	100
Cl5-BZ#118	736		ug/kg	136	--	100
Cl6-BZ#138	771		ug/kg	136	--	100
Cl7-BZ#187	278		ug/kg	136	--	100
Cl6-BZ#128	148		ug/kg	136	--	100
Cl7-BZ#180	169		ug/kg	136	--	100
Cl7-BZ#170	147		ug/kg	136	--	100
Cl8-BZ#195	ND		ug/kg	136	--	100
Cl9-BZ#206	ND		ug/kg	136	--	100
Cl10-BZ#209	ND		ug/kg	136	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	63		30-150
BZ 198	58		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-01	Date Collected:	10/20/10 09:56
Client ID:	S-10O-C031-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 12:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6070	E	ug/kg	136	--	100
Cl4-BZ#44	2440		ug/kg	136	--	100
Cl5-BZ#101	1200		ug/kg	136	--	100
Cl6-BZ#153	1190		ug/kg	136	--	100
Cl5-BZ#105	163		ug/kg	136	--	100

DBOB	63	30-150
BZ 198	58	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-01 D	Date Collected:	10/20/10 09:56
Client ID:	S-10O-C031-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/17/10 23:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3540		ug/kg	1360	--	1000
Cl3-BZ#18	7390		ug/kg	1360	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-01 D	Date Collected:	10/20/10 09:56
Client ID:	S-10O-C031-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/17/10 23:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	7990		ug/kg	1360	--	1000
Cl4-BZ#52	11100		ug/kg	1360	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-02	Date Collected:	10/20/10 11:03
Client ID:	S-10O-C032-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 13:37	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2660		ug/kg	137	--	100
Cl5-BZ#105	ND		ug/kg	137	--	100
Cl6-BZ#138	390		ug/kg	137	--	100
Cl6-BZ#128	ND		ug/kg	137	--	100
Cl7-BZ#180	ND		ug/kg	137	--	100
Cl7-BZ#170	ND		ug/kg	137	--	100
Cl8-BZ#195	ND		ug/kg	137	--	100
Cl9-BZ#206	ND		ug/kg	137	--	100
Cl10-BZ#209	ND		ug/kg	137	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	53		30-150
BZ 198	49		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-02	Date Collected:	10/20/10 11:03
Client ID:	S-10O-C032-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 13:37	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1400		ug/kg	137	--	100
Cl3-BZ#28	3600	E	ug/kg	137	--	100
Cl4-BZ#52	4620	E	ug/kg	137	--	100
Cl4-BZ#44	1220		ug/kg	137	--	100
Cl4-BZ#66	994		ug/kg	137	--	100
Cl5-BZ#101	637		ug/kg	137	--	100
Cl5-BZ#118	386		ug/kg	137	--	100
Cl6-BZ#153	594		ug/kg	137	--	100
Cl7-BZ#187	143		ug/kg	137	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	53		30-150
BZ 198	49		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-02 D	Date Collected:	10/20/10 11:03
Client ID:	S-10O-C032-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/17/10 23:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	6190		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-02 D	Date Collected:	10/20/10 11:03
Client ID:	S-10O-C032-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/17/10 23:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4440		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-03	Date Collected:	10/20/10 10:09
Client ID:	S-10O-C033-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 14:18	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	730		ug/kg	132	--	100
Cl3-BZ#18	1670		ug/kg	132	--	100
Cl4-BZ#66	872		ug/kg	132	--	100
Cl5-BZ#118	397		ug/kg	132	--	100
Cl6-BZ#138	446		ug/kg	132	--	100
Cl7-BZ#187	141		ug/kg	132	--	100
Cl6-BZ#128	ND		ug/kg	132	--	100
Cl7-BZ#180	ND		ug/kg	132	--	100
Cl7-BZ#170	ND		ug/kg	132	--	100
Cl8-BZ#195	ND		ug/kg	132	--	100
Cl9-BZ#206	ND		ug/kg	132	--	100
Cl10-BZ#209	ND		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	69		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-03	Date Collected:	10/20/10 10:09
Client ID:	S-10O-C033-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 14:18	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1970		ug/kg	132	--	100
Cl4-BZ#52	3540	E	ug/kg	132	--	100
Cl4-BZ#44	1060		ug/kg	132	--	100
Cl5-BZ#101	615		ug/kg	132	--	100
Cl6-BZ#153	581		ug/kg	132	--	100
Cl5-BZ#105	ND		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	69		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-03 D	Date Collected:	10/20/10 10:09
Client ID:	S-10O-C033-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 00:37	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	4280		ug/kg	1320	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-04	Date Collected:	10/20/10 10:51
Client ID:	S-10O-C034-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 14:59	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2860	E	ug/kg	135	--	100
Cl5-BZ#118	543		ug/kg	135	--	100
Cl6-BZ#138	603		ug/kg	135	--	100
Cl6-BZ#128	ND		ug/kg	135	--	100
Cl7-BZ#180	142		ug/kg	135	--	100
Cl7-BZ#170	ND		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	69		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-04	Date Collected:	10/20/10 10:51
Client ID:	S-10O-C034-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 14:59	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1550		ug/kg	135	--	100
Cl3-BZ#28	3770	E	ug/kg	135	--	100
Cl4-BZ#52	6420	E	ug/kg	135	--	100
Cl4-BZ#44	1940		ug/kg	135	--	100
Cl4-BZ#66	1580		ug/kg	135	--	100
Cl5-BZ#101	1010		ug/kg	135	--	100
Cl6-BZ#153	934		ug/kg	135	--	100
Cl5-BZ#105	ND		ug/kg	135	--	100
Cl7-BZ#187	218		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	69		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-04 D	Date Collected:	10/20/10 10:51
Client ID:	S-10O-C034-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 01:19	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	3650		ug/kg	1350	--	1000
Cl4-BZ#52	7160		ug/kg	1350	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-04 D	Date Collected:	10/20/10 10:51
Client ID:	S-10O-C034-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 01:19	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4100		ug/kg	1350	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-05	Date Collected:	10/20/10 10:31
Client ID:	S-10O-C035-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 15:41	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	643		ug/kg	135	--	100
Cl3-BZ#18	1050		ug/kg	135	--	100
Cl6-BZ#138	470		ug/kg	135	--	100
Cl7-BZ#187	150		ug/kg	135	--	100
Cl6-BZ#128	ND		ug/kg	135	--	100
Cl7-BZ#170	ND		ug/kg	135	--	100
Cl8-BZ#195	ND		ug/kg	135	--	100
Cl9-BZ#206	ND		ug/kg	135	--	100
Cl10-BZ#209	ND		ug/kg	135	--	100

DBOB	74	30-150
BZ 198	70	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-05	Date Collected:	10/20/10 10:31
Client ID:	S-10O-C035-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 15:41	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2150		ug/kg	135	--	100
Cl4-BZ#52	3660	E	ug/kg	135	--	100
Cl4-BZ#44	1120		ug/kg	135	--	100
Cl4-BZ#66	996		ug/kg	135	--	100
Cl5-BZ#101	698		ug/kg	135	--	100
Cl5-BZ#118	459		ug/kg	135	--	100
Cl6-BZ#153	653		ug/kg	135	--	100
Cl5-BZ#105	ND		ug/kg	135	--	100
Cl7-BZ#180	ND		ug/kg	135	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	70		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-05 D	Date Collected:	10/20/10 10:31
Client ID:	S-10O-C035-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 02:00	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	4840		ug/kg	1350	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-06	Date Collected:	10/20/10 10:19
Client ID:	S-10O-C036-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 16:22	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1520		ug/kg	136	--	100
Cl6-BZ#138	342		ug/kg	136	--	100
Cl6-BZ#128	ND		ug/kg	136	--	100
Cl7-BZ#170	ND		ug/kg	136	--	100
Cl8-BZ#195	ND		ug/kg	136	--	100
Cl9-BZ#206	ND		ug/kg	136	--	100
Cl10-BZ#209	ND		ug/kg	136	--	100

DBOB	77	30-150
BZ 198	65	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-06	Date Collected:	10/20/10 10:19
Client ID:	S-10O-C036-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 16:22	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2240		ug/kg	136	--	100
Cl3-BZ#28	2210		ug/kg	136	--	100
Cl4-BZ#52	4100	E	ug/kg	136	--	100
Cl4-BZ#44	1090		ug/kg	136	--	100
Cl4-BZ#66	706		ug/kg	136	--	100
Cl5-BZ#101	532		ug/kg	136	--	100
Cl5-BZ#118	259		ug/kg	136	--	100
Cl6-BZ#153	442		ug/kg	136	--	100
Cl5-BZ#105	ND		ug/kg	136	--	100
Cl7-BZ#187	ND		ug/kg	136	--	100
Cl7-BZ#180	ND		ug/kg	136	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	77		30-150
BZ 198	65		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-06 D	Date Collected:	10/20/10 10:19
Client ID:	S-10O-C036-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 02:41	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	4660		ug/kg	1360	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-07	Date Collected:	10/20/10 10:39
Client ID:	S-10O-C037-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 17:03	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	746		ug/kg	134	--	100
Cl5-BZ#118	216		ug/kg	134	--	100
Cl6-BZ#138	226		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl7-BZ#180	ND		ug/kg	134	--	100
Cl7-BZ#170	ND		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

DBOB	74	30-150
BZ 198	71	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-07	Date Collected:	10/20/10 10:39
Client ID:	S-10O-C037-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 17:03	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	357		ug/kg	134	--	100
Cl3-BZ#28	1110		ug/kg	134	--	100
Cl4-BZ#52	1860		ug/kg	134	--	100
Cl4-BZ#44	554		ug/kg	134	--	100
Cl4-BZ#66	486		ug/kg	134	--	100
Cl5-BZ#101	340		ug/kg	134	--	100
Cl6-BZ#153	302		ug/kg	134	--	100
Cl5-BZ#105	ND		ug/kg	134	--	100
Cl7-BZ#187	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	74		30-150
BZ 198	71		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-08	Date Collected:	10/20/10 08:58
Client ID:	S-10O-C038-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 17:44	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1370		ug/kg	134	--	100
Cl5-BZ#118	ND		ug/kg	134	--	100
Cl6-BZ#138	ND		ug/kg	134	--	100
Cl7-BZ#187	ND		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl7-BZ#180	ND		ug/kg	134	--	100
Cl7-BZ#170	ND		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

DBOB	88	30-150
BZ 198	76	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-08	Date Collected:	10/20/10 08:58
Client ID:	S-10O-C038-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 17:44	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1120		ug/kg	134	--	100
Cl3-BZ#28	1850		ug/kg	134	--	100
Cl4-BZ#52	2820	E	ug/kg	134	--	100
Cl4-BZ#44	557		ug/kg	134	--	100
Cl4-BZ#66	508		ug/kg	134	--	100
Cl5-BZ#101	234		ug/kg	134	--	100
Cl6-BZ#153	251		ug/kg	134	--	100
Cl5-BZ#105	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	76		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-08 D	Date Collected:	10/20/10 08:58
Client ID:	S-10O-C038-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 04:03	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	2810		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-09	Date Collected:	10/21/10 10:41
Client ID:	S-10O-C039-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 19:06	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	250		ug/kg	134	--	100
Cl3-BZ#18	1230		ug/kg	134	--	100
Cl4-BZ#52	3120	E	ug/kg	134	--	100
Cl4-BZ#66	1480		ug/kg	134	--	100
Cl5-BZ#118	1020		ug/kg	134	--	100
Cl6-BZ#138	848		ug/kg	134	--	100
Cl7-BZ#180	187		ug/kg	134	--	100
Cl7-BZ#170	152		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	64		30-150
BZ 198	59		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-09	Date Collected:	10/21/10 10:41
Client ID:	S-10O-C039-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 19:06	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1980		ug/kg	134	--	100
Cl4-BZ#44	822		ug/kg	134	--	100
Cl5-BZ#101	899		ug/kg	134	--	100
Cl6-BZ#153	803		ug/kg	134	--	100
Cl5-BZ#105	309		ug/kg	134	--	100
Cl7-BZ#187	188		ug/kg	134	--	100
Cl6-BZ#128	162		ug/kg	134	--	100

DBOB	64	30-150
BZ 198	59	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-09 D	Date Collected:	10/21/10 10:41
Client ID:	S-10O-C039-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 05:25	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	3530		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-10	Date Collected:	10/21/10 09:22
Client ID:	S-10O-C040-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 19:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	676		ug/kg	132	--	100
Cl5-BZ#105	ND		ug/kg	132	--	100
Cl6-BZ#138	ND		ug/kg	132	--	100
Cl7-BZ#187	ND		ug/kg	132	--	100
Cl6-BZ#128	ND		ug/kg	132	--	100
Cl7-BZ#180	ND		ug/kg	132	--	100
Cl7-BZ#170	ND		ug/kg	132	--	100
Cl8-BZ#195	ND		ug/kg	132	--	100
Cl9-BZ#206	ND		ug/kg	132	--	100
Cl10-BZ#209	ND		ug/kg	132	--	100

DBOB	76	30-150
BZ 198	69	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-10	Date Collected:	10/21/10 09:22
Client ID:	S-10O-C040-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 10:22
Analytical Date:	11/18/10 19:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	402		ug/kg	132	--	100
Cl3-BZ#28	823		ug/kg	132	--	100
Cl4-BZ#52	2060		ug/kg	132	--	100
Cl4-BZ#44	357		ug/kg	132	--	100
Cl4-BZ#66	380		ug/kg	132	--	100
Cl5-BZ#101	177		ug/kg	132	--	100
Cl5-BZ#118	ND		ug/kg	132	--	100
Cl6-BZ#153	198		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	69		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-11	Date Collected:	10/21/10 09:32
Client ID:	S-10O-C041-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 20:28	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3020	E	ug/kg	134	--	100
Cl3-BZ#18	6010	E	ug/kg	134	--	100
Cl5-BZ#105	ND		ug/kg	134	--	100
Cl6-BZ#138	585		ug/kg	134	--	100
Cl7-BZ#187	255		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl7-BZ#180	ND		ug/kg	134	--	100
Cl7-BZ#170	ND		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	65		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-11	Date Collected:	10/21/10 09:32
Client ID:	S-10O-C041-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 20:28	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5940	E	ug/kg	134	--	100
Cl4-BZ#52	9490	E	ug/kg	134	--	100
Cl4-BZ#44	2210		ug/kg	134	--	100
Cl4-BZ#66	1920		ug/kg	134	--	100
Cl5-BZ#101	936		ug/kg	134	--	100
Cl5-BZ#118	501		ug/kg	134	--	100
Cl6-BZ#153	1050		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	65		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-11 D	Date Collected:	10/21/10 09:32
Client ID:	S-10O-C041-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 06:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	6570		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-11 D	Date Collected:	10/21/10 09:32
Client ID:	S-10O-C041-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 06:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3040		ug/kg	1340	--	1000
Cl3-BZ#28	5420		ug/kg	1340	--	1000
Cl4-BZ#52	9880		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-12	Date Collected:	10/21/10 09:44
Client ID:	S-10O-C042-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 22:32	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	5170	E	ug/kg	131	--	100
Cl6-BZ#138	443		ug/kg	131	--	100
Cl6-BZ#128	ND		ug/kg	131	--	100
Cl8-BZ#195	ND		ug/kg	131	--	100
Cl9-BZ#206	ND		ug/kg	131	--	100
Cl10-BZ#209	ND		ug/kg	131	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	66		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-12	Date Collected:	10/21/10 09:44
Client ID:	S-10O-C042-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 22:32	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3340	E	ug/kg	131	--	100
Cl3-BZ#28	6360	E	ug/kg	131	--	100
Cl4-BZ#52	8480	E	ug/kg	131	--	100
Cl4-BZ#44	1830		ug/kg	131	--	100
Cl4-BZ#66	1620		ug/kg	131	--	100
Cl5-BZ#101	869		ug/kg	131	--	100
Cl5-BZ#118	585		ug/kg	131	--	100
Cl6-BZ#153	920		ug/kg	131	--	100
Cl5-BZ#105	ND		ug/kg	131	--	100
Cl7-BZ#187	210		ug/kg	131	--	100
Cl7-BZ#180	ND		ug/kg	131	--	100
Cl7-BZ#170	ND		ug/kg	131	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	66		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-12 D	Date Collected:	10/21/10 09:44
Client ID:	S-10O-C042-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 08:50	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	6980		ug/kg	1310	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-12 D	Date Collected:	10/21/10 09:44
Client ID:	S-10O-C042-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 08:50	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3210		ug/kg	1310	--	1000
Cl3-BZ#28	5510		ug/kg	1310	--	1000
Cl4-BZ#52	8460		ug/kg	1310	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-13	Date Collected:	10/21/10 10:27
Client ID:	S-10O-C043-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 23:13	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1750		ug/kg	134	--	100
Cl3-BZ#18	24700	E	ug/kg	134	--	100
Cl4-BZ#52	107000	E	ug/kg	134	--	100
Cl4-BZ#44	1960		ug/kg	134	--	100
Cl5-BZ#118	1180		ug/kg	134	--	100
Cl6-BZ#138	2160		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	131		30-150
BZ 198	120		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-13	Date Collected:	10/21/10 10:27
Client ID:	S-10O-C043-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 23:13	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3430	E	ug/kg	134	--	100
Cl4-BZ#66	5550	E	ug/kg	134	--	100
Cl5-BZ#101	4520	E	ug/kg	134	--	100
Cl6-BZ#153	5760	E	ug/kg	134	--	100
Cl5-BZ#105	304		ug/kg	134	--	100
Cl7-BZ#187	1570		ug/kg	134	--	100
Cl7-BZ#180	164		ug/kg	134	--	100
Cl7-BZ#170	166		ug/kg	134	--	100
Cl9-BZ#206	149		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	131		30-150
BZ 198	120		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-13 D2	Date Collected:	10/21/10 10:27
Client ID:	S-10O-C043-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/19/10 23:04	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	169000		ug/kg	13400	--	10000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-13 D	Date Collected:	10/21/10 10:27
Client ID:	S-10O-C043-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 09:31	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	25800		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-13 D	Date Collected:	10/21/10 10:27
Client ID:	S-10O-C043-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 09:31	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3420		ug/kg	1340	--	1000
Cl4-BZ#66	5280		ug/kg	1340	--	1000
Cl5-BZ#101	4570		ug/kg	1340	--	1000
Cl6-BZ#153	5850		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-14	Date Collected:	10/21/10 09:57
Client ID:	S-10O-C044-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 23:54	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4840	E	ug/kg	132	--	100
Cl6-BZ#138	300		ug/kg	132	--	100
Cl6-BZ#128	ND		ug/kg	132	--	100
Cl7-BZ#170	ND		ug/kg	132	--	100
Cl8-BZ#195	ND		ug/kg	132	--	100
Cl9-BZ#206	ND		ug/kg	132	--	100
Cl10-BZ#209	ND		ug/kg	132	--	100

DBOB	72	30-150
BZ 198	71	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-14	Date Collected:	10/21/10 09:57
Client ID:	S-10O-C044-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 23:54	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3340	E	ug/kg	132	--	100
Cl3-BZ#28	6970	E	ug/kg	132	--	100
Cl4-BZ#52	7590	E	ug/kg	132	--	100
Cl4-BZ#44	1240		ug/kg	132	--	100
Cl4-BZ#66	1050		ug/kg	132	--	100
Cl5-BZ#101	682		ug/kg	132	--	100
Cl5-BZ#118	410		ug/kg	132	--	100
Cl6-BZ#153	638		ug/kg	132	--	100
Cl5-BZ#105	ND		ug/kg	132	--	100
Cl7-BZ#187	142		ug/kg	132	--	100
Cl7-BZ#180	ND		ug/kg	132	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	72		30-150
BZ 198	71		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-14 D	Date Collected:	10/21/10 09:57
Client ID:	S-10O-C044-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 10:12	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	5800		ug/kg	1320	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-14 D	Date Collected:	10/21/10 09:57
Client ID:	S-10O-C044-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 10:12	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3420		ug/kg	1320	--	1000
Cl3-BZ#28	6020		ug/kg	1320	--	1000
Cl4-BZ#52	7620		ug/kg	1320	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-15	Date Collected:	10/21/10 09:11
Client ID:	S-10O-C045-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/19/10 00:35	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	3280	E	ug/kg	134	--	100
Cl4-BZ#66	903		ug/kg	134	--	100
Cl5-BZ#101	805		ug/kg	134	--	100
Cl6-BZ#138	296		ug/kg	134	--	100
Cl7-BZ#187	ND		ug/kg	134	--	100
Cl6-BZ#128	ND		ug/kg	134	--	100
Cl7-BZ#180	ND		ug/kg	134	--	100
Cl7-BZ#170	ND		ug/kg	134	--	100
Cl8-BZ#195	ND		ug/kg	134	--	100
Cl9-BZ#206	ND		ug/kg	134	--	100
Cl10-BZ#209	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	62		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-15	Date Collected:	10/21/10 09:11
Client ID:	S-10O-C045-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/19/10 00:35	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1990		ug/kg	134	--	100
Cl3-BZ#28	3890	E	ug/kg	134	--	100
Cl4-BZ#52	4760	E	ug/kg	134	--	100
Cl4-BZ#44	1230		ug/kg	134	--	100
Cl5-BZ#118	334		ug/kg	134	--	100
Cl6-BZ#153	548		ug/kg	134	--	100
Cl5-BZ#105	ND		ug/kg	134	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	62		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-15 D	Date Collected:	10/21/10 09:11
Client ID:	S-10O-C045-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 10:53	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4470		ug/kg	1340	--	1000
Cl4-BZ#52	4850		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-15 D	Date Collected:	10/21/10 09:11
Client ID:	S-10O-C045-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 10:53	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3590		ug/kg	1340	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-16	Date Collected:	08/18/10 08:20
Client ID:	S-10O-C046-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/19/10 01:16	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	6510	E	ug/kg	137	--	100
Cl6-BZ#138	898		ug/kg	137	--	100
Cl6-BZ#128	ND		ug/kg	137	--	100
Cl8-BZ#195	ND		ug/kg	137	--	100
Cl9-BZ#206	ND		ug/kg	137	--	100
Cl10-BZ#209	ND		ug/kg	137	--	100

DBOB	58	30-150
BZ 198	59	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1017460

Project Number: TO-0010-03 **Report Date:** 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-16	Date Collected:	08/18/10 08:20
Client ID:	S-10O-C046-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/19/10 01:16	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3830	E	ug/kg	137	--	100
Cl3-BZ#28	7930	E	ug/kg	137	--	100
Cl4-BZ#52	12600	E	ug/kg	137	--	100
Cl4-BZ#44	4220	E	ug/kg	137	--	100
Cl4-BZ#66	2980	E	ug/kg	137	--	100
Cl5-BZ#101	1640		ug/kg	137	--	100
Cl5-BZ#118	651		ug/kg	137	--	100
Cl6-BZ#153	1500		ug/kg	137	--	100
Cl5-BZ#105	158		ug/kg	137	--	100
Cl7-BZ#187	409		ug/kg	137	--	100
Cl7-BZ#180	195		ug/kg	137	--	100
Cl7-BZ#170	139		ug/kg	137	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	58		30-150
BZ 198	59		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-16 D	Date Collected:	08/18/10 08:20
Client ID:	S-10O-C046-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 11:34	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	8250		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1017460
Project Number: TO-0010-03
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID:	L1017460-16 D	Date Collected:	08/18/10 08:20
Client ID:	S-10O-C046-0-0.5	Date Received:	10/29/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	11/11/10 16:25
Analytical Date:	11/18/10 11:34	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/16/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4540		ug/kg	1370	--	1000
Cl3-BZ#28	9600		ug/kg	1370	--	1000
Cl4-BZ#52	15200		ug/kg	1370	--	1000
Cl4-BZ#44	4620		ug/kg	1370	--	1000
Cl4-BZ#66	3310		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/17/10 21:12
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 11/11/10 10:22
Cleanup Method1: EPA 3630
Cleanup Date1: 11/16/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-16 Batch: WG442523-1					
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	92		30-150
BZ 198	81		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/17/10 21:12
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 11/11/10 10:22
Cleanup Method1: EPA 3630
Cleanup Date1: 11/16/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-16 Batch: WG442523-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	81		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017460
Report Date: 11/30/10

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): 01-16 QC Batch ID: WG442523-4 WG442523-5 QC Sample: L1017460-11 Client ID: S-10O-C041-0-0.5												
Cl3-BZ#18	6570	1660	7100	**32**	Q	6270	**0**	Q	40-140	12		30
Cl6-BZ#138	585	1660	1580	60		1220	**38**	Q	40-140	26		30
Cl7-BZ#187	255	1660	1300	63		976	43		40-140	28		30
Cl6-BZ#128	ND	1660	1140	69		882	53		40-140	26		30
Cl7-BZ#180	ND	1660	1150	69		874	53		40-140	27		30
Cl7-BZ#170	ND	1660	1130	68		861	52		40-140	27		30
Cl8-BZ#195	ND	1660	1140	69		891	54		40-140	25		30
Cl9-BZ#206	ND	1660	1240	75		940	56		40-140	28		30
Cl10-BZ#209	ND	1660	1120	68		832	50		40-140	30		30
Cl2-BZ#8	3040	1660	4100	64		3350	**19**	Q	40-140	20		30
Cl3-BZ#28	5420	1660	6440	62		5520	**6**	Q	40-140	15		30
Cl4-BZ#52	9880	1660	10800	56		8910	**0**	Q	40-140	19		30
Cl4-BZ#44	2210	1660	3150	57		2540	**20**	Q	40-140	21		30
Cl4-BZ#66	1920	1660	2960	63		2410	**29**	Q	40-140	20		30
Cl5-BZ#101	936	1660	2010	65		1600	**40**		40-140	23		30
Cl5-BZ#118	501	1660	1600	66		1320	49		40-140	19		30
Cl6-BZ#153	1050	1660	2060	61		1640	**35**	Q	40-140	23		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
DBOB	77		58		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

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): 01-16 QC Batch ID: WG442523-4 WG442523-5 QC Sample: L1017460-11 Client ID: S-10O-C041-0-0.5												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	72		54		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-16 Batch: WG442523-2 WG442523-3							
Cl2-BZ#8	80		79		40-140	1		30
Cl3-BZ#18	74		86		40-140	15		30
Cl3-BZ#28	79		92		40-140	15		30
Cl4-BZ#52	82		88		40-140	7		30
Cl4-BZ#44	80		82		40-140	2		30
Cl4-BZ#66	80		84		40-140	5		30
Cl5-BZ#101	83		85		40-140	2		30
Cl5-BZ#118	84		86		40-140	2		30
Cl5-BZ#105	80		81		40-140	1		30
Cl6-BZ#138	85		84		40-140	1		30
Cl7-BZ#187	85		86		40-140	1		30
Cl6-BZ#128	86		85		40-140	1		30
Cl7-BZ#180	87		85		40-140	2		30
Cl7-BZ#170	86		86		40-140	0		30
Cl8-BZ#195	83		88		40-140	6		30
Cl9-BZ#206	95		100		40-140	5		30
Cl10-BZ#209	89		92		40-140	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-16	Batch:	WG442523-2	WG442523-3				

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	88		92		30-150
DBOB	82		93		30-150

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-16	Batch:	WG442523-2	WG442523-3				
Cl6-BZ#153	79		82		40-140	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	88		92		30-150
DBOB	82		93		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-01
Client ID: S-10O-C031-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 09:56
Date Received: 10/29/10
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	96.7		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	38.7		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-02
Client ID: S-10O-C032-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 11:03
Date Received: 10/29/10
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	96.7		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	38.5		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-03
Client ID: S-10O-C033-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 10:09
Date Received: 10/29/10
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	98.2		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	45.5		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-04
Client ID: S-10O-C034-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 10:51
Date Received: 10/29/10
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	96.6		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	37.6		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-05
Client ID: S-10O-C035-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 10:31
Date Received: 10/29/10
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	97.7		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	40.4		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-06
Client ID: S-10O-C036-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 10:19
Date Received: 10/29/10
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	97.2		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	43.6		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-07
Client ID: S-10O-C037-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 10:39
Date Received: 10/29/10
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	97.2		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	38.8		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-08
Client ID: S-10O-C038-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/20/10 08:58
Date Received: 10/29/10
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	98.1		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	55.2		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-09
Client ID: S-10O-C039-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/21/10 10:41
Date Received: 10/29/10
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	97.7		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	40.8		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-10
Client ID: S-10O-C040-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/21/10 09:22
Date Received: 10/29/10
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	99.1		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	72.6		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-11
Client ID: S-10O-C041-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/21/10 09:32
Date Received: 10/29/10
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	98.1		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	51.7		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-12
Client ID: S-10O-C042-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/21/10 09:44
Date Received: 10/29/10
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	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	71.0		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-13
Client ID: S-10O-C043-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/21/10 10:27
Date Received: 10/29/10
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	97.1		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	50.6		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-14
Client ID: S-10O-C044-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/21/10 09:57
Date Received: 10/29/10
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	99.3		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	72.2		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-15
Client ID: S-10O-C045-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/21/10 09:11
Date Received: 10/29/10
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	97.3		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	43.6		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1017460
Report Date: 11/30/10

SAMPLE RESULTS

Lab ID: L1017460-16
Client ID: S-10O-C046-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 08/18/10 08:20
Date Received: 10/29/10
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	95.6		%	0.100	--	1	-	11/10/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	41.2		%	0.100	NA	1	-	11/08/10 14:30	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017460
Report Date: 11/30/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-16 QC Batch ID: WG442282-1 QC Sample: L1017460-01 Client ID: S-10O-C031-0-0.5						
Solids, Total	96.7	96.8	%	0		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1017460
Report Date: 11/30/10

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(*)
L1017460-01A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-02A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-03A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-04A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-05A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-06A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-07A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-08A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-09A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-10A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-11A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-MS/MSD(),A2-TS-PREDRIED(7)
L1017460-11B	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-MS/MSD()
L1017460-12A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-13A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-14A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-15A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1017460-16A	Glass 250ml unpreserved	A	NA	-2	NA	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017460
Project Number:	TO-0010-03	**Report Date:**	11/30/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1017460
Project Number:	TO-0010-03	**Report Date:**	11/30/10

Data Qualifiers

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	**Lab Number:**	L1017460
Project Number:	TO-0010-03	**Report Date:**	11/30/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

L1017460

CHAIN OF CUSTODY

PAGE 4 OF 5

Date Rec'd in Lab:

ALPHA Job #: L1017460

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Project Information

Project Name: NBH Environmental Monitoring

Project Location: New Bedford, MA

Project #: TO-0010-03

Project Manager: Dave Walsh

ALPHA Quote #:

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Drive
SE. Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information

☐ FAX ☒ ADEx

Data Deliverables

☒ EMAIL ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

ANALYSIS

PCB congeners - NOAA 18

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 Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
L1017460								
-1 31	S-10O-C031-0-0.5	10/20/10	09:56	SED	KGM	☒	GN32	1
-2 32	S-10O-C032-0-0.5	10/20/10	11:03	SED	KGM	☒	GM37	1
-3 30	S-10O-C033-0-0.5	10/20/10	10:09	SED	KGM	☒	GS29	1
-4 34	S-10O-C034-0-0.5	10/20/10	10:51	SED	KGM	☒	GR35	1
-5 35	S-10O-C035-0-0.5	10/20/10	10:31	SED	KGM	☒	GV32	1
-6 36	S-10O-C036-0-0.5	10/20/10	10:19	SED	KGM	☒	GY29	1
-7 37	S-10O-C037-0-0.5	10/20/10	10:39	SED	KGM	☒	GW36	1
-8 38	S-10O-C038-0-0.5	10/20/10	08:58	SED	KGM	☒	MB3	1
-9 39	S-10O-C039-0-0.5	10/21/10	10:41	SED	KGM	☒	MA4	1
-10 40	S-10O-C040-0-0.5	10/21/10	09:22	SED	KGM	☒	MB5	1
					Container Type	A		
					Preservative	A		

Relinquished By:	Date/Time	Received By:	Date/Time
	10/25/10 16:00		10/26/10 18:[illegible]

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Serial_No:20101515:58

L1017460

CHAIN OF CUSTODY

PAGE 5 OF 5

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: ~~L1017218~~ [illegible]

Project Information

Project Name: NBH Environmental Monitoring

Project Location: New Bedford, MA

Project #: TO-0010-03

Project Manager: Dave Walsh

ALPHA Quote #:

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Drive

E. Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information

☐ FAX

☒ ADEx

Data Deliverables

☒ EMAIL

☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:

Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
-11 41	S-10O-C041-0-0.5	10/21/10	09:32	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA7	1
-12 42	S-10O-C042-0-0.5	10/21/10	09:44	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MB8	1
-13 43	S-10O-C043-0-0.5	10/21/10	10:27	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA9	1
14 44	S-10O-C044-0-0.5	10/21/10	09:57	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MB11	1
15 45	S-10O-C045-0-0.5	10/21/10	09:11	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	ME7	1
-16 46	S-10O-C046-0-0.5	08/18/10	08:20	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	JL24	1
-14	S-10O-C014-0-0.5MSMSD	10/19/10	09:47	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	KKK9	1
-26	S-10O-C026-0-0.5MSMSD	10/20/10	09:36	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	GD30	1
-11 41	S-10O-C041-0-0.5MSMSD	10/21/10	09:32	SED	KGM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	MA7	1
[illegible]						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		0
					Container Type	A	-	-	-	-	-	-	-	-	-	-	-		
					Preservative	A	-	-	-	-	-	-	-	-	-	-	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/29/10 18:00	[signature]	10/29/10 18:00

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

FORM NO: 01-01(I-NJ)
(rev. 29-APR-09)

Serial No: 2010-15:58

ALPHA ANALYTICAL

L1017460 Sample Delivery Group Form

Laboratory Job No: ~~L1017218~~ Tm Client: WHG

Receipt Date/Time: 10/29/10 16:00 SDG Reviewer:

Samples Delivered By:

[ ] Alpha Courier [X] Client [ ] UPS [ ] FedEx [ ] Other

Bill of Laden: [ ]Yes [ ] Unavailable Tracking #:

Chain of Custody: [X] Present [ ] Absent:

Custody Seals: [X] Absent [ ] Present/Intact [ ] Present/Broken

Cooler/Sample Temperature:

Is Ice/Blue Ice present? [ ] Yes [X] No [ ] N/A

Temp taken from: Temp Blank:(a) (b) (c) (d) (e)

IR Gun: (a) -2°C (b) -3°C (c) 0°C (d) -1°C (e)

IR Gun SN: 4006201

Was Temp: [ ] 2-6 Celsius

[X] <2 Celsius ... were samples frozen upon receipt? [X] Yes [ ] No

[ ] >6 Celsius ... were samples delivered direct from site? [ ] Yes [ ] No

Containers Received: [ ] Intact

[ ] Broken/Leaking Sample IDs:

Sample IDs:

All Containers Accounted For? [ ] Yes

[ ] No:

Extra Samples Received? [ ] No

[ ] Yes:

Do Sample Labels and COC agree? [ ] Yes

[ ] No:

Are Samples in Appropriate Containers? [ ] Yes

[ ] No:

Are samples rec'd within holding time? [ ] Yes

[ ] No:

* Please note: the analysis of pH will always be performed beyond the regulatory-required holding time of 15 min. from the time of collection

pH of samples upon receipt: [ ] N/A [ ] <2 [ ] >12 and/or [ ]

Are samples properly preserved? [ ] Yes [ ] No If No then.....

Initial pH= preserved In-House with [ ] HCL [ ] H_2SO_4 [ ] HNO_3 [ ] NAOH <<Final pH = >>

Other Issues:

Chlorine Check: [ ] N/A [ ] Present [ ] Absent

VOA/VPH vials: [ ] Yes [ ] No Preserved? [ ] Yes [ ] No If yes: [ ] HCL, [ ]

Aqueous: vials contain head space? [ ] No [ ] Yes :

Soils: MeOH covering soil? [ ] Yes [ ] No :

Reagent H_2O Preserved vials Frozen @ date/time:

Frozen by Client? [ ] No [ ] Yes @ date/time:

Was Client notified of any discrepancies listed above? [ ] Yes [ ] No [ ] N/A

If Yes: Call Tracker #

Form No.: 01-02 08/11/2010

ANALYTICAL REPORT

Lab Number:	L1018124
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NBH ENVIRONMENTAL MONITORING
Project Number:	TO-0010-03
Report Date:	12/08/10

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 NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

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

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018124
Report Date: 12/08/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1018124-01	S-10N-C001-0-1.0	NEW BEDFORD, MA	11/03/10 13:43
L1018124-02	S-10N-C012-0-1.0	NEW BEDFORD, MA	11/03/10 14:51
L1018124-03	S-10N-C012-1.0-2.0	NEW BEDFORD, MA	11/03/10 14:51
L1018124-04	S-10N-C013-0-1.0	NEW BEDFORD, MA	11/03/10 10:48
L1018124-05	S-10N-C013-1.0-2.0	NEW BEDFORD, MA	11/03/10 10:48
L1018124-06	S-10N-C014-0-1.0	NEW BEDFORD, MA	11/03/10 11:05
L1018124-07	S-10N-C014-1.0-2.0	NEW BEDFORD, MA	11/03/10 11:05
L1018124-08	S-10N-C015-0-1.0	NEW BEDFORD, MA	11/03/10 09:56
L1018124-09	S-10N-C015-1.0-2.0	NEW BEDFORD, MA	11/03/10 09:56
L1018124-10	S-10N-C016-0-1.0	NEW BEDFORD, MA	11/03/10 10:21
L1018124-11	S-10N-C016-1.0-2.0	NEW BEDFORD, MA	11/03/10 10:21

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018124
Project Number:	TO-0010-03	**Report Date:**	12/08/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on November 05, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until they were removed November 19, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018124
Project Number:	TO-0010-03	**Report Date:**	12/08/10

Case Narrative (continued)

whether it was the higher or lower value.

The majority of samples were analyzed at the dilution required by the elevated concentrations of target compounds in the sample.

L1018124-01, 04, 06, 08, 10 were re-analyzed on further dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compounds that exceeded the calibration range.

The WG444040-4 MS recoveries, performed on L1018124-01, are outside the acceptance criteria for Cl5-BZ#138 (39%), Cl5-BZ#101 (37%) and Cl6-BZ#153 (39%); however, the associated LCS recoveries are within criteria. No further action was required.

The WG444040-2/3 LCS/LCSD RPD(s), associated with L1018124, are above the acceptance criteria for Cl4-BZ#52 (44%); however, the individual LCS/LCSD recoveries are within method 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: 12/08/10

ORGANICS

PCBS

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-01	Date Collected:	11/03/10 13:43
Client ID:	S-10N-C001-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 15:55	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	157		ug/kg	16.6	--	10
Cl3-BZ#18	259		ug/kg	16.6	--	10
Cl4-BZ#52	630	E	ug/kg	16.6	--	10
Cl4-BZ#44	400	E	ug/kg	16.6	--	10
Cl4-BZ#66	763	E	ug/kg	16.6	--	10
Cl5-BZ#118	406	E	ug/kg	16.6	--	10
Cl6-BZ#138	184		ug/kg	16.6	--	10
Cl6-BZ#128	46.7		ug/kg	16.6	--	10
Cl7-BZ#180	36.0		ug/kg	16.6	--	10
Cl7-BZ#170	24.0		ug/kg	16.6	--	10
Cl8-BZ#195	ND		ug/kg	16.6	--	10
Cl9-BZ#206	ND		ug/kg	16.6	--	10
Cl10-BZ#209	ND		ug/kg	16.6	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-01	Date Collected:	11/03/10 13:43
Client ID:	S-10N-C001-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 15:55	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	716	E	ug/kg	16.6	--	10
Cl5-BZ#101	317		ug/kg	16.6	--	10
Cl6-BZ#153	156		ug/kg	16.6	--	10
Cl5-BZ#105	104		ug/kg	16.6	--	10
Cl7-BZ#187	29.2		ug/kg	16.6	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-01 D	Date Collected:	11/03/10 13:43
Client ID:	S-10N-C001-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 13:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#66	698		ug/kg	166	--	100
Cl5-BZ#118	371		ug/kg	166	--	100

DBOB	76	30-150
BZ 198	65	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-01 D	Date Collected:	11/03/10 13:43
Client ID:	S-10N-C001-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 13:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	800		ug/kg	166	--	100
Cl4-BZ#52	608		ug/kg	166	--	100
Cl4-BZ#44	435		ug/kg	166	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	65		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-02	Date Collected:	11/03/10 14:51
Client ID:	S-10N-C012-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 17:58	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	210		ug/kg	33.1	--	20
Cl3-BZ#28	425		ug/kg	33.1	--	20
Cl6-BZ#138	151		ug/kg	33.1	--	20
Cl6-BZ#128	40.8		ug/kg	33.1	--	20
Cl8-BZ#195	ND		ug/kg	33.1	--	20
Cl9-BZ#206	ND		ug/kg	33.1	--	20
Cl10-BZ#209	ND		ug/kg	33.1	--	20

DBOB	66	30-150
BZ 198	56	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-02	Date Collected:	11/03/10 14:51
Client ID:	S-10N-C012-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 17:58	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	101		ug/kg	33.1	--	20
Cl4-BZ#52	562		ug/kg	33.1	--	20
Cl4-BZ#44	278		ug/kg	33.1	--	20
Cl4-BZ#66	372		ug/kg	33.1	--	20
Cl5-BZ#101	301		ug/kg	33.1	--	20
Cl5-BZ#118	274		ug/kg	33.1	--	20
Cl6-BZ#153	203		ug/kg	33.1	--	20
Cl5-BZ#105	79.1		ug/kg	33.1	--	20
Cl7-BZ#187	39.2		ug/kg	33.1	--	20
Cl7-BZ#180	38.8		ug/kg	33.1	--	20
Cl7-BZ#170	ND		ug/kg	33.1	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	66		30-150
BZ 198	56		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-03	Date Collected:	11/03/10 14:51
Client ID:	S-10N-C012-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 20:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.68	--	1
Cl3-BZ#18	ND		ug/kg	1.68	--	1
Cl4-BZ#44	ND		ug/kg	1.68	--	1
Cl4-BZ#66	ND		ug/kg	1.68	--	1
Cl5-BZ#118	ND		ug/kg	1.68	--	1
Cl5-BZ#105	ND		ug/kg	1.68	--	1
Cl6-BZ#138	ND		ug/kg	1.68	--	1
Cl7-BZ#187	ND		ug/kg	1.68	--	1
Cl6-BZ#128	ND		ug/kg	1.68	--	1
Cl7-BZ#180	ND		ug/kg	1.68	--	1
Cl7-BZ#170	ND		ug/kg	1.68	--	1
Cl8-BZ#195	ND		ug/kg	1.68	--	1
Cl9-BZ#206	ND		ug/kg	1.68	--	1
Cl10-BZ#209	ND		ug/kg	1.68	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	91		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-03	Date Collected:	11/03/10 14:51
Client ID:	S-10N-C012-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 20:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/kg	1.68	--	1
Cl4-BZ#52	ND		ug/kg	1.68	--	1
Cl5-BZ#101	ND		ug/kg	1.68	--	1
Cl6-BZ#153	ND		ug/kg	1.68	--	1

DBOB	79	30-150
BZ 198	91	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-04	Date Collected:	11/03/10 10:48
Client ID:	S-10N-C013-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 17:48	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3140		ug/kg	166	--	100
Cl3-BZ#18	5250	E	ug/kg	166	--	100
Cl4-BZ#66	4100	E	ug/kg	166	--	100
Cl5-BZ#118	1700		ug/kg	166	--	100
Cl6-BZ#138	1180		ug/kg	166	--	100
Cl6-BZ#128	278		ug/kg	166	--	100
Cl8-BZ#195	ND		ug/kg	166	--	100
Cl9-BZ#206	ND		ug/kg	166	--	100
Cl10-BZ#209	ND		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-04	Date Collected:	11/03/10 10:48
Client ID:	S-10N-C013-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 17:48	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	8880	E	ug/kg	166	--	100
Cl4-BZ#52	7530	E	ug/kg	166	--	100
Cl4-BZ#44	4650	E	ug/kg	166	--	100
Cl5-BZ#101	2000		ug/kg	166	--	100
Cl6-BZ#153	1320		ug/kg	166	--	100
Cl5-BZ#105	574		ug/kg	166	--	100
Cl7-BZ#187	287		ug/kg	166	--	100
Cl7-BZ#180	299		ug/kg	166	--	100
Cl7-BZ#170	224		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-04 D	Date Collected:	11/03/10 10:48
Client ID:	S-10N-C013-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	11/29/10 20:42	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	9200		ug/kg	1660	--	1000
Cl4-BZ#52	10700		ug/kg	1660	--	1000
Cl4-BZ#66	5780		ug/kg	1660	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	84		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-04 D	Date Collected:	11/03/10 10:48
Client ID:	S-10N-C013-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	11/29/10 20:42	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	9950		ug/kg	1660	--	1000
Cl4-BZ#44	6310		ug/kg	1660	--	1000

DBOB	80	30-150
BZ 198	84	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-05	Date Collected:	11/03/10 10:48
Client ID:	S-10N-C013-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 20:42	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4.37		ug/kg	1.65	--	1
Cl4-BZ#66	3.28		ug/kg	1.65	--	1
Cl5-BZ#118	ND		ug/kg	1.65	--	1
Cl5-BZ#105	ND		ug/kg	1.65	--	1
Cl6-BZ#138	ND		ug/kg	1.65	--	1
Cl7-BZ#187	ND		ug/kg	1.65	--	1
Cl6-BZ#128	ND		ug/kg	1.65	--	1
Cl7-BZ#180	ND		ug/kg	1.65	--	1
Cl7-BZ#170	ND		ug/kg	1.65	--	1
Cl8-BZ#195	ND		ug/kg	1.65	--	1
Cl9-BZ#206	ND		ug/kg	1.65	--	1
Cl10-BZ#209	ND		ug/kg	1.65	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	87		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-05	Date Collected:	11/03/10 10:48
Client ID:	S-10N-C013-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 20:42	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2.81		ug/kg	1.65	--	1
Cl3-BZ#28	5.49		ug/kg	1.65	--	1
Cl4-BZ#52	5.35		ug/kg	1.65	--	1
Cl4-BZ#44	3.12		ug/kg	1.65	--	1
Cl5-BZ#101	ND		ug/kg	1.65	--	1
Cl6-BZ#153	ND		ug/kg	1.65	--	1

DBOB	70	30-150
BZ 198	87	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-06	Date Collected:	11/03/10 11:05
Client ID:	S-10N-C014-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 18:39	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	107		ug/kg	16.8	--	10
Cl3-BZ#18	223		ug/kg	16.8	--	10
Cl4-BZ#52	769	E	ug/kg	16.8	--	10
Cl4-BZ#44	327		ug/kg	16.8	--	10
Cl4-BZ#66	539	E	ug/kg	16.8	--	10
Cl5-BZ#118	461	E	ug/kg	16.8	--	10
Cl6-BZ#138	306		ug/kg	16.8	--	10
Cl6-BZ#128	75.3		ug/kg	16.8	--	10
Cl7-BZ#180	62.5		ug/kg	16.8	--	10
Cl8-BZ#195	ND		ug/kg	16.8	--	10
Cl9-BZ#206	ND		ug/kg	16.8	--	10
Cl10-BZ#209	ND		ug/kg	16.8	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-06	Date Collected:	11/03/10 11:05
Client ID:	S-10N-C014-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 18:39	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	434	E	ug/kg	16.8	--	10
Cl5-BZ#101	416	E	ug/kg	16.8	--	10
Cl6-BZ#153	289		ug/kg	16.8	--	10
Cl5-BZ#105	97.8		ug/kg	16.8	--	10
Cl7-BZ#187	49.7		ug/kg	16.8	--	10
Cl7-BZ#170	49.3		ug/kg	16.8	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-06 D	Date Collected:	11/03/10 11:05
Client ID:	S-10N-C014-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 18:29	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	970		ug/kg	168	--	100
Cl4-BZ#52	1370		ug/kg	168	--	100
Cl4-BZ#66	878		ug/kg	168	--	100
Cl5-BZ#101	883		ug/kg	168	--	100
Cl5-BZ#118	744		ug/kg	168	--	100
Cl6-BZ#153	595		ug/kg	168	--	100

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

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-07	Date Collected:	11/03/10 11:05
Client ID:	S-10N-C014-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 21:23	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.67	--	1
Cl4-BZ#52	ND		ug/kg	1.67	--	1
Cl4-BZ#44	ND		ug/kg	1.67	--	1
Cl4-BZ#66	ND		ug/kg	1.67	--	1
Cl5-BZ#101	ND		ug/kg	1.67	--	1
Cl5-BZ#118	ND		ug/kg	1.67	--	1
Cl5-BZ#105	ND		ug/kg	1.67	--	1
Cl6-BZ#138	ND		ug/kg	1.67	--	1
Cl7-BZ#187	ND		ug/kg	1.67	--	1
Cl6-BZ#128	ND		ug/kg	1.67	--	1
Cl7-BZ#180	ND		ug/kg	1.67	--	1
Cl7-BZ#170	ND		ug/kg	1.67	--	1
Cl8-BZ#195	ND		ug/kg	1.67	--	1
Cl9-BZ#206	ND		ug/kg	1.67	--	1
Cl10-BZ#209	ND		ug/kg	1.67	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	60		30-150
BZ 198	78		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-07	Date Collected:	11/03/10 11:05
Client ID:	S-10N-C014-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 21:23	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	ND		ug/kg	1.67	--	1
Cl3-BZ#28	ND		ug/kg	1.67	--	1
Cl6-BZ#153	ND		ug/kg	1.67	--	1

DBOB	60	30-150
BZ 198	78	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-08	Date Collected:	11/03/10 09:56
Client ID:	S-10N-C015-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 17:07	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2830		ug/kg	167	--	100
Cl3-BZ#18	4280	E	ug/kg	167	--	100
Cl4-BZ#52	7270	E	ug/kg	167	--	100
Cl4-BZ#44	3660	E	ug/kg	167	--	100
Cl4-BZ#66	5820	E	ug/kg	167	--	100
Cl5-BZ#118	2120		ug/kg	167	--	100
Cl6-BZ#138	1330		ug/kg	167	--	100
Cl6-BZ#128	320		ug/kg	167	--	100
Cl7-BZ#180	297		ug/kg	167	--	100
Cl7-BZ#170	217		ug/kg	167	--	100
Cl8-BZ#195	ND		ug/kg	167	--	100
Cl9-BZ#206	ND		ug/kg	167	--	100
Cl10-BZ#209	ND		ug/kg	167	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-08	Date Collected:	11/03/10 09:56
Client ID:	S-10N-C015-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 17:07	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6540	E	ug/kg	167	--	100
Cl5-BZ#101	2020		ug/kg	167	--	100
Cl6-BZ#153	1070		ug/kg	167	--	100
Cl5-BZ#105	800		ug/kg	167	--	100
Cl7-BZ#187	275		ug/kg	167	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-08 D	Date Collected:	11/03/10 09:56
Client ID:	S-10N-C015-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 16:26	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	5230		ug/kg	833	--	500
Cl4-BZ#52	7660		ug/kg	833	--	500
Cl4-BZ#66	5920		ug/kg	833	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	75		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-08 D	Date Collected:	11/03/10 09:56
Client ID:	S-10N-C015-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 16:26	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	7600		ug/kg	833	--	500
Cl4-BZ#44	4100		ug/kg	833	--	500

DBOB	86	30-150
BZ 198	75	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-09	Date Collected:	11/03/10 09:56
Client ID:	S-10N-C015-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 22:45	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	13.3		ug/kg	1.67	--	1
Cl4-BZ#66	16.8		ug/kg	1.67	--	1
Cl5-BZ#101	9.14		ug/kg	1.67	--	1
Cl5-BZ#105	2.04		ug/kg	1.67	--	1
Cl6-BZ#138	3.12		ug/kg	1.67	--	1
Cl6-BZ#128	ND		ug/kg	1.67	--	1
Cl7-BZ#170	ND		ug/kg	1.67	--	1
Cl8-BZ#195	ND		ug/kg	1.67	--	1
Cl9-BZ#206	ND		ug/kg	1.67	--	1
Cl10-BZ#209	ND		ug/kg	1.67	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	64		30-150
BZ 198	71		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-09	Date Collected:	11/03/10 09:56
Client ID:	S-10N-C015-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 22:45	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7.01		ug/kg	1.67	--	1
Cl3-BZ#28	20.2		ug/kg	1.67	--	1
Cl4-BZ#52	17.8		ug/kg	1.67	--	1
Cl4-BZ#44	9.77		ug/kg	1.67	--	1
Cl5-BZ#118	5.17		ug/kg	1.67	--	1
Cl6-BZ#153	3.14		ug/kg	1.67	--	1
Cl7-BZ#187	ND		ug/kg	1.67	--	1
Cl7-BZ#180	ND		ug/kg	1.67	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	64		30-150
BZ 198	71		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-10	Date Collected:	11/03/10 10:21
Client ID:	S-10N-C016-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 19:20	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	210		ug/kg	16.6	--	10
Cl3-BZ#28	1230	E	ug/kg	16.6	--	10
Cl4-BZ#52	1060	E	ug/kg	16.6	--	10
Cl4-BZ#44	539	E	ug/kg	16.6	--	10
Cl4-BZ#66	911	E	ug/kg	16.6	--	10
Cl5-BZ#118	665	E	ug/kg	16.6	--	10
Cl6-BZ#138	409	E	ug/kg	16.6	--	10
Cl7-BZ#187	67.3		ug/kg	16.6	--	10
Cl6-BZ#128	102		ug/kg	16.6	--	10
Cl7-BZ#180	113		ug/kg	16.6	--	10
Cl7-BZ#170	62.8		ug/kg	16.6	--	10
Cl8-BZ#195	ND		ug/kg	16.6	--	10
Cl9-BZ#206	19.8		ug/kg	16.6	--	10
Cl10-BZ#209	ND		ug/kg	16.6	--	10

Project Name: NBH ENVIRONMENTAL MONITORING
Lab Number: L1018124
Project Number: TO-0010-03
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-10	Date Collected:	11/03/10 10:21
Client ID:	S-10N-C016-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/03/10 19:20	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	552	E	ug/kg	16.6	--	10
Cl5-BZ#101	478	E	ug/kg	16.6	--	10
Cl6-BZ#153	314	E	ug/kg	16.6	--	10
Cl5-BZ#105	123		ug/kg	16.6	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-10 D	Date Collected:	11/03/10 10:21
Client ID:	S-10N-C016-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 19:10	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	570		ug/kg	166	--	100
Cl6-BZ#138	458		ug/kg	166	--	100

DBOB	68	30-150
BZ 198	62	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-10 D	Date Collected:	11/03/10 10:21
Client ID:	S-10N-C016-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:19
Analytical Date:	12/02/10 19:10	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1440		ug/kg	166	--	100
Cl4-BZ#52	1450		ug/kg	166	--	100
Cl4-BZ#44	822		ug/kg	166	--	100
Cl4-BZ#66	1140		ug/kg	166	--	100
Cl5-BZ#101	955		ug/kg	166	--	100
Cl5-BZ#118	833		ug/kg	166	--	100
Cl6-BZ#153	613		ug/kg	166	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	68		30-150
BZ 198	62		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-11	Date Collected:	11/03/10 10:21
Client ID:	S-10N-C016-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/03/10 22:04	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1.67		ug/kg	1.66	--	1
Cl4-BZ#44	ND		ug/kg	1.66	--	1
Cl4-BZ#66	ND		ug/kg	1.66	--	1
Cl5-BZ#101	ND		ug/kg	1.66	--	1
Cl5-BZ#118	ND		ug/kg	1.66	--	1
Cl5-BZ#105	ND		ug/kg	1.66	--	1
Cl6-BZ#138	ND		ug/kg	1.66	--	1
Cl7-BZ#187	ND		ug/kg	1.66	--	1
Cl6-BZ#128	ND		ug/kg	1.66	--	1
Cl7-BZ#180	ND		ug/kg	1.66	--	1
Cl7-BZ#170	ND		ug/kg	1.66	--	1
Cl8-BZ#195	ND		ug/kg	1.66	--	1
Cl9-BZ#206	ND		ug/kg	1.66	--	1
Cl10-BZ#209	ND		ug/kg	1.66	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	81		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

SAMPLE RESULTS

Lab ID:	L1018124-11	Date Collected:	11/03/10 10:21
Client ID:	S-10N-C016-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/03/10 22:04	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.66	--	1
Cl3-BZ#28	1.94		ug/kg	1.66	--	1
Cl4-BZ#52	2.65		ug/kg	1.66	--	1
Cl6-BZ#153	ND		ug/kg	1.66	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	81		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/29/10 14:55
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 11/19/10 16:19
Cleanup Method1: EPA 3630
Cleanup Date1: 11/23/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-11 Batch: WG444040-1					
Cl2-BZ#8	ND		ug/kg	1.67	--
Cl3-BZ#18	ND		ug/kg	1.67	--
Cl3-BZ#28	ND		ug/kg	1.67	--
Cl4-BZ#52	ND		ug/kg	1.67	--
Cl4-BZ#44	ND		ug/kg	1.67	--
Cl4-BZ#66	ND		ug/kg	1.67	--
Cl5-BZ#101	ND		ug/kg	1.67	--
Cl5-BZ#118	ND		ug/kg	1.67	--
Cl5-BZ#105	ND		ug/kg	1.67	--
Cl6-BZ#138	ND		ug/kg	1.67	--
Cl7-BZ#187	ND		ug/kg	1.67	--
Cl6-BZ#128	ND		ug/kg	1.67	--
Cl7-BZ#180	ND		ug/kg	1.67	--
Cl7-BZ#170	ND		ug/kg	1.67	--
Cl8-BZ#195	ND		ug/kg	1.67	--
Cl9-BZ#206	ND		ug/kg	1.67	--
Cl10-BZ#209	ND		ug/kg	1.67	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	88		30-150

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/29/10 14:55
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 11/19/10 16:19
Cleanup Method1: EPA 3630
Cleanup Date1: 11/23/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-11 Batch: WG444040-1					
Cl6-BZ#153	ND		ug/kg	1.67	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	88		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018124
Report Date: 12/08/10

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): 01-11 QC Batch ID: WG444040-4 WG444040-5 QC Sample: L1018124-01 Client ID: S-10N-C001-0-1.0												
Cl2-BZ#8	157	1660	848	42		944	48		40-140	11		30
Cl3-BZ#18	259	1660	1130	53		1330	65		40-140	16		30
Cl4-BZ#66	698	1660	1670	59		1880	71		40-140	12		30
Cl5-BZ#118	371	1660	1400	62		1500	68		40-140	7		30
Cl6-BZ#138	184	1660	829	**39**	Q	978	48		40-140	16		30
Cl6-BZ#128	46.7	1660	751	43		865	49		40-140	14		30
Cl7-BZ#180	36.0	1660	724	42		831	48		40-140	14		30
Cl7-BZ#170	24.0	1660	720	42		830	49		40-140	14		30
Cl8-BZ#195	ND	1660	722	44		834	50		40-140	14		30
Cl9-BZ#206	ND	1660	776	47		901	54		40-140	15		30
Cl10-BZ#209	ND	1660	689	42		801	48		40-140	15		30
Cl3-BZ#28	800	1660	1870	65		2090	78		40-140	11		30
Cl4-BZ#52	608	1660	1610	60		1740	68		40-140	8		30
Cl4-BZ#44	435	1660	1420	59		1520	65		40-140	7		30
Cl5-BZ#101	317	1660	926	**37**	Q	1050	44		40-140	13		30
Cl6-BZ#153	156	1660	796	**39**	Q	864	43		40-140	8		30
Cl5-BZ#105	104	1660	908	49		976	53		40-140	7		30
Cl7-BZ#187	29.2	1660	769	45		789	46		40-140	3		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018124
Report Date: 12/08/10

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): 01-11 QC Batch ID: WG444040-4 WG444040-5 QC Sample: L1018124-01 Client ID: S-10N-C001-0-1.0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	69		64		30-150
DBOB	65		66		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018124

Project Number: TO-0010-03 **Report Date:** 12/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-11 Batch: WG444040-2 WG444040-3							
Cl2-BZ#8	64		57		40-140	12		30
Cl3-BZ#18	78		62		40-140	23		30
Cl3-BZ#28	74		68		40-140	8		30
Cl4-BZ#52	106		68		40-140	**44**	Q	30
Cl4-BZ#44	74		68		40-140	8		30
Cl4-BZ#66	77		72		40-140	7		30
Cl5-BZ#101	80		76		40-140	5		30
Cl5-BZ#118	82		77		40-140	6		30
Cl5-BZ#105	75		71		40-140	5		30
Cl6-BZ#138	79		76		40-140	4		30
Cl7-BZ#187	77		78		40-140	1		30
Cl6-BZ#128	80		78		40-140	3		30
Cl7-BZ#180	88		78		40-140	12		30
Cl7-BZ#170	81		76		40-140	6		30
Cl8-BZ#195	81		79		40-140	3		30
Cl9-BZ#206	98		96		40-140	2		30
Cl10-BZ#209	86		83		40-140	4		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-11		Batch: WG444040-2		WG444040-3			
DBOB	76		68		30-150			
BZ 198	86		82		30-150			

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-11		Batch: WG444040-2		WG444040-3		
Cl6-BZ#153	78		72		40-140	8	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	76		68		30-150
BZ 198	86		82		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-01
Client ID: S-10N-C001-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 13:43
Date Received: 11/05/10
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	99.1		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	79.1		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-02
Client ID: S-10N-C012-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 14:51
Date Received: 11/05/10
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	98.9		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	59.5		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-03
Client ID: S-10N-C012-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 14:51
Date Received: 11/05/10
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	98.1		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	48.6		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-04
Client ID: S-10N-C013-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 10:48
Date Received: 11/05/10
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	98.0		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	59.1		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-05
Client ID: S-10N-C013-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 10:48
Date Received: 11/05/10
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	98.8		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	62.4		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-06
Client ID: S-10N-C014-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 11:05
Date Received: 11/05/10
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	98.2		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	44.1		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-07
Client ID: S-10N-C014-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 11:05
Date Received: 11/05/10
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	98.7		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	56.4		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-08
Client ID: S-10N-C015-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 09:56
Date Received: 11/05/10
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	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	50.0		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-09
Client ID: S-10N-C015-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 09:56
Date Received: 11/05/10
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	98.6		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	52.0		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-10
Client ID: S-10N-C016-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 10:21
Date Received: 11/05/10
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	98.6		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	50.7		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018124
Report Date: 12/08/10

SAMPLE RESULTS

Lab ID: L1018124-11
Client ID: S-10N-C016-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 10:21
Date Received: 11/05/10
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	98.2		%	0.100	--	1	-	11/19/10 10:10	30,2540G	KB
Solids, Total (Pre-Dried)	46.9		%	0.100	NA	1	-	11/17/10 14:05	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018124
Report Date: 12/08/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG443522-1 QC Sample: L1018124-01 Client ID: S-10N-C001-0-1.0						
Solids, Total (Pre-Dried)	79.1	78.7	%	1		20
General Chemistry - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG443985-1 QC Sample: L1018124-01 Client ID: S-10N-C001-0-1.0						
Solids, Total	99.1	99.2	%	0		20

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018124
Report Date: 12/08/10

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
ABCD	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018124-01A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-01B	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-02A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-03A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-04A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-05A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-06A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-07A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-08A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-09A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-10A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018124-11A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018124
Project Number:	TO-0010-03	**Report Date:**	12/08/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018124
Project Number:	TO-0010-03	**Report Date:**	12/08/10

Data Qualifiers

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:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018124
Project Number:	TO-0010-03	**Report Date:**	12/08/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial_No:12081015:58

CHAIN OF CUSTODY

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018124

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

☐ These samples have been Previously analyzed by Alpha

Due Date: Time:

Report Information — ☐ FAX ☒ ADEx

Data Deliverables — ☒ EMAIL ☐ Add'l Deliverables

Billing Information — ☒ Same as Client Info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
	S-10O-C077-0-1.0	10/28/10	10:09	SED	DR	☒	BH-K4	1
	S-10O-C077-1.0-2.0	10/28/10	10:09	SED	DR	☒	BH-K4	1
	S-10O-C078-0-1.0	10/28/10	10:25	SED	DR	☒	BH-L4	1
	S-10O-C078-1.0-2.0	10/28/10	10:25	SED	DR	☒	BH-L4	1
	S-10O-C079-0-1.0	10/28/10	10:38	SED	DR	☒	BH-M3	1
	S-10O-C079-1.0-2.0	10/28/10	10:38	SED	DR	☒	BH-M3	1
	S-10O-C080-0-1.0	10/28/10	10:52	SED	DR	☒	BH-N3	1
	S-10O-C080-1.0-2.0	10/28/10	10:52	SED	DR	☒	BH-N3	1
18124.1	S-10N-C001-0-1.0	11/03/10	13:43	SED	KGM	☒	BH-C2	1
	S-10N-C001-1.0-2.0	11/03/10	13:43	SED	KGM	☒	BH-C2	1
					Container Type	A		
					Preservative	A		

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-462
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12081015:58

CHAIN OF CUSTODY

PAGE 11 OF 11

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018124

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client Info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
	S-10N-C017-0-1.0	11/03/10	09:12	SED	KGM	☒	BH-M2	1
	S-10N-C017-1.0-2.0	11/03/10	09:12	SED	KGM	☒	BH-M2	1
	S-10O-C072-1.0-2.0MSMSD	10/28/10	09:09	SED	MW	☒	MS/MSD	1
	S-10O-C076-0-1.0MSMSD	10/28/10	10:00	SED	DR	☒	MS/MSD	1
	S-10O-C079-1.0-2.0MSMSD	10/28/10	10:38	SED	DR	☒	MS/MSD	1
L1018124	S-10N-C001-0-1.0MSMSD	11/03/10	13:43	SED	KGM	☒	MS/MSD	1
	S-10O-C070-0-1.0MS/MSD	10/27/10	15:18	SED	DB	☐	CSO MS/MSD	1
	S-10O-C071-0-1.0MS/MSD	10/29/10	0833	SED	MW	☐	MS/MSD	1
						☐		
						☐		

SAMPLE HANDLING

Filtration
☐ Done
☒ Not Needed
☐ Lab to do

Preservation
☐ Lab to do

(Please specify below)

Container Type	A	-	-	-	-	-	-	-	-	-	-	-	
Preservative	A	-	-	-	-	-	-	-	-	-	-	-	

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1908

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-463
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12081015:58

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018124

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information — ☐ FAX ☒ ADEx
Data Deliverables — ☒ EMAIL ☐ Add'l Deliverables
Billing Information — ☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
L1018124-01	S-10N-C012-0-1.0	11/03/10	14:51	SED	KGM	☒	BH-I2	1
-02	S-10N-C012-1.0-2.0	11/03/10	14:51	SED	KGM	☒	BH-I2	1
-03	S-10N-C013-0-1.0	11/03/10	10:48	SED	KGM	☒	BH-K2	1
-04	S-10N-C013-1.0-2.0	11/03/10	10:48	SED	KGM	☒	BH-K2	1
-05	S-10N-C014-0-1.0	11/03/10	11:05	SED	KGM	☒	BH-K3	1
-06	S-10N-C014-1.0-2.0	11/03/10	11:05	SED	KGM	☒	BH-K3	1
-07	S-10N-C015-0-1.0	11/03/10	09:56	SED	KGM	☒	BH-L2	1
-08	S-10N-C015-1.0-2.0	11/03/10	09:56	SED	KGM	☒	BH-L2	1
-09	S-10N-C016-0-1.0	11/03/10	10:21	SED	KGM	☒	BH-L3	1
-10	S-10N-C016-1.0-2.0	11/03/10	10:21	SED	KGM	☒	BH-L3	1
	Container Type					A		
	Preservative					A		

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1500

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

FORM NO: 01-06(I-NJ) (rev. 30-APR-09)

Delivery Order-0010-03
April 2011
B-464
Sediment Monitoring Summary Report
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1018125
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NBH ENVIRONMENTAL MONITORING
Project Number:	TO-0010-03
Report Date:	12/13/10

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

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018125
Report Date: 12/13/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1018125-01	S-10O-C047-0-1.0	NEW BEDFORD, MA	10/25/10 09:17
L1018125-02	S-10O-C047-1.0-2.0	NEW BEDFORD, MA	10/25/10 09:17
L1018125-03	S-10O-C048-0-1.0	NEW BEDFORD, MA	10/25/10 09:05
L1018125-04	S-10O-C048-1.0-2.0	NEW BEDFORD, MA	10/25/10 09:05
L1018125-05	S-10O-C049-0-1.0	NEW BEDFORD, MA	10/25/10 14:50
L1018125-06	S-10O-C049-1.0-2.0	NEW BEDFORD, MA	10/25/10 14:50
L1018125-07	S-10O-C050-0-1.0	NEW BEDFORD, MA	10/25/10 14:32
L1018125-08	S-10O-C050-1.0-2.0	NEW BEDFORD, MA	10/25/10 14:32
L1018125-09	S-10O-C051-0-1.0	NEW BEDFORD, MA	10/25/10 09:37
L1018125-10	S-10O-C051-1.0-2.0	NEW BEDFORD, MA	10/25/10 09:37
L1018125-11	S-10O-C052-0-1.0	NEW BEDFORD, MA	10/25/10 14:20
L1018125-12	S-10O-C052-1.0-2.0	NEW BEDFORD, MA	10/25/10 14:20
L1018125-13	S-10O-C053-0-1.0	NEW BEDFORD, MA	10/25/10 09:55
L1018125-14	S-10O-C053-1.0-2.0	NEW BEDFORD, MA	10/25/10 09:55
L1018125-15	S-10O-C054-0-1.0	NEW BEDFORD, MA	10/25/10 13:53
L1018125-16	S-10O-C054-1.0-2.0	NEW BEDFORD, MA	10/25/10 13:53
L1018125-17	S-10O-C055-0-1.0	NEW BEDFORD, MA	10/25/10 14:04
L1018125-18	S-10O-C055-1.0-2.0	NEW BEDFORD, MA	10/25/10 14:04
L1018125-19	S-10O-C070-0-1.0	NEW BEDFORD, MA	10/27/10 15:18

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018125
Project Number:	TO-0010-03	**Report Date:**	12/13/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on November 05, 2010 and placed in frozen storage until November 12, 2010 when aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until they were removed November 19, 2010 to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018125
Project Number:	TO-0010-03	**Report Date:**	12/13/10

Case Narrative (continued)

whether it was the higher or lower value.

The majority of samples were analyzed at the dilution required by the elevated concentrations of target compounds in the sample.

L1018125-01, -02, -03, -04, -10, -13 were re-analyzed on further dilution in order to quantitate the samples within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analyses were performed only for the compounds that exceeded the calibration range.

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: 12/13/10

ORGANICS

PCBS

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-01	Date Collected:	10/25/10 09:17
Client ID:	S-10O-C047-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 15:45	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3940	E	ug/kg	166	--	100
Cl4-BZ#52	26900	E	ug/kg	166	--	100
Cl4-BZ#44	11400	E	ug/kg	166	--	100
Cl4-BZ#66	18600	E	ug/kg	166	--	100
Cl5-BZ#118	12700	E	ug/kg	166	--	100
Cl6-BZ#138	6050		ug/kg	166	--	100
Cl7-BZ#187	1510		ug/kg	166	--	100
Cl6-BZ#128	1040		ug/kg	166	--	100
Cl7-BZ#180	1370		ug/kg	166	--	100
Cl7-BZ#170	1050		ug/kg	166	--	100
Cl8-BZ#195	200		ug/kg	166	--	100
Cl9-BZ#206	207		ug/kg	166	--	100
Cl10-BZ#209	ND		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-01	Date Collected:	10/25/10 09:17
Client ID:	S-10O-C047-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 15:45	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	8720	E	ug/kg	166	--	100
Cl3-BZ#28	10400	E	ug/kg	166	--	100
Cl5-BZ#101	9120	E	ug/kg	166	--	100
Cl6-BZ#153	6710	E	ug/kg	166	--	100
Cl5-BZ#105	731		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-01 D	Date Collected:	10/25/10 09:17
Client ID:	S-10O-C047-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/08/10 12:54	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4230		ug/kg	3330	--	2000
Cl3-BZ#18	10700		ug/kg	3330	--	2000
Cl4-BZ#52	32200		ug/kg	3330	--	2000
Cl4-BZ#66	20200		ug/kg	3330	--	2000
Cl5-BZ#118	14500		ug/kg	3330	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	102		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-01 D	Date Collected:	10/25/10 09:17
Client ID:	S-10O-C047-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/08/10 12:54	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	19500		ug/kg	3330	--	2000
Cl4-BZ#44	16200		ug/kg	3330	--	2000
Cl5-BZ#101	17300		ug/kg	3330	--	2000
Cl6-BZ#153	12200		ug/kg	3330	--	2000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	102		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-02	Date Collected:	10/25/10 09:17
Client ID:	S-10O-C047-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 16:26	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	171	--	100
Cl4-BZ#52	5540	E	ug/kg	171	--	100
Cl4-BZ#66	3900	E	ug/kg	171	--	100
Cl5-BZ#118	4020	E	ug/kg	171	--	100
Cl6-BZ#138	2720		ug/kg	171	--	100
Cl6-BZ#128	651		ug/kg	171	--	100
Cl7-BZ#180	553		ug/kg	171	--	100
Cl7-BZ#170	381		ug/kg	171	--	100
Cl8-BZ#195	ND		ug/kg	171	--	100
Cl9-BZ#206	ND		ug/kg	171	--	100
Cl10-BZ#209	ND		ug/kg	171	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-02	Date Collected:	10/25/10 09:17
Client ID:	S-10O-C047-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 16:26	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	570		ug/kg	171	--	100
Cl3-BZ#28	334		ug/kg	171	--	100
Cl4-BZ#44	1820		ug/kg	171	--	100
Cl5-BZ#101	3670	E	ug/kg	171	--	100
Cl6-BZ#153	2480		ug/kg	171	--	100
Cl5-BZ#105	871		ug/kg	171	--	100
Cl7-BZ#187	410		ug/kg	171	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-02 D	Date Collected:	10/25/10 09:17
Client ID:	S-10O-C047-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 13:42	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	6840		ug/kg	1710	--	1000
Cl4-BZ#66	4650		ug/kg	1710	--	1000
Cl5-BZ#118	5020		ug/kg	1710	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	65		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-02 D	Date Collected:	10/25/10 09:17
Client ID:	S-10O-C047-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 13:42	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#101	5600		ug/kg	1710	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	65		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-03	Date Collected:	10/25/10 09:05
Client ID:	S-10O-C048-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 17:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1390		ug/kg	166	--	100
Cl3-BZ#18	2960		ug/kg	166	--	100
Cl4-BZ#52	5100	E	ug/kg	166	--	100
Cl4-BZ#44	3360	E	ug/kg	166	--	100
Cl4-BZ#66	8410	E	ug/kg	166	--	100
Cl5-BZ#118	6200	E	ug/kg	166	--	100
Cl6-BZ#138	3020		ug/kg	166	--	100
Cl7-BZ#187	397		ug/kg	166	--	100
Cl6-BZ#128	714		ug/kg	166	--	100
Cl7-BZ#180	639		ug/kg	166	--	100
Cl7-BZ#170	443		ug/kg	166	--	100
Cl8-BZ#195	ND		ug/kg	166	--	100
Cl9-BZ#206	ND		ug/kg	166	--	100
Cl10-BZ#209	ND		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-03	Date Collected:	10/25/10 09:05
Client ID:	S-10O-C048-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 17:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4290	E	ug/kg	166	--	100
Cl5-BZ#101	4660	E	ug/kg	166	--	100
Cl6-BZ#153	2490		ug/kg	166	--	100
Cl5-BZ#105	1000		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-03 D	Date Collected:	10/25/10 09:05
Client ID:	S-10O-C048-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 14:23	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	6140		ug/kg	1660	--	1000
Cl5-BZ#118	7260		ug/kg	1660	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	73		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-03 D	Date Collected:	10/25/10 09:05
Client ID:	S-10O-C048-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 14:23	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6770		ug/kg	1660	--	1000
Cl4-BZ#44	3980		ug/kg	1660	--	1000
Cl4-BZ#66	9080		ug/kg	1660	--	1000
Cl5-BZ#101	7570		ug/kg	1660	--	1000

DBOB	85	30-150
BZ 198	73	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-04	Date Collected:	10/25/10 09:05
Client ID:	S-10O-C048-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 17:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	168	--	100
Cl3-BZ#18	514		ug/kg	168	--	100
Cl4-BZ#52	1740		ug/kg	168	--	100
Cl4-BZ#44	771		ug/kg	168	--	100
Cl4-BZ#66	2620		ug/kg	168	--	100
Cl5-BZ#118	3680	E	ug/kg	168	--	100
Cl6-BZ#138	2820		ug/kg	168	--	100
Cl6-BZ#128	723		ug/kg	168	--	100
Cl7-BZ#180	450		ug/kg	168	--	100
Cl7-BZ#170	327		ug/kg	168	--	100
Cl8-BZ#195	ND		ug/kg	168	--	100
Cl9-BZ#206	ND		ug/kg	168	--	100
Cl10-BZ#209	ND		ug/kg	168	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-04	Date Collected:	10/25/10 09:05
Client ID:	S-10O-C048-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 17:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/kg	168	--	100
Cl5-BZ#101	2670		ug/kg	168	--	100
Cl6-BZ#153	1470		ug/kg	168	--	100
Cl5-BZ#105	1120		ug/kg	168	--	100
Cl7-BZ#187	294		ug/kg	168	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-04 D	Date Collected:	10/25/10 09:05
Client ID:	S-10O-C048-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 15:04	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#118	4370		ug/kg	1680	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	67		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-05	Date Collected:	10/25/10 14:50
Client ID:	S-10O-C049-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 18:29	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	478		ug/kg	166	--	100
Cl3-BZ#18	954		ug/kg	166	--	100
Cl4-BZ#52	1920		ug/kg	166	--	100
Cl4-BZ#66	2590		ug/kg	166	--	100
Cl5-BZ#118	2150		ug/kg	166	--	100
Cl6-BZ#138	1160		ug/kg	166	--	100
Cl6-BZ#128	295		ug/kg	166	--	100
Cl7-BZ#180	240		ug/kg	166	--	100
Cl7-BZ#170	ND		ug/kg	166	--	100
Cl8-BZ#195	ND		ug/kg	166	--	100
Cl9-BZ#206	ND		ug/kg	166	--	100
Cl10-BZ#209	ND		ug/kg	166	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	87		30-150
BZ 198	56		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-05	Date Collected:	10/25/10 14:50
Client ID:	S-10O-C049-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/04/10 18:29	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1900		ug/kg	166	--	100
Cl4-BZ#44	1110		ug/kg	166	--	100
Cl5-BZ#101	2110		ug/kg	166	--	100
Cl6-BZ#153	1150		ug/kg	166	--	100
Cl5-BZ#105	482		ug/kg	166	--	100
Cl7-BZ#187	197		ug/kg	166	--	100

DBOB	87	30-150
BZ 198	56	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-06	Date Collected:	10/25/10 14:50
Client ID:	S-10O-C049-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/09/10 16:49	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.66	--	1
Cl3-BZ#18	ND		ug/kg	1.66	--	1
Cl4-BZ#52	2.67		ug/kg	1.66	--	1
Cl6-BZ#153	ND		ug/kg	1.66	--	1
Cl5-BZ#105	ND		ug/kg	1.66	--	1
Cl6-BZ#138	ND		ug/kg	1.66	--	1
Cl7-BZ#187	ND		ug/kg	1.66	--	1
Cl6-BZ#128	ND		ug/kg	1.66	--	1
Cl7-BZ#180	ND		ug/kg	1.66	--	1
Cl7-BZ#170	ND		ug/kg	1.66	--	1
Cl8-BZ#195	ND		ug/kg	1.66	--	1
Cl9-BZ#206	ND		ug/kg	1.66	--	1
Cl10-BZ#209	ND		ug/kg	1.66	--	1

DBOB	75	30-150
BZ 198	73	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-06	Date Collected:	10/25/10 14:50
Client ID:	S-10O-C049-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/09/10 16:49	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/kg	1.66	--	1
Cl4-BZ#44	ND		ug/kg	1.66	--	1
Cl4-BZ#66	2.17		ug/kg	1.66	--	1
Cl5-BZ#101	2.01		ug/kg	1.66	--	1
Cl5-BZ#118	1.88		ug/kg	1.66	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	73		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-07	Date Collected:	10/25/10 14:32
Client ID:	S-10O-C050-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/01/10 14:37	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1080		ug/kg	165	--	100
Cl4-BZ#52	1920		ug/kg	165	--	100
Cl4-BZ#66	2110		ug/kg	165	--	100
Cl5-BZ#118	1490		ug/kg	165	--	100
Cl6-BZ#138	822		ug/kg	165	--	100
Cl6-BZ#128	212		ug/kg	165	--	100
Cl7-BZ#170	ND		ug/kg	165	--	100
Cl8-BZ#195	ND		ug/kg	165	--	100
Cl9-BZ#206	ND		ug/kg	165	--	100
Cl10-BZ#209	ND		ug/kg	165	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	59		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-07	Date Collected:	10/25/10 14:32
Client ID:	S-10O-C050-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/01/10 14:37	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	480		ug/kg	165	--	100
Cl3-BZ#28	2400		ug/kg	165	--	100
Cl4-BZ#44	1220		ug/kg	165	--	100
Cl5-BZ#101	1570		ug/kg	165	--	100
Cl6-BZ#153	850		ug/kg	165	--	100
Cl5-BZ#105	421		ug/kg	165	--	100
Cl7-BZ#187	ND		ug/kg	165	--	100
Cl7-BZ#180	ND		ug/kg	165	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	59		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-08	Date Collected:	10/25/10 14:32
Client ID:	S-10O-C050-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/06/10 23:52	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.65	--	1
Cl3-BZ#18	ND		ug/kg	1.65	--	1
Cl4-BZ#52	ND		ug/kg	1.65	--	1
Cl4-BZ#44	ND		ug/kg	1.65	--	1
Cl4-BZ#66	ND		ug/kg	1.65	--	1
Cl5-BZ#101	ND		ug/kg	1.65	--	1
Cl5-BZ#118	ND		ug/kg	1.65	--	1
Cl5-BZ#105	ND		ug/kg	1.65	--	1
Cl6-BZ#138	ND		ug/kg	1.65	--	1
Cl7-BZ#187	ND		ug/kg	1.65	--	1
Cl6-BZ#128	ND		ug/kg	1.65	--	1
Cl7-BZ#180	ND		ug/kg	1.65	--	1
Cl7-BZ#170	ND		ug/kg	1.65	--	1
Cl8-BZ#195	ND		ug/kg	1.65	--	1
Cl9-BZ#206	ND		ug/kg	1.65	--	1
Cl10-BZ#209	ND		ug/kg	1.65	--	1

DBOB	75	30-150
BZ 198	79	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-08	Date Collected:	10/25/10 14:32
Client ID:	S-10O-C050-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/06/10 23:52	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/kg	1.65	--	1
Cl6-BZ#153	ND		ug/kg	1.65	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	79		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-09	Date Collected:	10/25/10 09:37
Client ID:	S-10O-C051-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/06/10 21:49	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	115		ug/kg	16.4	--	10
Cl6-BZ#138	38.2		ug/kg	16.4	--	10
Cl7-BZ#187	ND		ug/kg	16.4	--	10
Cl6-BZ#128	ND		ug/kg	16.4	--	10
Cl7-BZ#180	ND		ug/kg	16.4	--	10
Cl7-BZ#170	ND		ug/kg	16.4	--	10
Cl8-BZ#195	ND		ug/kg	16.4	--	10
Cl9-BZ#206	ND		ug/kg	16.4	--	10
Cl10-BZ#209	ND		ug/kg	16.4	--	10

DBOB	73	30-150
BZ 198	80	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-09	Date Collected:	10/25/10 09:37
Client ID:	S-10O-C051-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/06/10 21:49	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	59.4		ug/kg	16.4	--	10
Cl3-BZ#28	188		ug/kg	16.4	--	10
Cl4-BZ#52	226		ug/kg	16.4	--	10
Cl4-BZ#44	131		ug/kg	16.4	--	10
Cl4-BZ#66	211		ug/kg	16.4	--	10
Cl5-BZ#101	102		ug/kg	16.4	--	10
Cl5-BZ#118	93.9		ug/kg	16.4	--	10
Cl6-BZ#153	45.9		ug/kg	16.4	--	10
Cl5-BZ#105	31.8		ug/kg	16.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	80		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-10	Date Collected:	10/25/10 09:37
Client ID:	S-10O-C051-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/06/10 19:46	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	888		ug/kg	165	--	100

DBOB	82	30-150
BZ 198	81	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-10	Date Collected:	10/25/10 09:37
Client ID:	S-10O-C051-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/06/10 19:46	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1200		ug/kg	165	--	100
Cl4-BZ#52	1010		ug/kg	165	--	100
Cl4-BZ#44	925		ug/kg	165	--	100
Cl4-BZ#66	1280		ug/kg	165	--	100
Cl5-BZ#101	590		ug/kg	165	--	100
Cl5-BZ#118	531		ug/kg	165	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	81		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-10	Date Collected:	10/25/10 09:37
Client ID:	S-10O-C051-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/06/10 20:27	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	270		ug/kg	16.5	--	10
Cl3-BZ#18	811	E	ug/kg	16.5	--	10
Cl4-BZ#52	873	E	ug/kg	16.5	--	10
Cl4-BZ#44	759	E	ug/kg	16.5	--	10
Cl4-BZ#66	1150	E	ug/kg	16.5	--	10
Cl5-BZ#118	482	E	ug/kg	16.5	--	10
Cl6-BZ#138	219		ug/kg	16.5	--	10
Cl6-BZ#128	56.3		ug/kg	16.5	--	10
Cl7-BZ#180	41.2		ug/kg	16.5	--	10
Cl7-BZ#170	31.6		ug/kg	16.5	--	10
Cl8-BZ#195	ND		ug/kg	16.5	--	10
Cl9-BZ#206	ND		ug/kg	16.5	--	10
Cl10-BZ#209	ND		ug/kg	16.5	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-10	Date Collected:	10/25/10 09:37
Client ID:	S-10O-C051-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:21
Analytical Date:	12/06/10 20:27	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	777	E	ug/kg	16.5	--	10
Cl5-BZ#101	386	E	ug/kg	16.5	--	10
Cl6-BZ#153	152		ug/kg	16.5	--	10
Cl5-BZ#105	159		ug/kg	16.5	--	10
Cl7-BZ#187	32.9		ug/kg	16.5	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-11	Date Collected:	10/25/10 14:20
Client ID:	S-10O-C052-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/06/10 22:30	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	46.0		ug/kg	16.8	--	10
Cl4-BZ#66	89.5		ug/kg	16.8	--	10
Cl6-BZ#138	35.8		ug/kg	16.8	--	10
Cl7-BZ#187	ND		ug/kg	16.8	--	10
Cl6-BZ#128	ND		ug/kg	16.8	--	10
Cl7-BZ#170	ND		ug/kg	16.8	--	10
Cl8-BZ#195	ND		ug/kg	16.8	--	10
Cl9-BZ#206	ND		ug/kg	16.8	--	10
Cl10-BZ#209	ND		ug/kg	16.8	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	84		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-11	Date Collected:	10/25/10 14:20
Client ID:	S-10O-C052-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/06/10 22:30	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	29.2		ug/kg	16.8	--	10
Cl3-BZ#28	126		ug/kg	16.8	--	10
Cl4-BZ#52	123		ug/kg	16.8	--	10
Cl4-BZ#44	62.2		ug/kg	16.8	--	10
Cl5-BZ#101	75.0		ug/kg	16.8	--	10
Cl5-BZ#118	66.9		ug/kg	16.8	--	10
Cl6-BZ#153	47.4		ug/kg	16.8	--	10
Cl5-BZ#105	20.8		ug/kg	16.8	--	10
Cl7-BZ#180	ND		ug/kg	16.8	--	10

DBOB	92	30-150
BZ 198	84	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-12	Date Collected:	10/25/10 14:20
Client ID:	S-10O-C052-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/07/10 00:33	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.68	--	1
Cl3-BZ#18	ND		ug/kg	1.68	--	1
Cl3-BZ#28	ND		ug/kg	1.68	--	1
Cl4-BZ#52	ND		ug/kg	1.68	--	1
Cl4-BZ#44	ND		ug/kg	1.68	--	1
Cl4-BZ#66	ND		ug/kg	1.68	--	1
Cl5-BZ#101	ND		ug/kg	1.68	--	1
Cl5-BZ#118	ND		ug/kg	1.68	--	1
Cl5-BZ#105	ND		ug/kg	1.68	--	1
Cl6-BZ#138	ND		ug/kg	1.68	--	1
Cl7-BZ#187	ND		ug/kg	1.68	--	1
Cl6-BZ#128	ND		ug/kg	1.68	--	1
Cl7-BZ#180	ND		ug/kg	1.68	--	1
Cl7-BZ#170	ND		ug/kg	1.68	--	1
Cl8-BZ#195	ND		ug/kg	1.68	--	1
Cl9-BZ#206	ND		ug/kg	1.68	--	1
Cl10-BZ#209	ND		ug/kg	1.68	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	75		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-12	Date Collected:	10/25/10 14:20
Client ID:	S-10O-C052-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/07/10 00:33	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	1.68	--	1

DBOB	69	30-150
BZ 198	75	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-13	Date Collected:	10/25/10 09:55
Client ID:	S-10O-C053-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/04/10 19:10	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	625		ug/kg	171	--	100
Cl3-BZ#18	1660		ug/kg	171	--	100
Cl4-BZ#66	2470		ug/kg	171	--	100
Cl5-BZ#118	1880		ug/kg	171	--	100
Cl6-BZ#138	1240		ug/kg	171	--	100
Cl8-BZ#195	ND		ug/kg	171	--	100
Cl9-BZ#206	ND		ug/kg	171	--	100
Cl10-BZ#209	ND		ug/kg	171	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-13	Date Collected:	10/25/10 09:55
Client ID:	S-10O-C053-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/04/10 19:10	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3530	E	ug/kg	171	--	100
Cl4-BZ#52	3680	E	ug/kg	171	--	100
Cl4-BZ#44	1570		ug/kg	171	--	100
Cl5-BZ#101	2020		ug/kg	171	--	100
Cl6-BZ#153	1610		ug/kg	171	--	100
Cl5-BZ#105	446		ug/kg	171	--	100
Cl7-BZ#187	297		ug/kg	171	--	100
Cl6-BZ#128	225		ug/kg	171	--	100
Cl7-BZ#180	281		ug/kg	171	--	100
Cl7-BZ#170	189		ug/kg	171	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-13 D	Date Collected:	10/25/10 09:55
Client ID:	S-10O-C053-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/01/10 03:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	4640		ug/kg	1710	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	96		30-150
BZ 198	88		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-13 D	Date Collected:	10/25/10 09:55
Client ID:	S-10O-C053-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/01/10 03:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4380		ug/kg	1710	--	1000

DBOB	96	30-150
BZ 198	88	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-14	Date Collected:	10/25/10 09:55
Client ID:	S-10O-C053-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/04/10 19:51	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	476		ug/kg	164	--	100
Cl4-BZ#66	823		ug/kg	164	--	100
Cl5-BZ#105	ND		ug/kg	164	--	100
Cl6-BZ#138	316		ug/kg	164	--	100
Cl7-BZ#187	ND		ug/kg	164	--	100
Cl6-BZ#128	ND		ug/kg	164	--	100
Cl7-BZ#180	ND		ug/kg	164	--	100
Cl7-BZ#170	ND		ug/kg	164	--	100
Cl8-BZ#195	ND		ug/kg	164	--	100
Cl9-BZ#206	ND		ug/kg	164	--	100
Cl10-BZ#209	ND		ug/kg	164	--	100

DBOB	86	30-150
BZ 198	74	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-14	Date Collected:	10/25/10 09:55
Client ID:	S-10O-C053-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/04/10 19:51	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	196		ug/kg	164	--	100
Cl3-BZ#28	1070		ug/kg	164	--	100
Cl4-BZ#52	1560		ug/kg	164	--	100
Cl4-BZ#44	658		ug/kg	164	--	100
Cl5-BZ#101	630		ug/kg	164	--	100
Cl5-BZ#118	525		ug/kg	164	--	100
Cl6-BZ#153	428		ug/kg	164	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	74		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-15	Date Collected:	10/25/10 13:53
Client ID:	S-10O-C054-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/06/10 23:11	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	41.8		ug/kg	16.4	--	10
Cl3-BZ#18	87.7		ug/kg	16.4	--	10
Cl4-BZ#66	151		ug/kg	16.4	--	10
Cl5-BZ#118	90.0		ug/kg	16.4	--	10
Cl6-BZ#138	49.7		ug/kg	16.4	--	10
Cl6-BZ#128	ND		ug/kg	16.4	--	10
Cl7-BZ#170	ND		ug/kg	16.4	--	10
Cl8-BZ#195	ND		ug/kg	16.4	--	10
Cl9-BZ#206	ND		ug/kg	16.4	--	10
Cl10-BZ#209	ND		ug/kg	16.4	--	10

DBOB	71	30-150
BZ 198	74	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-15	Date Collected:	10/25/10 13:53
Client ID:	S-10O-C054-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/06/10 23:11	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	197		ug/kg	16.4	--	10
Cl4-BZ#52	160		ug/kg	16.4	--	10
Cl4-BZ#44	95.8		ug/kg	16.4	--	10
Cl5-BZ#101	101		ug/kg	16.4	--	10
Cl6-BZ#153	56.9		ug/kg	16.4	--	10
Cl5-BZ#105	23.5		ug/kg	16.4	--	10
Cl7-BZ#187	ND		ug/kg	16.4	--	10
Cl7-BZ#180	ND		ug/kg	16.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	74		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-16	Date Collected:	10/25/10 13:53
Client ID:	S-10O-C054-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/07/10 01:14	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.69	--	1
Cl3-BZ#18	ND		ug/kg	1.69	--	1
Cl3-BZ#28	ND		ug/kg	1.69	--	1
Cl4-BZ#52	ND		ug/kg	1.69	--	1
Cl4-BZ#44	ND		ug/kg	1.69	--	1
Cl4-BZ#66	ND		ug/kg	1.69	--	1
Cl5-BZ#101	ND		ug/kg	1.69	--	1
Cl5-BZ#118	ND		ug/kg	1.69	--	1
Cl5-BZ#105	ND		ug/kg	1.69	--	1
Cl6-BZ#138	ND		ug/kg	1.69	--	1
Cl7-BZ#187	ND		ug/kg	1.69	--	1
Cl6-BZ#128	ND		ug/kg	1.69	--	1
Cl7-BZ#180	ND		ug/kg	1.69	--	1
Cl7-BZ#170	ND		ug/kg	1.69	--	1
Cl8-BZ#195	ND		ug/kg	1.69	--	1
Cl9-BZ#206	ND		ug/kg	1.69	--	1
Cl10-BZ#209	ND		ug/kg	1.69	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	85		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-16	Date Collected:	10/25/10 13:53
Client ID:	S-10O-C054-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/07/10 01:14	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	1.69	--	1

DBOB	79	30-150
BZ 198	85	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-17	Date Collected:	10/25/10 14:04
Client ID:	S-10O-C055-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/06/10 21:08	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	173		ug/kg	65.9	--	40
Cl3-BZ#18	336		ug/kg	65.9	--	40
Cl4-BZ#52	608		ug/kg	65.9	--	40
Cl4-BZ#66	655		ug/kg	65.9	--	40
Cl5-BZ#118	428		ug/kg	65.9	--	40
Cl6-BZ#138	246		ug/kg	65.9	--	40
Cl6-BZ#128	ND		ug/kg	65.9	--	40
Cl7-BZ#180	ND		ug/kg	65.9	--	40
Cl7-BZ#170	ND		ug/kg	65.9	--	40
Cl8-BZ#195	ND		ug/kg	65.9	--	40
Cl9-BZ#206	ND		ug/kg	65.9	--	40
Cl10-BZ#209	ND		ug/kg	65.9	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	72		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-17	Date Collected:	10/25/10 14:04
Client ID:	S-10O-C055-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:23
Analytical Date:	12/06/10 21:08	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	702		ug/kg	65.9	--	40
Cl4-BZ#44	376		ug/kg	65.9	--	40
Cl5-BZ#101	456		ug/kg	65.9	--	40
Cl6-BZ#153	237		ug/kg	65.9	--	40
Cl5-BZ#105	118		ug/kg	65.9	--	40
Cl7-BZ#187	ND		ug/kg	65.9	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	72		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-18	Date Collected:	10/25/10 14:04
Client ID:	S-10O-C055-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:24
Analytical Date:	12/07/10 01:55	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.72	--	1
Cl3-BZ#18	2.30		ug/kg	1.72	--	1
Cl4-BZ#66	2.43		ug/kg	1.72	--	1
Cl5-BZ#118	ND		ug/kg	1.72	--	1
Cl5-BZ#105	ND		ug/kg	1.72	--	1
Cl6-BZ#138	ND		ug/kg	1.72	--	1
Cl7-BZ#187	ND		ug/kg	1.72	--	1
Cl6-BZ#128	ND		ug/kg	1.72	--	1
Cl7-BZ#180	ND		ug/kg	1.72	--	1
Cl7-BZ#170	ND		ug/kg	1.72	--	1
Cl8-BZ#195	ND		ug/kg	1.72	--	1
Cl9-BZ#206	ND		ug/kg	1.72	--	1
Cl10-BZ#209	ND		ug/kg	1.72	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	66		30-150
BZ 198	74		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-18	Date Collected:	10/25/10 14:04
Client ID:	S-10O-C055-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:24
Analytical Date:	12/07/10 01:55	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3.20		ug/kg	1.72	--	1
Cl4-BZ#52	3.95		ug/kg	1.72	--	1
Cl4-BZ#44	ND		ug/kg	1.72	--	1
Cl5-BZ#101	ND		ug/kg	1.72	--	1
Cl6-BZ#153	ND		ug/kg	1.72	--	1

DBOB	66	30-150
BZ 198	74	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-19	Date Collected:	10/27/10 15:18
Client ID:	S-10O-C070-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:24
Analytical Date:	12/06/10 17:43	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	20.4		ug/kg	16.8	--	10
Cl3-BZ#18	59.7		ug/kg	16.8	--	10
Cl4-BZ#52	150		ug/kg	16.8	--	10
Cl4-BZ#44	72.7		ug/kg	16.8	--	10
Cl4-BZ#66	155		ug/kg	16.8	--	10
Cl5-BZ#118	123		ug/kg	16.8	--	10
Cl6-BZ#138	101		ug/kg	16.8	--	10
Cl6-BZ#128	29.6		ug/kg	16.8	--	10
Cl7-BZ#180	19.7		ug/kg	16.8	--	10
Cl8-BZ#195	ND		ug/kg	16.8	--	10
Cl9-BZ#206	ND		ug/kg	16.8	--	10
Cl10-BZ#209	ND		ug/kg	16.8	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	68		30-150
BZ 198	68		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

SAMPLE RESULTS

Lab ID:	L1018125-19	Date Collected:	10/27/10 15:18
Client ID:	S-10O-C070-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/19/10 16:24
Analytical Date:	12/06/10 17:43	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	11/23/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	101		ug/kg	16.8	--	10
Cl5-BZ#101	116		ug/kg	16.8	--	10
Cl6-BZ#153	85.1		ug/kg	16.8	--	10
Cl5-BZ#105	43.6		ug/kg	16.8	--	10
Cl7-BZ#187	ND		ug/kg	16.8	--	10
Cl7-BZ#170	ND		ug/kg	16.8	--	10

DBOB	68	30-150
BZ 198	68	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018125

Project Number: TO-0010-03 **Report Date:** 12/13/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/04/10 10:58
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 11/19/10 16:21
Cleanup Method1: EPA 3630
Cleanup Date1: 11/23/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-19 Batch: WG444052-1					
Cl2-BZ#8	ND		ug/kg	1.67	--
Cl3-BZ#18	ND		ug/kg	1.67	--
Cl3-BZ#28	ND		ug/kg	1.67	--
Cl4-BZ#52	ND		ug/kg	1.67	--
Cl4-BZ#44	ND		ug/kg	1.67	--
Cl4-BZ#66	ND		ug/kg	1.67	--
Cl5-BZ#101	ND		ug/kg	1.67	--
Cl5-BZ#118	ND		ug/kg	1.67	--
Cl5-BZ#105	ND		ug/kg	1.67	--
Cl6-BZ#138	ND		ug/kg	1.67	--
Cl7-BZ#187	ND		ug/kg	1.67	--
Cl6-BZ#128	ND		ug/kg	1.67	--
Cl7-BZ#180	ND		ug/kg	1.67	--
Cl7-BZ#170	ND		ug/kg	1.67	--
Cl8-BZ#195	ND		ug/kg	1.67	--
Cl9-BZ#206	ND		ug/kg	1.67	--
Cl10-BZ#209	ND		ug/kg	1.67	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	81		30-150

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/04/10 10:58
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 11/19/10 16:21
Cleanup Method1: EPA 3630
Cleanup Date1: 11/23/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-19 Batch: WG444052-1					
Cl6-BZ#153	ND		ug/kg	1.67	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	81		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018125
Report Date: 12/13/10

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): 01-19 QC Batch ID: WG444052-4 WG444052-5 QC Sample: L1018125-19 Client ID: S-10O-C070-0-1.0												
Cl2-BZ#8	20.4	1690	908	52		980	57		40-140	8		30
Cl3-BZ#18	59.7	1690	979	54		1030	57		40-140	5		30
Cl4-BZ#52	150	1690	1020	51		1130	58		40-140	10		30
Cl4-BZ#44	72.7	1690	971	53		1030	57		40-140	6		30
Cl4-BZ#66	155	1690	1110	56		1130	58		40-140	2		30
Cl5-BZ#118	123	1690	1110	58		1130	60		40-140	2		30
Cl6-BZ#138	101	1690	1060	57		1130	61		40-140	6		30
Cl6-BZ#128	29.6	1690	1010	58		1010	58		40-140	0		30
Cl7-BZ#180	19.7	1690	1050	61		1010	59		40-140	4		30
Cl8-BZ#195	ND	1690	981	58		995	59		40-140	1		30
Cl9-BZ#206	ND	1690	1080	64		1060	63		40-140	2		30
Cl10-BZ#209	ND	1690	978	58		977	58		40-140	0		30
Cl3-BZ#28	101	1690	1340	73		1420	78		40-140	6		30
Cl5-BZ#101	116	1690	1240	66		1300	70		40-140	5		30
Cl6-BZ#153	85.1	1690	1190	65		1250	69		40-140	5		30
Cl5-BZ#105	43.6	1690	1280	73		1290	74		40-140	1		30
Cl7-BZ#187	ND	1690	1140	67		1130	67		40-140	1		30
Cl7-BZ#170	ND	1690	1210	71		1230	73		40-140	2		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018125
Report Date: 12/13/10

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): 01-19 QC Batch ID: WG444052-4 WG444052-5 QC Sample: L1018125-19 Client ID: S-10O-C070-0-1.0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	59		59		30-150
DBOB	61		64		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Lab Number: L1018125
Project Number: TO-0010-03
Report Date: 12/13/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-19 Batch: WG444052-2 WG444052-3							
Cl2-BZ#8	83		78		40-140	6		30
Cl3-BZ#18	86		80		40-140	7		30
Cl3-BZ#28	91		85		40-140	7		30
Cl4-BZ#52	88		82		40-140	7		30
Cl4-BZ#44	92		88		40-140	4		30
Cl4-BZ#66	94		89		40-140	5		30
Cl5-BZ#101	96		90		40-140	6		30
Cl5-BZ#118	98		92		40-140	6		30
Cl5-BZ#105	90		87		40-140	3		30
Cl6-BZ#138	94		90		40-140	4		30
Cl7-BZ#187	92		87		40-140	6		30
Cl6-BZ#128	92		88		40-140	4		30
Cl7-BZ#180	91		87		40-140	4		30
Cl7-BZ#170	79		78		40-140	1		30
Cl8-BZ#195	80		79		40-140	1		30
Cl9-BZ#206	93		89		40-140	4		30
Cl10-BZ#209	85		84		40-140	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-19		Batch: WG444052-2		WG444052-3			
DBOB	104		87		30-150			
BZ 198	81		80		30-150			

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-19		Batch: WG444052-2		WG444052-3			
Cl6-BZ#153	87		82		40-140	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	104		87		30-150
BZ 198	81		80		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-01
Client ID: S-10O-C047-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 09:17
Date Received: 11/05/10
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	99.0		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	40.8		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-02
Client ID: S-10O-C047-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 09:17
Date Received: 11/05/10
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	95.9		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	42.9		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-03
Client ID: S-10O-C048-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 09:05
Date Received: 11/05/10
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	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	42.6		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-04
Client ID: S-10O-C048-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 09:05
Date Received: 11/05/10
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	97.4		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	38.2		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-05
Client ID: S-10O-C049-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 14:50
Date Received: 11/05/10
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	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	54.1		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-06
Client ID: S-10O-C049-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 14:50
Date Received: 11/05/10
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	98.7		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	45.8		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-07
Client ID: S-10O-C050-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 14:32
Date Received: 11/05/10
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	98.7		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	54.2		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-08
Client ID: S-10O-C050-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 14:32
Date Received: 11/05/10
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	98.9		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	41.6		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-09
Client ID: S-10O-C051-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 09:37
Date Received: 11/05/10
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	99.8		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	88.2		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-10
Client ID: S-10O-C051-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 09:37
Date Received: 11/05/10
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	99.3		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	59.4		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-11
Client ID: S-10O-C052-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 14:20
Date Received: 11/05/10
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	98.4		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	52.7		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-12
Client ID: S-10O-C052-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 14:20
Date Received: 11/05/10
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	97.3		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	43.5		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-13
Client ID: S-10O-C053-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 09:55
Date Received: 11/05/10
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	96.3		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	33.3		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-14
Client ID: S-10O-C053-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 09:55
Date Received: 11/05/10
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	99.1		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	52.0		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-15
Client ID: S-10O-C054-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 13:53
Date Received: 11/05/10
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	99.3		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	54.7		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-16
Client ID: S-10O-C054-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 13:53
Date Received: 11/05/10
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	96.6		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	55.5		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-17
Client ID: S-10O-C055-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 14:04
Date Received: 11/05/10
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	99.6		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	49.1		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-18
Client ID: S-10O-C055-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 14:04
Date Received: 11/05/10
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	95.4		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	57.8		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018125
Report Date: 12/13/10

SAMPLE RESULTS

Lab ID: L1018125-19
Client ID: S-10O-C070-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 15:18
Date Received: 11/05/10
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	96.7		%	0.100	--	1	-	11/19/10 11:30	30,2540G	KB
Solids, Total (Pre-Dried)	72.4		%	0.100	NA	1	-	11/17/10 15:20	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018125
Report Date: 12/13/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-19 QC Batch ID: WG444008-1 QC Sample: L1018125-01 Client ID: S-10O-C047-0-1.0						
Solids, Total	99.0	98.4	%	1		20

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018125
Report Date: 12/13/10

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
ABCD	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018125-01A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-02A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-03A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-04A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-05A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-06A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-07A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-08A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-09A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-10A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-11A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-12A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-13A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-14A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-15A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018125
Report Date: 12/13/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018125-16A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-17A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-18A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-19A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018125-19B	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018125
Project Number:	TO-0010-03	**Report Date:**	12/13/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018125
Project Number:	TO-0010-03	**Report Date:**	12/13/10

Data Qualifiers

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:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018125
Project Number:	TO-0010-03	**Report Date:**	12/13/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial_No:12131016:11

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018125

Project Information
Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Client Information
Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Turn-Around Time
☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☒ Same as Client info PO #:

Regulatory Requirements/Report Limits
State/Fed Program: FED Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
L1018125-1	S-10O-C047-0-1.0	10/25/10	09:17	SED	MW	☒	BH-A1	1
-2	S-10O-C047-1.0-2.0	10/25/10	09:17	SED	MW	☒	BH-A1	1
-3	S-10O-C048-0-1.0	10/25/10	09:05	SED	MW	☒	BH-A3	1
-4	S-10O-C048-1.0-2.0	10/25/10	09:05	SED	MW	☒	BH-A3	1
-5	S-10O-C049-0-1.0	10/25/10	14:50	SED	MW	☒	BH-B1	1
-6	S-10O-C049-1.0-2.0	10/25/10	14:50	SED	MW	☒	BH-B1	1
-7	S-10O-C050-0-1.0	10/25/10	14:32	SED	MW	☒	BH-B2	1
-8	S-10O-C050-1.0-2.0	10/25/10	14:32	SED	MW	☒	BH-B2	1
-9	S-10O-C051-0-1.0	10/25/10	09:37	SED	MW	☒	BH-C1	1
-10	S-10O-C051-1.0-2.0	10/25/10	09:37	SED	MW	☒	BH-C1	1
	Container Type					A		
	Preservative					A		

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10, 19:06		11/5/10 1900

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

FORM NO: 01-01(HU) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-554
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12131016:11

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018125

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
18125-11	S-10O-C052-0-1.0	10/25/10	14:20	SED	MW	☒	BH-C4	1
-12	S-10O-C052-1.0-2.0	10/25/10	14:20	SED	MW	☒	BH-C4	1
-13	S-10O-C053-0-1.0	10/25/10	09:55	SED	MW	☒	BH-D1	1
-14	S-10O-C053-1.0-2.0	10/25/10	09:55	SED	MW	☒	BH-D1	1
-15	S-10O-C054-0-1.0	10/25/10	13:53	SED	MW	☒	BH-D4	1
-16	S-10O-C054-1.0-2.0	10/25/10	13:53	SED	MW	☒	BH-D4	1
-17	S-10O-C055-0-1.0	10/25/10	14:04	SED	MW	☒	BH-E5	1
-18	S-10O-C055-1.0-2.0	10/25/10	14:04	SED	MW	☒	BH-E5	1
	S-10O-C056-0-1.0	10/25/10	10:36	SED	MW	☒	BH-F1	1
	S-10O-C056-1.0-2.0	10/25/10	10:36	SED	MW	☒	BH-F1	1
	Container Type					A		
	Preservative					A		

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:10		11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-555
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12131016:11

11/5/10 L1018125

CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 | ALPHA Job #: L1018125

Client Information
Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Project Information
Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time
☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☒ Same as Client Info PO #:

Regulatory Requirements/Report Limits
State/Fed Program: FED Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
	S-10O-C067-0-1.0	10/27/10	10:25	SED	MW	☒	BH-SOIL3	1
	S-10O-C067-1.0-2.0	10/27/10	10:25	SED	MW	☒	BH-SOIL3	1
	S-10O-C068-0-1.0	10/27/10	11:10	SED	MW	☒	BH-SOIL4	1
	S-10O-C068-1.0-2.0	10/27/10	11:10	SED	MW	☒	BH-SOIL4	1
	S-10O-C069-0-1.0	10/27/10	11:30	SED	MW	☒	BH-SOIL5	1
	S-10O-C069-1.0-2.0	10/27/10	11:30	SED	MW	☒	BH-SOIL5	1
18125 19	S-10O-C070-0-1.0	10/27/10	15:18	SED	DB	☒	BH-CSO	1
	S-10O-C071-0-1.0	10/28/10	08:33	SED	MW	☒	BH-A2	1
	S-10O-C071-1.0-2.0	10/28/10	08:33	SED	MW	☒	BH-A2	1
						☐		

Container Type: A - - - - - - - - - - -
Preservative: A - - - - - - - - - - -

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

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-556
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12131016:11

CHAIN OF CUSTODY

PAGE 11 OF 11

11/5/10 — Date Rec'd in Lab

L1018125 — ALPHA Job #

ALPHA ANALYTICAL
Westborough, 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 Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	SAMPLE HANDLING Filtration: ☐ Done ☒ Not Needed ☐ Lab to do; Preservation: ☐ Lab to do (Please specify below)	Sample Specific Comments	TOTAL # BOTTLES
	S-10N-C017-0-1.0	11/03/10	09:12	SED	KGM	☒		BH-M2	1
	S-10N-C017-1.0-2.0	11/03/10	09:12	SED	KGM	☒		BH-M2	1
	S-10O-C072-1.0-2.0MSMSD	10/26/10	09:09	SED	MW	☒		MS/MSD	1
	S-10O-C076-0-1.0MSMSD	10/26/10	10:00	SED	DR	☒		MS/MSD	1
	S-10O-C079-1.0-2.0MSMSD	10/26/10	10:38	SED	DR	☒		MS/MSD	1
	S-10N-C001-0-1.0MSMSD	11/03/10	13:43	SED	KGM	☒		MS/MSD	1
1812-5 19	S-10O-C074-0-1.0MS/MSD	10/27/10	15:18	SED	DB	☐		CSO MS/MSD	1
	S-10O-C071-0-1.0MS/MSD	10/28/10	0833	SED	MW	☐		MS/MSD	1
						☐			
						☐			

Container Type	A	-	-	-	-	-	-	-	-	-	-	-	
Preservative	A	-	-	-	-	-	-	-	-	-	-	-	

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 17:00		11/5/10 1900

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

FORM NO: 01-01(0-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-557
Sediment Monitoring Summary Report
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1018126
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NBH ENVIRONMENTAL MONITORING
Project Number:	TO-0010-03
Report Date:	12/17/10

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 NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

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

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1018126-01	S-10O-C056-0-1.0	NEW BEDFORD, MA	10/25/10 10:36
L1018126-02	S-10O-C056-1.0-2.0	NEW BEDFORD, MA	10/25/10 10:36
L1018126-03	S-10O-C057-0-1.0	NEW BEDFORD, MA	10/25/10 11:00
L1018126-04	S-10O-C057-1.0-2.0	NEW BEDFORD, MA	10/25/10 11:00
L1018126-05	S-10O-C058-0-1.0	NEW BEDFORD, MA	10/25/10 11:32
L1018126-06	S-10O-C058-1.0-2.0	NEW BEDFORD, MA	10/25/10 11:32
L1018126-07	S-10O-C059-0-1.0	NEW BEDFORD, MA	10/25/10 11:54
L1018126-08	S-10O-C059-1.0-2.0	NEW BEDFORD, MA	10/25/10 11:54
L1018126-09	S-10O-C060-0-1.0	NEW BEDFORD, MA	10/25/10 12:11
L1018126-10	S-10O-C060-1.0-2.0	NEW BEDFORD, MA	10/25/10 12:11
L1018126-11	S-10O-C061-0-1.0	NEW BEDFORD, MA	10/25/10 12:36
L1018126-12	S-10O-C061-1.0-2.0	NEW BEDFORD, MA	10/25/10 12:36
L1018126-13	S-10O-C062-0-1.0	NEW BEDFORD, MA	10/25/10 13:00
L1018126-14	S-10O-C062-1.0-2.0	NEW BEDFORD, MA	10/25/10 13:00
L1018126-15	S-10O-C063-0-1.0	NEW BEDFORD, MA	10/25/10 13:19
L1018126-16	S-10O-C063-1.0-2.0	NEW BEDFORD, MA	10/25/10 13:19
L1018126-17	S-10O-C064-0-1.0	NEW BEDFORD, MA	10/25/10 13:38
L1018126-18	S-10O-C064-1.0-2.0	NEW BEDFORD, MA	10/25/10 13:38
L1018126-19	S-10O-C065-0-1.0	NEW BEDFORD, MA	10/27/10 09:05
L1018126-20	S-10O-C071-0-1.0	NEW BEDFORD, MA	10/28/10 08:33

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018126
Project Number:	TO-0010-03	**Report Date:**	12/17/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on November 05, 2010 and placed in frozen storage until November 19, 2010 when aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until they were removed November 22, 2010 to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018126
Project Number:	TO-0010-03	**Report Date:**	12/17/10

Case Narrative (continued)

whether it was the higher or lower value.

The majority of samples were analyzed at the dilution required by the elevated concentrations of target compounds in the sample.

Samples L1018126-03, -09, -11, -13, -14, -18, -19 and -20 were re-analyzed on dilution in order to quantitate the samples within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compound that exceeded the calibration on the initial analyses. The re-analyses were performed only for the compounds that exceeded the calibration range.

The WG444316-3 LCS/LCSD RPD(s), associated with L1018126-01 through -20, are above the acceptance criteria for Cl2-BZ#8 (38%) and Cl3-BZ#28 (36%); however, the individual LCS/LCSD recoveries are within method 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: 12/17/10

ORGANICS

PCBS

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-01	Date Collected:	10/25/10 10:36
Client ID:	S-10O-C056-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 15:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	395		ug/kg	163	--	100
Cl3-BZ#18	848		ug/kg	163	--	100
Cl4-BZ#52	1300		ug/kg	163	--	100
Cl4-BZ#44	791		ug/kg	163	--	100
Cl4-BZ#66	1510		ug/kg	163	--	100
Cl5-BZ#118	931		ug/kg	163	--	100
Cl6-BZ#138	536		ug/kg	163	--	100
Cl6-BZ#128	ND		ug/kg	163	--	100
Cl7-BZ#180	ND		ug/kg	163	--	100
Cl7-BZ#170	ND		ug/kg	163	--	100
Cl8-BZ#195	ND		ug/kg	163	--	100
Cl9-BZ#206	ND		ug/kg	163	--	100
Cl10-BZ#209	ND		ug/kg	163	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	66		30-150
BZ 198	55		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-01	Date Collected:	10/25/10 10:36
Client ID:	S-10O-C056-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 15:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1180		ug/kg	163	--	100
Cl5-BZ#101	924		ug/kg	163	--	100
Cl6-BZ#153	523		ug/kg	163	--	100
Cl5-BZ#105	253		ug/kg	163	--	100
Cl7-BZ#187	ND		ug/kg	163	--	100

DBOB	66	30-150
BZ 198	55	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-02	Date Collected:	10/25/10 10:36
Client ID:	S-10O-C056-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 18:57	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1.91		ug/kg	1.66	--	1
Cl4-BZ#52	6.43		ug/kg	1.66	--	1
Cl4-BZ#44	2.32		ug/kg	1.66	--	1
Cl4-BZ#66	ND		ug/kg	1.66	--	1
Cl5-BZ#105	ND		ug/kg	1.66	--	1
Cl6-BZ#138	ND		ug/kg	1.66	--	1
Cl7-BZ#187	3.17		ug/kg	1.66	--	1
Cl6-BZ#128	ND		ug/kg	1.66	--	1
Cl7-BZ#180	ND		ug/kg	1.66	--	1
Cl7-BZ#170	ND		ug/kg	1.66	--	1
Cl8-BZ#195	ND		ug/kg	1.66	--	1
Cl9-BZ#206	ND		ug/kg	1.66	--	1
Cl10-BZ#209	ND		ug/kg	1.66	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	76		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-02	Date Collected:	10/25/10 10:36
Client ID:	S-10O-C056-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 18:57	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.66	--	1
Cl3-BZ#28	1.97		ug/kg	1.66	--	1
Cl5-BZ#101	2.03		ug/kg	1.66	--	1
Cl5-BZ#118	2.05		ug/kg	1.66	--	1

DBOB	75	30-150
BZ 198	76	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-03	Date Collected:	10/25/10 11:00
Client ID:	S-10O-C057-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 16:47	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2070		ug/kg	168	--	100
Cl3-BZ#18	4660	E	ug/kg	168	--	100
Cl4-BZ#52	6620	E	ug/kg	168	--	100
Cl4-BZ#44	5190	E	ug/kg	168	--	100
Cl4-BZ#66	8590	E	ug/kg	168	--	100
Cl5-BZ#118	4420	E	ug/kg	168	--	100
Cl6-BZ#138	2030		ug/kg	168	--	100
Cl6-BZ#128	511		ug/kg	168	--	100
Cl7-BZ#180	412		ug/kg	168	--	100
Cl7-BZ#170	296		ug/kg	168	--	100
Cl8-BZ#195	ND		ug/kg	168	--	100
Cl9-BZ#206	ND		ug/kg	168	--	100
Cl10-BZ#209	ND		ug/kg	168	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-03	Date Collected:	10/25/10 11:00
Client ID:	S-10O-C057-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 16:47	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5060	E	ug/kg	168	--	100
Cl5-BZ#101	3470	E	ug/kg	168	--	100
Cl6-BZ#153	1610		ug/kg	168	--	100
Cl5-BZ#105	1100		ug/kg	168	--	100
Cl7-BZ#187	303		ug/kg	168	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-03 D	Date Collected:	10/25/10 11:00
Client ID:	S-10O-C057-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 14:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4510		ug/kg	838	--	500
Cl4-BZ#52	7350		ug/kg	838	--	500
Cl4-BZ#44	5560		ug/kg	838	--	500
Cl4-BZ#66	9850		ug/kg	838	--	500
Cl5-BZ#118	5000		ug/kg	838	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	72		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-03 D	Date Collected:	10/25/10 11:00
Client ID:	S-10O-C057-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 14:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6390		ug/kg	838	--	500
Cl5-BZ#101	4960		ug/kg	838	--	500

DBOB	79	30-150
BZ 198	72	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-04	Date Collected:	10/25/10 11:00
Client ID:	S-10O-C057-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 17:35	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.67	--	1
Cl3-BZ#18	1.71		ug/kg	1.67	--	1
Cl3-BZ#28	ND		ug/kg	1.67	--	1
Cl4-BZ#52	2.19		ug/kg	1.67	--	1
Cl4-BZ#44	ND		ug/kg	1.67	--	1
Cl5-BZ#105	ND		ug/kg	1.67	--	1
Cl6-BZ#138	ND		ug/kg	1.67	--	1
Cl7-BZ#187	3.48		ug/kg	1.67	--	1
Cl6-BZ#128	ND		ug/kg	1.67	--	1
Cl7-BZ#180	ND		ug/kg	1.67	--	1
Cl7-BZ#170	ND		ug/kg	1.67	--	1
Cl8-BZ#195	ND		ug/kg	1.67	--	1
Cl9-BZ#206	ND		ug/kg	1.67	--	1
Cl10-BZ#209	ND		ug/kg	1.67	--	1

DBOB	91	30-150
BZ 198	79	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-04	Date Collected:	10/25/10 11:00
Client ID:	S-10O-C057-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 17:35	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#66	ND		ug/kg	1.67	--	1
Cl5-BZ#101	ND		ug/kg	1.67	--	1
Cl5-BZ#118	ND		ug/kg	1.67	--	1
Cl6-BZ#153	ND		ug/kg	1.67	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	79		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-05	Date Collected:	10/25/10 11:32
Client ID:	S-10O-C058-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 18:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	295		ug/kg	165	--	100
Cl3-BZ#18	656		ug/kg	165	--	100
Cl4-BZ#52	1250		ug/kg	165	--	100
Cl4-BZ#66	766		ug/kg	165	--	100
Cl5-BZ#118	513		ug/kg	165	--	100
Cl6-BZ#138	305		ug/kg	165	--	100
Cl7-BZ#187	ND		ug/kg	165	--	100
Cl6-BZ#128	ND		ug/kg	165	--	100
Cl7-BZ#180	ND		ug/kg	165	--	100
Cl7-BZ#170	ND		ug/kg	165	--	100
Cl8-BZ#195	ND		ug/kg	165	--	100
Cl9-BZ#206	ND		ug/kg	165	--	100
Cl10-BZ#209	ND		ug/kg	165	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	68		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-05	Date Collected:	10/25/10 11:32
Client ID:	S-10O-C058-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 18:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1120		ug/kg	165	--	100
Cl4-BZ#44	618		ug/kg	165	--	100
Cl5-BZ#101	526		ug/kg	165	--	100
Cl6-BZ#153	373		ug/kg	165	--	100
Cl5-BZ#105	ND		ug/kg	165	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	68		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-06	Date Collected:	10/25/10 11:32
Client ID:	S-10O-C058-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 16:13	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2.29		ug/kg	1.65	--	1
Cl4-BZ#66	2.81		ug/kg	1.65	--	1
Cl5-BZ#105	ND		ug/kg	1.65	--	1
Cl6-BZ#138	ND		ug/kg	1.65	--	1
Cl7-BZ#187	ND		ug/kg	1.65	--	1
Cl6-BZ#128	ND		ug/kg	1.65	--	1
Cl7-BZ#180	ND		ug/kg	1.65	--	1
Cl7-BZ#170	ND		ug/kg	1.65	--	1
Cl8-BZ#195	ND		ug/kg	1.65	--	1
Cl9-BZ#206	ND		ug/kg	1.65	--	1
Cl10-BZ#209	ND		ug/kg	1.65	--	1

DBOB	76	30-150
BZ 198	68	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-06	Date Collected:	10/25/10 11:32
Client ID:	S-10O-C058-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 16:13	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.65	--	1
Cl3-BZ#28	3.77		ug/kg	1.65	--	1
Cl4-BZ#52	5.12		ug/kg	1.65	--	1
Cl4-BZ#44	2.16		ug/kg	1.65	--	1
Cl5-BZ#101	1.71		ug/kg	1.65	--	1
Cl5-BZ#118	ND		ug/kg	1.65	--	1
Cl6-BZ#153	ND		ug/kg	1.65	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	68		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-07	Date Collected:	10/25/10 11:54
Client ID:	S-10O-C059-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 19:31	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	508		ug/kg	167	--	100
Cl3-BZ#18	1280		ug/kg	167	--	100
Cl4-BZ#52	1810		ug/kg	167	--	100
Cl4-BZ#44	1040		ug/kg	167	--	100
Cl4-BZ#66	1260		ug/kg	167	--	100
Cl5-BZ#118	807		ug/kg	167	--	100
Cl6-BZ#138	538		ug/kg	167	--	100
Cl6-BZ#128	ND		ug/kg	167	--	100
Cl7-BZ#170	ND		ug/kg	167	--	100
Cl8-BZ#195	ND		ug/kg	167	--	100
Cl9-BZ#206	ND		ug/kg	167	--	100
Cl10-BZ#209	ND		ug/kg	167	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	51		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-07	Date Collected:	10/25/10 11:54
Client ID:	S-10O-C059-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 19:31	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2000		ug/kg	167	--	100
Cl5-BZ#101	824		ug/kg	167	--	100
Cl6-BZ#153	522		ug/kg	167	--	100
Cl5-BZ#105	266		ug/kg	167	--	100
Cl7-BZ#187	ND		ug/kg	167	--	100
Cl7-BZ#180	ND		ug/kg	167	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	51		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-08	Date Collected:	10/25/10 11:54
Client ID:	S-10O-C059-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 20:12	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1800		ug/kg	164	--	100
Cl3-BZ#18	4960	E	ug/kg	164	--	100
Cl4-BZ#52	7900	E	ug/kg	164	--	100
Cl4-BZ#44	3690	E	ug/kg	164	--	100
Cl4-BZ#66	3160		ug/kg	164	--	100
Cl5-BZ#118	1460		ug/kg	164	--	100
Cl6-BZ#138	1720		ug/kg	164	--	100
Cl7-BZ#187	299		ug/kg	164	--	100
Cl6-BZ#128	445		ug/kg	164	--	100
Cl7-BZ#180	430		ug/kg	164	--	100
Cl7-BZ#170	309		ug/kg	164	--	100
Cl8-BZ#195	ND		ug/kg	164	--	100
Cl9-BZ#206	ND		ug/kg	164	--	100
Cl10-BZ#209	ND		ug/kg	164	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-08	Date Collected:	10/25/10 11:54
Client ID:	S-10O-C059-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 20:12	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3860	E	ug/kg	164	--	100
Cl5-BZ#101	1480		ug/kg	164	--	100
Cl6-BZ#153	1150		ug/kg	164	--	100
Cl5-BZ#105	583		ug/kg	164	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-08 D	Date Collected:	10/25/10 11:54
Client ID:	S-10O-C059-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 14:50	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	5100		ug/kg	820	--	500
Cl4-BZ#52	8960		ug/kg	820	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	72		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-08 D	Date Collected:	10/25/10 11:54
Client ID:	S-10O-C059-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 14:50	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5120		ug/kg	820	--	500
Cl4-BZ#44	3980		ug/kg	820	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	72		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-09	Date Collected:	10/25/10 12:11
Client ID:	S-10O-C060-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 20:53	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2920		ug/kg	166	--	100
Cl3-BZ#18	5820	E	ug/kg	166	--	100
Cl4-BZ#52	6600	E	ug/kg	166	--	100
Cl4-BZ#44	4350	E	ug/kg	166	--	100
Cl4-BZ#66	7320	E	ug/kg	166	--	100
Cl5-BZ#118	3240		ug/kg	166	--	100
Cl6-BZ#138	1520		ug/kg	166	--	100
Cl6-BZ#128	385		ug/kg	166	--	100
Cl7-BZ#180	327		ug/kg	166	--	100
Cl7-BZ#170	224		ug/kg	166	--	100
Cl8-BZ#195	ND		ug/kg	166	--	100
Cl9-BZ#206	ND		ug/kg	166	--	100
Cl10-BZ#209	ND		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-09	Date Collected:	10/25/10 12:11
Client ID:	S-10O-C060-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/07/10 20:53	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6050	E	ug/kg	166	--	100
Cl5-BZ#101	2720		ug/kg	166	--	100
Cl6-BZ#153	1340		ug/kg	166	--	100
Cl5-BZ#105	863		ug/kg	166	--	100
Cl7-BZ#187	260		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-09 D	Date Collected:	10/25/10 12:11
Client ID:	S-10O-C060-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 15:32	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	5780		ug/kg	832	--	500
Cl4-BZ#66	7910		ug/kg	832	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	75		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-09 D	Date Collected:	10/25/10 12:11
Client ID:	S-10O-C060-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/14/10 15:32	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	7740		ug/kg	832	--	500
Cl4-BZ#52	6730		ug/kg	832	--	500
Cl4-BZ#44	4780		ug/kg	832	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	75		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-10	Date Collected:	10/25/10 12:11
Client ID:	S-10O-C060-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/16/10 12:17	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4.13		ug/kg	1.67	--	1
Cl3-BZ#18	6.74		ug/kg	1.67	--	1
Cl4-BZ#52	11.8		ug/kg	1.67	--	1
Cl4-BZ#44	5.41		ug/kg	1.67	--	1
Cl5-BZ#118	4.44		ug/kg	1.67	--	1
Cl6-BZ#138	2.41		ug/kg	1.67	--	1
Cl7-BZ#187	ND		ug/kg	1.67	--	1
Cl6-BZ#128	ND		ug/kg	1.67	--	1
Cl7-BZ#180	ND		ug/kg	1.67	--	1
Cl7-BZ#170	ND		ug/kg	1.67	--	1
Cl8-BZ#195	ND		ug/kg	1.67	--	1
Cl9-BZ#206	ND		ug/kg	1.67	--	1
Cl10-BZ#209	ND		ug/kg	1.67	--	1

DBOB	90	30-150
BZ 198	73	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-10	Date Collected:	10/25/10 12:11
Client ID:	S-10O-C060-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:38
Analytical Date:	12/16/10 12:17	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	10.2		ug/kg	1.67	--	1
Cl4-BZ#66	6.45		ug/kg	1.67	--	1
Cl5-BZ#101	3.93		ug/kg	1.67	--	1
Cl6-BZ#153	2.43		ug/kg	1.67	--	1
Cl5-BZ#105	ND		ug/kg	1.67	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	73		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-11	Date Collected:	10/25/10 12:36
Client ID:	S-10O-C061-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 21:42	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	100		ug/kg	16.8	--	10
Cl3-BZ#18	255		ug/kg	16.8	--	10
Cl4-BZ#52	625	E	ug/kg	16.8	--	10
Cl4-BZ#44	243		ug/kg	16.8	--	10
Cl4-BZ#66	487	E	ug/kg	16.8	--	10
Cl5-BZ#118	325		ug/kg	16.8	--	10
Cl6-BZ#138	195		ug/kg	16.8	--	10
Cl7-BZ#180	33.6		ug/kg	16.8	--	10
Cl7-BZ#170	28.4		ug/kg	16.8	--	10
Cl8-BZ#195	ND		ug/kg	16.8	--	10
Cl9-BZ#206	ND		ug/kg	16.8	--	10
Cl10-BZ#209	ND		ug/kg	16.8	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-11	Date Collected:	10/25/10 12:36
Client ID:	S-10O-C061-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 21:42	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	448	E	ug/kg	16.8	--	10
Cl5-BZ#101	271		ug/kg	16.8	--	10
Cl6-BZ#153	176		ug/kg	16.8	--	10
Cl5-BZ#105	62.7		ug/kg	16.8	--	10
Cl7-BZ#187	33.2		ug/kg	16.8	--	10
Cl6-BZ#128	28.1		ug/kg	16.8	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-11 D	Date Collected:	10/25/10 12:36
Client ID:	S-10O-C061-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 14:27	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	568		ug/kg	168	--	100

DBOB	67	30-150
BZ 198	62	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-11 D	Date Collected:	10/25/10 12:36
Client ID:	S-10O-C061-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 14:27	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	533		ug/kg	168	--	100
Cl4-BZ#66	437		ug/kg	168	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	67		30-150
BZ 198	62		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-12	Date Collected:	10/25/10 12:36
Client ID:	S-10O-C061-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 23:45	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.67	--	1
Cl3-BZ#18	ND		ug/kg	1.67	--	1
Cl4-BZ#52	2.31		ug/kg	1.67	--	1
Cl4-BZ#44	ND		ug/kg	1.67	--	1
Cl4-BZ#66	2.15		ug/kg	1.67	--	1
Cl5-BZ#118	ND		ug/kg	1.67	--	1
Cl5-BZ#105	ND		ug/kg	1.67	--	1
Cl6-BZ#138	ND		ug/kg	1.67	--	1
Cl7-BZ#187	ND		ug/kg	1.67	--	1
Cl6-BZ#128	ND		ug/kg	1.67	--	1
Cl7-BZ#180	ND		ug/kg	1.67	--	1
Cl7-BZ#170	ND		ug/kg	1.67	--	1
Cl8-BZ#195	ND		ug/kg	1.67	--	1
Cl9-BZ#206	ND		ug/kg	1.67	--	1
Cl10-BZ#209	ND		ug/kg	1.67	--	1

DBOB	71	30-150
BZ 198	69	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-12	Date Collected:	10/25/10 12:36
Client ID:	S-10O-C061-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 23:45	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2.26		ug/kg	1.67	--	1
Cl5-BZ#101	ND		ug/kg	1.67	--	1
Cl6-BZ#153	ND		ug/kg	1.67	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	69		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-13	Date Collected:	10/25/10 13:00
Client ID:	S-10O-C062-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 15:50	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1470		ug/kg	167	--	100
Cl3-BZ#18	3080		ug/kg	167	--	100
Cl4-BZ#52	5280	E	ug/kg	167	--	100
Cl4-BZ#44	2950		ug/kg	167	--	100
Cl4-BZ#66	5710	E	ug/kg	167	--	100
Cl5-BZ#118	3990	E	ug/kg	167	--	100
Cl6-BZ#138	2060		ug/kg	167	--	100
Cl7-BZ#187	322		ug/kg	167	--	100
Cl6-BZ#128	514		ug/kg	167	--	100
Cl7-BZ#180	432		ug/kg	167	--	100
Cl7-BZ#170	322		ug/kg	167	--	100
Cl8-BZ#195	ND		ug/kg	167	--	100
Cl9-BZ#206	ND		ug/kg	167	--	100
Cl10-BZ#209	ND		ug/kg	167	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	63		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-13	Date Collected:	10/25/10 13:00
Client ID:	S-10O-C062-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 15:50	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4350	E	ug/kg	167	--	100
Cl5-BZ#101	3240		ug/kg	167	--	100
Cl6-BZ#153	1940		ug/kg	167	--	100
Cl5-BZ#105	678		ug/kg	167	--	100

DBOB	82	30-150
BZ 198	63	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-13 D	Date Collected:	10/25/10 13:00
Client ID:	S-10O-C062-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 21:01	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	8260		ug/kg	667	--	400
Cl4-BZ#66	8910		ug/kg	667	--	400
Cl5-BZ#118	5700		ug/kg	667	--	400

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-13 D	Date Collected:	10/25/10 13:00
Client ID:	S-10O-C062-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 21:01	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6750		ug/kg	667	--	400

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-14	Date Collected:	10/25/10 13:00
Client ID:	S-10O-C062-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/15/10 01:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	10.8		ug/kg	1.66	--	1
Cl3-BZ#18	20.5		ug/kg	1.66	--	1
Cl4-BZ#52	43.3	E	ug/kg	1.66	--	1
Cl4-BZ#44	24.4		ug/kg	1.66	--	1
Cl4-BZ#66	55.4	E	ug/kg	1.66	--	1
Cl6-BZ#138	19.3		ug/kg	1.66	--	1
Cl7-BZ#187	3.12		ug/kg	1.66	--	1
Cl7-BZ#180	ND		ug/kg	1.66	--	1
Cl7-BZ#170	3.34		ug/kg	1.66	--	1
Cl8-BZ#195	ND		ug/kg	1.66	--	1
Cl9-BZ#206	ND		ug/kg	1.66	--	1
Cl10-BZ#209	ND		ug/kg	1.66	--	1

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-14	Date Collected:	10/25/10 13:00
Client ID:	S-10O-C062-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/15/10 01:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	32.4		ug/kg	1.66	--	1
Cl5-BZ#101	25.0		ug/kg	1.66	--	1
Cl5-BZ#118	27.4		ug/kg	1.66	--	1
Cl6-BZ#153	16.6		ug/kg	1.66	--	1
Cl5-BZ#105	1.97		ug/kg	1.66	--	1
Cl6-BZ#128	3.25		ug/kg	1.66	--	1

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-14 D	Date Collected:	10/25/10 13:00
Client ID:	S-10O-C062-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/16/10 11:36	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	43.2		ug/kg	8.32	--	5
Cl4-BZ#66	42.2		ug/kg	8.32	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	67		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-15	Date Collected:	10/25/10 13:19
Client ID:	S-10O-C063-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 17:12	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	535		ug/kg	165	--	100
Cl3-BZ#18	1410		ug/kg	165	--	100
Cl4-BZ#52	2420		ug/kg	165	--	100
Cl4-BZ#44	1260		ug/kg	165	--	100
Cl4-BZ#66	3220		ug/kg	165	--	100
Cl5-BZ#118	2750		ug/kg	165	--	100
Cl6-BZ#138	1360		ug/kg	165	--	100
Cl6-BZ#128	338		ug/kg	165	--	100
Cl7-BZ#180	284		ug/kg	165	--	100
Cl7-BZ#170	202		ug/kg	165	--	100
Cl8-BZ#195	ND		ug/kg	165	--	100
Cl9-BZ#206	ND		ug/kg	165	--	100
Cl10-BZ#209	ND		ug/kg	165	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	67		30-150
BZ 198	52		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-15	Date Collected:	10/25/10 13:19
Client ID:	S-10O-C063-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 17:12	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2320		ug/kg	165	--	100
Cl5-BZ#101	2600		ug/kg	165	--	100
Cl6-BZ#153	1510		ug/kg	165	--	100
Cl5-BZ#105	461		ug/kg	165	--	100
Cl7-BZ#187	241		ug/kg	165	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	67		30-150
BZ 198	52		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-16	Date Collected:	10/25/10 13:19
Client ID:	S-10O-C063-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/15/10 00:26	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4.31		ug/kg	1.65	--	1
Cl4-BZ#52	8.62		ug/kg	1.65	--	1
Cl4-BZ#44	3.73		ug/kg	1.65	--	1
Cl4-BZ#66	9.12		ug/kg	1.65	--	1
Cl5-BZ#118	6.04		ug/kg	1.65	--	1
Cl6-BZ#138	3.25		ug/kg	1.65	--	1
Cl7-BZ#187	ND		ug/kg	1.65	--	1
Cl6-BZ#128	ND		ug/kg	1.65	--	1
Cl7-BZ#180	ND		ug/kg	1.65	--	1
Cl7-BZ#170	ND		ug/kg	1.65	--	1
Cl8-BZ#195	ND		ug/kg	1.65	--	1
Cl9-BZ#206	ND		ug/kg	1.65	--	1
Cl10-BZ#209	ND		ug/kg	1.65	--	1

DBOB	77	30-150
BZ 198	73	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-16	Date Collected:	10/25/10 13:19
Client ID:	S-10O-C063-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/15/10 00:26	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.65	--	1
Cl3-BZ#28	5.70		ug/kg	1.65	--	1
Cl5-BZ#101	5.47		ug/kg	1.65	--	1
Cl6-BZ#153	3.12		ug/kg	1.65	--	1
Cl5-BZ#105	ND		ug/kg	1.65	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	77		30-150
BZ 198	73		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-17	Date Collected:	10/25/10 13:38
Client ID:	S-10O-C064-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 19:55	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	544		ug/kg	167	--	100
Cl3-BZ#18	1150		ug/kg	167	--	100
Cl4-BZ#52	3150		ug/kg	167	--	100
Cl4-BZ#44	1400		ug/kg	167	--	100
Cl4-BZ#66	3110		ug/kg	167	--	100
Cl5-BZ#118	2250		ug/kg	167	--	100
Cl6-BZ#138	1380		ug/kg	167	--	100
Cl6-BZ#128	365		ug/kg	167	--	100
Cl7-BZ#180	295		ug/kg	167	--	100
Cl7-BZ#170	213		ug/kg	167	--	100
Cl8-BZ#195	ND		ug/kg	167	--	100
Cl9-BZ#206	ND		ug/kg	167	--	100
Cl10-BZ#209	ND		ug/kg	167	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	72		30-150
BZ 198	59		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-17	Date Collected:	10/25/10 13:38
Client ID:	S-10O-C064-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 19:55	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2850		ug/kg	167	--	100
Cl5-BZ#101	2050		ug/kg	167	--	100
Cl6-BZ#153	1420		ug/kg	167	--	100
Cl5-BZ#105	527		ug/kg	167	--	100
Cl7-BZ#187	262		ug/kg	167	--	100

DBOB	72	30-150
BZ 198	59	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-18	Date Collected:	10/25/10 13:38
Client ID:	S-10O-C064-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 20:36	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1720		ug/kg	169	--	100
Cl3-BZ#18	3440	E	ug/kg	169	--	100
Cl4-BZ#52	7090	E	ug/kg	169	--	100
Cl4-BZ#44	4810	E	ug/kg	169	--	100
Cl4-BZ#66	8210	E	ug/kg	169	--	100
Cl5-BZ#118	4900	E	ug/kg	169	--	100
Cl6-BZ#138	2870		ug/kg	169	--	100
Cl6-BZ#128	743		ug/kg	169	--	100
Cl7-BZ#180	561		ug/kg	169	--	100
Cl7-BZ#170	406		ug/kg	169	--	100
Cl8-BZ#195	ND		ug/kg	169	--	100
Cl9-BZ#206	ND		ug/kg	169	--	100
Cl10-BZ#209	ND		ug/kg	169	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	69		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-18	Date Collected:	10/25/10 13:38
Client ID:	S-10O-C064-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 20:36	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	7670	E	ug/kg	169	--	100
Cl5-BZ#101	3960	E	ug/kg	169	--	100
Cl6-BZ#153	2150		ug/kg	169	--	100
Cl5-BZ#105	1390		ug/kg	169	--	100
Cl7-BZ#187	431		ug/kg	169	--	100

DBOB	85	30-150
BZ 198	69	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-18 D	Date Collected:	10/25/10 13:38
Client ID:	S-10O-C064-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 20:20	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	6670		ug/kg	845	--	500
Cl4-BZ#52	12800		ug/kg	845	--	500
Cl4-BZ#44	8480		ug/kg	845	--	500
Cl4-BZ#66	15300		ug/kg	845	--	500
Cl5-BZ#118	7690		ug/kg	845	--	500

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-18 D	Date Collected:	10/25/10 13:38
Client ID:	S-10O-C064-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 20:20	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	15900		ug/kg	845	--	500
Cl5-BZ#101	7940		ug/kg	845	--	500

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-19	Date Collected:	10/27/10 09:05
Client ID:	S-10O-C065-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 22:23	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	16.4	--	10
Cl3-BZ#18	ND		ug/kg	16.4	--	10
Cl4-BZ#52	288		ug/kg	16.4	--	10
Cl4-BZ#44	203		ug/kg	16.4	--	10
Cl4-BZ#66	367	E	ug/kg	16.4	--	10
Cl5-BZ#118	194		ug/kg	16.4	--	10
Cl6-BZ#128	36.8		ug/kg	16.4	--	10
Cl7-BZ#180	41.2		ug/kg	16.4	--	10
Cl8-BZ#195	ND		ug/kg	16.4	--	10
Cl9-BZ#206	ND		ug/kg	16.4	--	10
Cl10-BZ#209	ND		ug/kg	16.4	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-19	Date Collected:	10/27/10 09:05
Client ID:	S-10O-C065-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 22:23	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	32.8		ug/kg	16.4	--	10
Cl5-BZ#101	228		ug/kg	16.4	--	10
Cl6-BZ#153	90.1		ug/kg	16.4	--	10
Cl5-BZ#105	88.9		ug/kg	16.4	--	10
Cl6-BZ#138	162		ug/kg	16.4	--	10
Cl7-BZ#187	20.3		ug/kg	16.4	--	10
Cl7-BZ#170	18.7		ug/kg	16.4	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-19 D	Date Collected:	10/27/10 09:05
Client ID:	S-10O-C065-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 21:17	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#66	352		ug/kg	164	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	65		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-20	Date Collected:	10/28/10 08:33
Client ID:	S-10O-C071-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 21:58	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1050		ug/kg	166	--	100
Cl3-BZ#18	1900		ug/kg	166	--	100
Cl4-BZ#52	3210		ug/kg	166	--	100
Cl4-BZ#66	3580		ug/kg	166	--	100
Cl5-BZ#118	2010		ug/kg	166	--	100
Cl6-BZ#138	1120		ug/kg	166	--	100
Cl6-BZ#128	285		ug/kg	166	--	100
Cl7-BZ#180	228		ug/kg	166	--	100
Cl7-BZ#170	ND		ug/kg	166	--	100
Cl8-BZ#195	ND		ug/kg	166	--	100
Cl9-BZ#206	ND		ug/kg	166	--	100
Cl10-BZ#209	ND		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-20	Date Collected:	10/28/10 08:33
Client ID:	S-10O-C071-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/08/10 21:58	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4000	E	ug/kg	166	--	100
Cl4-BZ#44	2160		ug/kg	166	--	100
Cl5-BZ#101	2060		ug/kg	166	--	100
Cl6-BZ#153	1140		ug/kg	166	--	100
Cl5-BZ#105	626		ug/kg	166	--	100
Cl7-BZ#187	214		ug/kg	166	--	100

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

SAMPLE RESULTS

Lab ID:	L1018126-20 D	Date Collected:	10/28/10 08:33
Client ID:	S-10O-C071-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/22/10 15:46
Analytical Date:	12/14/10 23:04	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/01/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5240		ug/kg	333	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	58		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018126

Project Number: TO-0010-03 **Report Date:** 12/17/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/07/10 13:22
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 11/22/10 15:38
Cleanup Method1: EPA 3630
Cleanup Date1: 12/01/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG444316-1					
Cl2-BZ#8	ND		ug/kg	1.67	--
Cl3-BZ#18	ND		ug/kg	1.67	--
Cl3-BZ#28	ND		ug/kg	1.67	--
Cl4-BZ#52	ND		ug/kg	1.67	--
Cl4-BZ#44	ND		ug/kg	1.67	--
Cl4-BZ#66	ND		ug/kg	1.67	--
Cl5-BZ#101	ND		ug/kg	1.67	--
Cl5-BZ#118	ND		ug/kg	1.67	--
Cl5-BZ#105	ND		ug/kg	1.67	--
Cl6-BZ#138	ND		ug/kg	1.67	--
Cl7-BZ#187	ND		ug/kg	1.67	--
Cl6-BZ#128	ND		ug/kg	1.67	--
Cl7-BZ#180	ND		ug/kg	1.67	--
Cl7-BZ#170	ND		ug/kg	1.67	--
Cl8-BZ#195	ND		ug/kg	1.67	--
Cl9-BZ#206	ND		ug/kg	1.67	--
Cl10-BZ#209	ND		ug/kg	1.67	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	84		30-150

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/07/10 13:22
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 11/22/10 15:38
Cleanup Method1: EPA 3630
Cleanup Date1: 12/01/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG444316-1					
Cl6-BZ#153	ND		ug/kg	1.67	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	84		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

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: WG444316-4 WG444316-5 QC Sample: L1018126-16 Client ID: S-10O-C063-1.0-2.0												
Cl2-BZ#8	ND	1660	1040	63		1230	74		40-140	17		30
Cl3-BZ#18	4.31	1660	1050	63		1240	74		40-140	17		30
Cl4-BZ#52	8.62	1660	1050	63		1270	76		40-140	19		30
Cl4-BZ#44	3.73	1660	1050	63		1240	74		40-140	17		30
Cl4-BZ#66	9.12	1660	1010	60		1180	70		40-140	16		30
Cl5-BZ#118	6.04	1660	1030	62		1240	74		40-140	19		30
Cl6-BZ#138	3.25	1660	1020	61		1180	71		40-140	15		30
Cl7-BZ#187	ND	1660	978	59		1130	68		40-140	14		30
Cl6-BZ#128	ND	1660	1030	62		1210	73		40-140	16		30
Cl7-BZ#180	ND	1660	984	59		1170	70		40-140	17		30
Cl7-BZ#170	ND	1660	934	56		1100	66		40-140	16		30
Cl8-BZ#195	ND	1660	956	58		1100	66		40-140	14		30
Cl9-BZ#206	ND	1660	1070	65		1220	73		40-140	13		30
Cl10-BZ#209	ND	1660	929	56		1070	64		40-140	14		30
Cl3-BZ#28	5.70	1660	1100	66		1240	74		40-140	12		30
Cl5-BZ#101	5.47	1660	1060	64		1180	71		40-140	11		30
Cl6-BZ#153	3.12	1660	1010	61		1120	67		40-140	10		30
Cl5-BZ#105	ND	1660	1090	66		1240	75		40-140	13		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

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: WG444316-4 WG444316-5 QC Sample: L1018126-16 Client ID: S-10O-C063-1.0-2.0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	64		70		30-150
DBOB	71		81		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

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: WG444316-2 WG444316-3							
Cl2-BZ#8	66		97		40-140	**38**	Q	30
Cl3-BZ#18	71		94		40-140	28		30
Cl3-BZ#28	66		95		40-140	**36**	Q	30
Cl4-BZ#52	74		95		40-140	25		30
Cl4-BZ#44	75		93		40-140	21		30
Cl4-BZ#66	74		93		40-140	23		30
Cl5-BZ#101	79		96		40-140	19		30
Cl5-BZ#118	78		93		40-140	18		30
Cl5-BZ#105	68		87		40-140	25		30
Cl6-BZ#138	78		92		40-140	16		30
Cl7-BZ#187	81		90		40-140	11		30
Cl6-BZ#128	78		90		40-140	14		30
Cl7-BZ#180	86		91		40-140	6		30
Cl7-BZ#170	97		82		40-140	17		30
Cl8-BZ#195	90		83		40-140	8		30
Cl9-BZ#206	94		99		40-140	5		30
Cl10-BZ#209	104		93		40-140	11		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

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: WG444316-2		WG444316-3			

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	75		95		30-150
BZ 198	96		87		30-150

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-20		Batch: WG444316-2		WG444316-3			
Cl6-BZ#153	66		87		40-140	27		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	75		95		30-150
BZ 198	96		87		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-01
Client ID: S-10O-C056-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 10:36
Date Received: 11/05/10
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	99.5		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	74.9		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-02
Client ID: S-10O-C056-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 10:36
Date Received: 11/05/10
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	98.2		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	46.2		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-03
Client ID: S-10O-C057-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 11:00
Date Received: 11/05/10
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	98.2		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	52.0		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-04
Client ID: S-10O-C057-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 11:00
Date Received: 11/05/10
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	98.4		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	52.7		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-05
Client ID: S-10O-C058-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 11:32
Date Received: 11/05/10
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	99.4		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	72.4		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-06
Client ID: S-10O-C058-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 11:32
Date Received: 11/05/10
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	99.8		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	79.4		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-07
Client ID: S-10O-C059-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 11:54
Date Received: 11/05/10
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	98.7		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	45.3		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-08
Client ID: S-10O-C059-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 11:54
Date Received: 11/05/10
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	98.8		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	61.3		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-09
Client ID: S-10O-C060-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 12:11
Date Received: 11/05/10
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	98.8		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	62.0		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-10
Client ID: S-10O-C060-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 12:11
Date Received: 11/05/10
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	98.6		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	51.8		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-11
Client ID: S-10O-C061-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 12:36
Date Received: 11/05/10
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	97.8		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	44.2		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-12
Client ID: S-10O-C061-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/25/10 12:36
Date Received: 11/05/10
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	98.7		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	55.4		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-13
Client ID: S-10O-C062-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 13:00
Date Received: 11/05/10
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	98.2		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	46.9		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-14
Client ID: S-10O-C062-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 13:00
Date Received: 11/05/10
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	98.4		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	51.9		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-15
Client ID: S-10O-C063-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 13:19
Date Received: 11/05/10
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	98.4		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	47.6		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-16
Client ID: S-10O-C063-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 13:19
Date Received: 11/05/10
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	98.6		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	52.9		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-17
Client ID: S-10O-C064-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/25/10 13:38
Date Received: 11/05/10
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	97.8		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	42.6		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-18
Client ID: S-10O-C064-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 10/25/10 13:38
Date Received: 11/05/10
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	97.2		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	37.5		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-19
Client ID: S-10O-C065-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 09:05
Date Received: 11/05/10
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	99.5		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	91.0		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018126
Report Date: 12/17/10

SAMPLE RESULTS

Lab ID: L1018126-20
Client ID: S-10O-C071-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 08:33
Date Received: 11/05/10
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	98.0		%	0.100	--	1	-	11/22/10 12:35	30,2540G	KB
Solids, Total (Pre-Dried)	43.3		%	0.100	NA	1	-	11/19/10 16:09	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG444350-1 QC Sample: L1018126-16 Client ID: S-10O-C063-1.0-2.0						
Solids, Total	98.6	98.3	%	0		20

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

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
ABCD	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018126-01A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-02A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-03A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-04A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-05A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-06A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-07A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-08A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-09A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-10A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-11A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-12A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-13A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-14A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-15A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018126-16A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-16B	Glass 500ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-17A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-18A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-19A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-20A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018126-20B	Glass 500ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

Container Comments

L1018126-01A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-02A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-03A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-04A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-05A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-06A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-07A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-08A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-09A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-10A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-11A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-12A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-13A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-14A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-15A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-16A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-17A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-18A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-19A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018126-20A	SAMPLES FROZEN UPON RECEIPT 11/5/10

*Values in parentheses indicate holding time in days

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018126
Report Date: 12/17/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)

Container Comments

L1018126-20B SAMPLES FROZEN UPON RECEIPT 11/5/10

*Values in parentheses indicate holding time in days

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018126
Project Number:	TO-0010-03	**Report Date:**	12/17/10

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.
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.

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.
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.
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.
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. 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.

Report Format: Data Usability Report

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018126
Project Number:	TO-0010-03	**Report Date:**	12/17/10

Data Qualifiers

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:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018126
Project Number:	TO-0010-03	**Report Date:**	12/17/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial_No:12171013:56

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 | ALPHA Job #: L1018126

Project Information
Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Client Information
Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Turn-Around Time
☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☒ Same as Client info PO #:

Regulatory Requirements/Report Limits
State/Fed Program: FED Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	SAMPLE HANDLING Filtration / Preservation	Sample Specific Comments	TOTAL # BOTTLES
1	S-10O-C052-0-1.0	10/25/10	14:20	SED	MW	☒		BH-C4	1
2	S-10O-C052-1.0-2.0	10/25/10	14:20	SED	MW	☒		BH-C4	1
3	S-10O-C053-0-1.0	10/25/10	09:55	SED	MW	☒		BH-D1	1
4	S-10O-C053-1.0-2.0	10/25/10	09:55	SED	MW	☒		BH-D1	1
5	S-10O-C054-0-1.0	10/25/10	13:53	SED	MW	☒		BH-D4	1
6	S-10O-C054-1.0-2.0	10/25/10	13:53	SED	MW	☒		BH-D4	1
7	S-10O-C055-0-1.0	10/25/10	14:04	SED	MW	☒		BH-E5	1
8	S-10O-C055-1.0-2.0	10/25/10	14:04	SED	MW	☒		BH-E5	1
9	S-10O-C056-0-1.0	10/25/10	10:36	SED	MW	☒		BH-F1	1
10	S-10O-C056-1.0-2.0	10/25/10	10:36	SED	MW	☒		BH-F1	1
	Container Type					A			
	Preservative					A			

ANALYSIS

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

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:10		11/5/10 1900

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

FORM NO: 01-01(I-HJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-655
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12171013:56

CHAIN OF CUSTODY

ALPHA TRIBAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018126

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	SAMPLE HANDLING	TOTAL # BOTTLES	Sample Specific Comments
18126-3	S-10O-C057-0-1.0	10/25/10	11:00	SED	MW	☒		1	BH-G1
-4	S-10O-C057-1.0-2.0	10/25/10	11:00	SED		☒		1	BH-G1
-5	S-10O-C058-0-1.0	10/25/10	11:32	SED		☒		1	BH-I1
-6	S-10O-C058-1.0-2.0	10/25/10	11:32	SED		☒		1	BH-I1
-7	S-10O-C059-0-1.0	10/25/10	11:54	SED		☒		1	BH-K1
-8	S-10O-C059-1.0-2.0	10/25/10	11:54	SED		☒		1	BH-K1
-9	S-10O-C060-0-1.0	10/25/10	12:11	SED		☒		1	BH-L1
-10	S-10O-C060-1.0-2.0	10/25/10	12:11	SED		☒		1	BH-L1
-11	S-10O-C061-0-1.0	10/25/10	12:36	SED		☒		1	BH-M1
-12	S-10O-C061-1.0-2.0	10/25/10	12:36	SED		☒		1	BH-M1
	Container Type					A			
	Preservative					A			

ANALYSIS

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

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10, 19:10		11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-656
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12171013:56

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018126

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information — Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	SAMPLE HANDLING Filtration ☐ Done ☒ Not Needed ☐ Lab to do Preservation ☐ Lab to do (Please specify below)	TOTAL # BOTTLES	Sample Specific Comments
10126 13	S-10O-C062-0-1.0	10/25/10	13:00	SED	MW	☒		1	BH-N2
14	S-10O-C062-1.0-2.0	10/25/10	13:00	SED	MW	☒		1	BH-N2
15	S-10O-C063-0-1.0	10/25/10	13:19	SED	MW	☒		1	BH-O1
16	S-10O-C063-1.0-2.0	10/25/10	13:19	SED	MW	☒		1	BH-O1
17	S-10O-C064-0-1.0	10/25/10	13:38	SED	MW	☒		1	BH-P1
18	S-10O-C064-1.0-2.0	10/25/10	13:38	SED	MW	☒		1	BH-P1
19	S-10O-C065-0-1.0	10/27/10	09:05	SED	MW	☒		1	BH-SOIL1
	S-10O-C065-1.0-2.0	10/27/10	09:05	SED	MW	☒		1	BH-SOIL1
	S-10O-C066-0-1.0	10/27/10	10:07	SED	MW	☒		1	BH-SOIL2
	S-10O-C066-1.0-2.0	10/27/10	10:07	SED	MW	☒		1	BH-SOIL2
				Container Type		A			
				Preservative		A			

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 23-APR-09)

Delivery Order-0010-03
April 2011
B-657
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12171013:56

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018126

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
	S-10O-C067-0-1.0	10/27/10	10:25	SED	MW	☒	BH-SOIL3	1
	S-10O-C067-1.0-2.0	10/27/10	10:25	SED	MW	☒	BH-SOIL3	1
	S-10O-C068-0-1.0	10/27/10	11:10	SED	MW	☒	BH-SOIL4	1
	S-10O-C068-1.0-2.0	10/27/10	11:10	SED	MW	☒	BH-SOIL4	1
	S-10O-C069-0-1.0	10/27/10	11:30	SED	MW	☒	BH-SOIL5	1
	S-10O-C069-1.0-2.0	10/27/10	11:30	SED	MW	☒	BH-SOIL5	1
	S-10O-C070-0-1.0	10/27/10	15:18	SED	DB	☒	BH-CSO	1
18126.20	S-10O-C071-0-1.0	10/28/10	08:33	SED	MW	☒	BH-A2	1
	S-10O-C071-1.0-2.0	10/28/10	08:33	SED	MW	☒	BH-A2	1
						☐		
				Container Type		A		
				Preservative		A		

ANALYSIS

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

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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FORM NO: 01-01(I-N-J) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-658
Sediment Monitoring Summary Report
W912WJ-09-D-0001

L1018126

CHAIN OF CUSTODY

PAGE 11 OF 11

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 | ALPHA Job #:

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	SAMPLE HANDLING: Filtration ☐ Done ☒ Not Needed ☐ Lab to do; Preservation ☐ Lab to do (Please specify below)	TOTAL # BOTTLES	Sample Specific Comments
	S-10N-C017-0-1.0	11/03/10	09:12	SED	KGM	☒		1	BH-M2
	S-10N-C017-1.0-2.0	11/03/10	09:12	SED	KGM	☒		1	BH-M2
	S-10O-C072-1.0-2.0MSMSD	10/28/10	09:09	SED	MW	☒		1	MS/MSD
	S-10O-C076-0-1.0MSMSD	10/28/10	10:00	SED	DR	☒		1	MS/MSD
	S-10O-C079-1.0-2.0MSMSD	10/28/10	10:38	SED	DR	☒		1	MS/MSD
	S-10N-C001-0-1.0MSMSD	11/03/10	13:43	SED	KGM	☒		1	MS/MSD
	S-10O-C074-0-1.0MS/MSD	10/27/10	15:18	SED	DB	☐		1	CSO MS/MSD
15126.20	S-10O-C071-0-1.0MS/MSD	10/28/10	08:33	SED	MW	☐		1	MS/MSD
						☐			
						☐			

Container Type	A	-	-	-	-	-	-	-	-	-	-	-
Preservative	A	-	-	-	-	-	-	-	-	-	-	-

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1908

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FORM NO: 01-01(D-NJ) (rev. 29-APR-09)

ANALYTICAL REPORT

Lab Number:	L1018129
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NBH ENVIRONMENTAL MONITORING
Project Number:	TO-0010-03
Report Date:	12/22/10

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

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018129
Report Date: 12/22/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1018129-01	S-10O-C065-1.0-2.0	NEW BEDFORD, MA	10/27/10 09:05
L1018129-02	S-10O-C066-0-1.0	NEW BEDFORD, MA	10/27/10 10:07
L1018129-03	S-10O-C066-1.0-2.0	NEW BEDFORD, MA	10/27/10 10:07
L1018129-04	S-10O-C067-0-1.0	NEW BEDFORD, MA	10/27/10 10:25
L1018129-05	S-10O-C067-1.0-2.0	NEW BEDFORD, MA	10/27/10 10:25
L1018129-06	S-10O-C068-0-1.0	NEW BEDFORD, MA	10/27/10 11:10
L1018129-07	S-10O-C068-1.0-2.0	NEW BEDFORD, MA	10/27/10 11:10
L1018129-08	S-10O-C069-0-1.0	NEW BEDFORD, MA	10/27/10 11:30
L1018129-09	S-10O-C069-1.0-2.0	NEW BEDFORD, MA	10/27/10 11:30
L1018129-10	S-10O-C071-1.0-2.0	NEW BEDFORD, MA	10/28/10 08:33
L1018129-11	S-10O-C072-0-1.0	NEW BEDFORD, MA	10/28/10 09:09
L1018129-12	S-10O-C072-1.0-2.0	NEW BEDFORD, MA	10/28/10 09:09
L1018129-13	S-10O-C073-0-1.0	NEW BEDFORD, MA	10/28/10 08:55
L1018129-14	S-10O-C073-1.0-2.0	NEW BEDFORD, MA	10/28/10 08:55
L1018129-15	S-10O-C074-0-1.0	NEW BEDFORD, MA	10/28/10 09:20
L1018129-16	S-10O-C074-1.0-2.0	NEW BEDFORD, MA	10/28/10 09:20
L1018129-17	S-10O-C075-0-1.0	NEW BEDFORD, MA	10/28/10 09:35
L1018129-18	S-10O-C075-1.0-2.0	NEW BEDFORD, MA	10/28/10 09:35

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018129
Project Number:	TO-0010-03	**Report Date:**	12/22/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on November 05, 2010 and placed in frozen storage until November 22, 2010 when aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage until they were removed November 30, 2010 to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

PCB Congeners by 8082

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

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018129
Project Number:	TO-0010-03	**Report Date:**	12/22/10

Case Narrative (continued)

whether it was the higher or lower value.

The majority of samples were analyzed at the dilution required by the elevated concentrations of target compounds in the sample.

L1018129-10, -12 were re-analyzed on further dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analyses were performed only for the compounds that exceeded the calibration range.

The WG445388-3 LCSD recoveries were above the acceptance criteria for Cl3-BZ#28(155%). In addition, the associated WG445388-3 LCS/LCSD RPD(s) are above the acceptance criteria for Cl3-BZ#18 (34%) and Cl3-BZ#28 (35%).

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: 12/22/10

ORGANICS

PCBS

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-01	Date Collected:	10/27/10 09:05
Client ID:	S-10O-C065-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 10:46	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	16.5	--	10
Cl3-BZ#18	ND		ug/kg	16.5	--	10
Cl4-BZ#52	75.3		ug/kg	16.5	--	10
Cl4-BZ#44	39.9		ug/kg	16.5	--	10
Cl4-BZ#66	133		ug/kg	16.5	--	10
Cl5-BZ#118	142		ug/kg	16.5	--	10
Cl6-BZ#138	154		ug/kg	16.5	--	10
Cl6-BZ#128	41.4		ug/kg	16.5	--	10
Cl7-BZ#180	25.3		ug/kg	16.5	--	10
Cl7-BZ#170	19.6		ug/kg	16.5	--	10
Cl8-BZ#195	ND		ug/kg	16.5	--	10
Cl9-BZ#206	ND		ug/kg	16.5	--	10
Cl10-BZ#209	ND		ug/kg	16.5	--	10

DBOB	81	30-150
BZ 198	78	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-01	Date Collected:	10/27/10 09:05
Client ID:	S-10O-C065-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 10:46	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	19.6		ug/kg	16.5	--	10
Cl5-BZ#101	127		ug/kg	16.5	--	10
Cl6-BZ#153	88.7		ug/kg	16.5	--	10
Cl5-BZ#105	69.8		ug/kg	16.5	--	10
Cl7-BZ#187	20.1		ug/kg	16.5	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	78		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-02	Date Collected:	10/27/10 10:07
Client ID:	S-10O-C066-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 11:27	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	16.6	--	10
Cl3-BZ#18	ND		ug/kg	16.6	--	10
Cl4-BZ#52	65.7		ug/kg	16.6	--	10
Cl4-BZ#44	27.6		ug/kg	16.6	--	10
Cl4-BZ#66	147		ug/kg	16.6	--	10
Cl5-BZ#118	194		ug/kg	16.6	--	10
Cl6-BZ#138	190		ug/kg	16.6	--	10
Cl7-BZ#187	22.2		ug/kg	16.6	--	10
Cl6-BZ#128	51.6		ug/kg	16.6	--	10
Cl7-BZ#180	25.5		ug/kg	16.6	--	10
Cl7-BZ#170	20.2		ug/kg	16.6	--	10
Cl8-BZ#195	ND		ug/kg	16.6	--	10
Cl9-BZ#206	ND		ug/kg	16.6	--	10
Cl10-BZ#209	ND		ug/kg	16.6	--	10

DBOB	85	30-150
BZ 198	88	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-02	Date Collected:	10/27/10 10:07
Client ID:	S-10O-C066-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 11:27	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/kg	16.6	--	10
Cl5-BZ#101	166		ug/kg	16.6	--	10
Cl6-BZ#153	110		ug/kg	16.6	--	10
Cl5-BZ#105	79.1		ug/kg	16.6	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	88		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-03	Date Collected:	10/27/10 10:07
Client ID:	S-10O-C066-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 12:08	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	33.3	--	20
Cl3-BZ#18	ND		ug/kg	33.3	--	20
Cl4-BZ#52	111		ug/kg	33.3	--	20
Cl4-BZ#44	51.8		ug/kg	33.3	--	20
Cl4-BZ#66	302		ug/kg	33.3	--	20
Cl5-BZ#118	331		ug/kg	33.3	--	20
Cl6-BZ#138	224		ug/kg	33.3	--	20
Cl6-BZ#128	58.2		ug/kg	33.3	--	20
Cl7-BZ#180	33.9		ug/kg	33.3	--	20
Cl7-BZ#170	ND		ug/kg	33.3	--	20
Cl8-BZ#195	ND		ug/kg	33.3	--	20
Cl9-BZ#206	ND		ug/kg	33.3	--	20
Cl10-BZ#209	ND		ug/kg	33.3	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	53		30-150
BZ 198	57		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-03	Date Collected:	10/27/10 10:07
Client ID:	S-10O-C066-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 12:08	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	76.1		ug/kg	33.3	--	20
Cl5-BZ#101	316		ug/kg	33.3	--	20
Cl6-BZ#153	187		ug/kg	33.3	--	20
Cl5-BZ#105	98.6		ug/kg	33.3	--	20
Cl7-BZ#187	ND		ug/kg	33.3	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	53		30-150
BZ 198	57		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-04	Date Collected:	10/27/10 10:25
Client ID:	S-10O-C067-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 12:49	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	16.6	--	10
Cl3-BZ#18	ND		ug/kg	16.6	--	10
Cl4-BZ#52	55.6		ug/kg	16.6	--	10
Cl4-BZ#44	25.1		ug/kg	16.6	--	10
Cl4-BZ#66	119		ug/kg	16.6	--	10
Cl5-BZ#118	172		ug/kg	16.6	--	10
Cl6-BZ#138	166		ug/kg	16.6	--	10
Cl6-BZ#128	43.9		ug/kg	16.6	--	10
Cl7-BZ#180	26.2		ug/kg	16.6	--	10
Cl7-BZ#170	21.1		ug/kg	16.6	--	10
Cl8-BZ#195	ND		ug/kg	16.6	--	10
Cl9-BZ#206	ND		ug/kg	16.6	--	10
Cl10-BZ#209	ND		ug/kg	16.6	--	10

DBOB	84	30-150
BZ 198	85	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-04	Date Collected:	10/27/10 10:25
Client ID:	S-10O-C067-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 12:49	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	26.3		ug/kg	16.6	--	10
Cl5-BZ#101	118		ug/kg	16.6	--	10
Cl6-BZ#153	95.5		ug/kg	16.6	--	10
Cl5-BZ#105	73.4		ug/kg	16.6	--	10
Cl7-BZ#187	22.0		ug/kg	16.6	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	84		30-150
BZ 198	85		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-05	Date Collected:	10/27/10 10:25
Client ID:	S-10O-C067-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 13:30	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	8.22	--	5
Cl3-BZ#18	18.7		ug/kg	8.22	--	5
Cl4-BZ#52	48.0		ug/kg	8.22	--	5
Cl4-BZ#44	23.5		ug/kg	8.22	--	5
Cl4-BZ#66	78.7		ug/kg	8.22	--	5
Cl5-BZ#118	86.0		ug/kg	8.22	--	5
Cl6-BZ#138	69.6		ug/kg	8.22	--	5
Cl7-BZ#187	8.96		ug/kg	8.22	--	5
Cl6-BZ#128	17.6		ug/kg	8.22	--	5
Cl7-BZ#180	9.34		ug/kg	8.22	--	5
Cl7-BZ#170	ND		ug/kg	8.22	--	5
Cl8-BZ#195	ND		ug/kg	8.22	--	5
Cl9-BZ#206	ND		ug/kg	8.22	--	5
Cl10-BZ#209	ND		ug/kg	8.22	--	5

DBOB	69	30-150
BZ 198	75	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-05	Date Collected:	10/27/10 10:25
Client ID:	S-10O-C067-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 13:30	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	21.4		ug/kg	8.22	--	5
Cl5-BZ#101	77.4		ug/kg	8.22	--	5
Cl6-BZ#153	49.1		ug/kg	8.22	--	5
Cl5-BZ#105	30.7		ug/kg	8.22	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	75		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-06	Date Collected:	10/27/10 11:10
Client ID:	S-10O-C068-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 14:11	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	32.9	--	20
Cl3-BZ#18	42.3		ug/kg	32.9	--	20
Cl4-BZ#52	198		ug/kg	32.9	--	20
Cl4-BZ#44	106		ug/kg	32.9	--	20
Cl4-BZ#66	349		ug/kg	32.9	--	20
Cl5-BZ#118	328		ug/kg	32.9	--	20
Cl6-BZ#138	270		ug/kg	32.9	--	20
Cl6-BZ#128	69.6		ug/kg	32.9	--	20
Cl7-BZ#180	38.0		ug/kg	32.9	--	20
Cl7-BZ#170	ND		ug/kg	32.9	--	20
Cl8-BZ#195	ND		ug/kg	32.9	--	20
Cl9-BZ#206	ND		ug/kg	32.9	--	20
Cl10-BZ#209	ND		ug/kg	32.9	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	76		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-06	Date Collected:	10/27/10 11:10
Client ID:	S-10O-C068-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 14:11	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	129		ug/kg	32.9	--	20
Cl5-BZ#101	306		ug/kg	32.9	--	20
Cl6-BZ#153	185		ug/kg	32.9	--	20
Cl5-BZ#105	132		ug/kg	32.9	--	20
Cl7-BZ#187	34.2		ug/kg	32.9	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	76		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-07	Date Collected:	10/27/10 11:10
Client ID:	S-10O-C068-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 14:52	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	32.8	--	20
Cl3-BZ#18	ND		ug/kg	32.8	--	20
Cl4-BZ#52	221		ug/kg	32.8	--	20
Cl4-BZ#44	114		ug/kg	32.8	--	20
Cl4-BZ#66	364		ug/kg	32.8	--	20
Cl5-BZ#118	340		ug/kg	32.8	--	20
Cl6-BZ#138	249		ug/kg	32.8	--	20
Cl6-BZ#128	62.9		ug/kg	32.8	--	20
Cl7-BZ#180	35.1		ug/kg	32.8	--	20
Cl7-BZ#170	ND		ug/kg	32.8	--	20
Cl8-BZ#195	ND		ug/kg	32.8	--	20
Cl9-BZ#206	ND		ug/kg	32.8	--	20
Cl10-BZ#209	ND		ug/kg	32.8	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	63		30-150
BZ 198	65		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-07	Date Collected:	10/27/10 11:10
Client ID:	S-10O-C068-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 14:52	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	112		ug/kg	32.8	--	20
Cl5-BZ#101	330		ug/kg	32.8	--	20
Cl6-BZ#153	176		ug/kg	32.8	--	20
Cl5-BZ#105	121		ug/kg	32.8	--	20
Cl7-BZ#187	ND		ug/kg	32.8	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	63		30-150
BZ 198	65		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-08	Date Collected:	10/27/10 11:30
Client ID:	S-10O-C069-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 18:18	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.28	--	2
Cl3-BZ#18	9.03		ug/kg	3.28	--	2
Cl4-BZ#52	19.2		ug/kg	3.28	--	2
Cl4-BZ#44	12.4		ug/kg	3.28	--	2
Cl4-BZ#66	27.1		ug/kg	3.28	--	2
Cl5-BZ#118	16.3		ug/kg	3.28	--	2
Cl6-BZ#138	16.4		ug/kg	3.28	--	2
Cl6-BZ#128	4.66		ug/kg	3.28	--	2
Cl8-BZ#195	ND		ug/kg	3.28	--	2
Cl9-BZ#206	ND		ug/kg	3.28	--	2
Cl10-BZ#209	ND		ug/kg	3.28	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	38		30-150
BZ 198	36		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-08	Date Collected:	10/27/10 11:30
Client ID:	S-10O-C069-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 18:18	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	12.5		ug/kg	3.28	--	2
Cl5-BZ#101	9.31		ug/kg	3.28	--	2
Cl6-BZ#153	8.72		ug/kg	3.28	--	2
Cl5-BZ#105	9.10		ug/kg	3.28	--	2
Cl7-BZ#187	ND		ug/kg	3.28	--	2
Cl7-BZ#180	3.34		ug/kg	3.28	--	2
Cl7-BZ#170	ND		ug/kg	3.28	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	38		30-150
BZ 198	36		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-09	Date Collected:	10/27/10 11:30
Client ID:	S-10O-C069-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 18:59	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.28	--	2
Cl3-BZ#18	ND		ug/kg	3.28	--	2
Cl3-BZ#28	ND		ug/kg	3.28	--	2
Cl4-BZ#52	ND		ug/kg	3.28	--	2
Cl4-BZ#44	ND		ug/kg	3.28	--	2
Cl4-BZ#66	ND		ug/kg	3.28	--	2
Cl5-BZ#101	ND		ug/kg	3.28	--	2
Cl5-BZ#118	ND		ug/kg	3.28	--	2
Cl5-BZ#105	ND		ug/kg	3.28	--	2
Cl6-BZ#138	ND		ug/kg	3.28	--	2
Cl7-BZ#187	ND		ug/kg	3.28	--	2
Cl6-BZ#128	ND		ug/kg	3.28	--	2
Cl7-BZ#180	ND		ug/kg	3.28	--	2
Cl7-BZ#170	ND		ug/kg	3.28	--	2
Cl8-BZ#195	ND		ug/kg	3.28	--	2
Cl9-BZ#206	ND		ug/kg	3.28	--	2
Cl10-BZ#209	ND		ug/kg	3.28	--	2

DBOB	65	30-150
BZ 198	61	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-09	Date Collected:	10/27/10 11:30
Client ID:	S-10O-C069-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 18:59	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	3.28	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	61		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-10	Date Collected:	10/28/10 08:33
Client ID:	S-10O-C071-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/18/10 10:06	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3420		ug/kg	171	--	100
Cl3-BZ#18	6830	E	ug/kg	171	--	100
Cl4-BZ#52	23100	E	ug/kg	171	--	100
Cl4-BZ#44	5690	E	ug/kg	171	--	100
Cl4-BZ#66	9500	E	ug/kg	171	--	100
Cl5-BZ#118	3840	E	ug/kg	171	--	100
Cl6-BZ#138	3250		ug/kg	171	--	100
Cl7-BZ#187	1000		ug/kg	171	--	100
Cl6-BZ#128	554		ug/kg	171	--	100
Cl7-BZ#180	714		ug/kg	171	--	100
Cl7-BZ#170	585		ug/kg	171	--	100
Cl8-BZ#195	ND		ug/kg	171	--	100
Cl9-BZ#206	ND		ug/kg	171	--	100
Cl10-BZ#209	ND		ug/kg	171	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	71		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-10	Date Collected:	10/28/10 08:33
Client ID:	S-10O-C071-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/18/10 10:06	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	7810	E	ug/kg	171	--	100
Cl5-BZ#101	4300	E	ug/kg	171	--	100
Cl6-BZ#153	3770	E	ug/kg	171	--	100
Cl5-BZ#105	416		ug/kg	171	--	100

DBOB	86	30-150
BZ 198	71	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-10 D	Date Collected:	10/28/10 08:33
Client ID:	S-10O-C071-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 15:33	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	10300		ug/kg	1710	--	1000
Cl4-BZ#66	10700		ug/kg	1710	--	1000

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-10 D	Date Collected:	10/28/10 08:33
Client ID:	S-10O-C071-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:50
Analytical Date:	12/20/10 15:33	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	10500		ug/kg	1710	--	1000
Cl4-BZ#52	27000		ug/kg	1710	--	1000
Cl4-BZ#44	8090		ug/kg	1710	--	1000
Cl5-BZ#101	6380		ug/kg	1710	--	1000
Cl5-BZ#118	4490		ug/kg	1710	--	1000
Cl6-BZ#153	5410		ug/kg	1710	--	1000

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-11	Date Collected:	10/28/10 09:09
Client ID:	S-10O-C072-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 19:40	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	7.71		ug/kg	3.35	--	2
Cl4-BZ#66	6.25		ug/kg	3.35	--	2
Cl5-BZ#118	ND		ug/kg	3.35	--	2
Cl5-BZ#105	ND		ug/kg	3.35	--	2
Cl6-BZ#138	ND		ug/kg	3.35	--	2
Cl7-BZ#187	ND		ug/kg	3.35	--	2
Cl6-BZ#128	ND		ug/kg	3.35	--	2
Cl7-BZ#180	ND		ug/kg	3.35	--	2
Cl7-BZ#170	ND		ug/kg	3.35	--	2
Cl8-BZ#195	ND		ug/kg	3.35	--	2
Cl9-BZ#206	ND		ug/kg	3.35	--	2
Cl10-BZ#209	ND		ug/kg	3.35	--	2

DBOB	71	30-150
BZ 198	80	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-11	Date Collected:	10/28/10 09:09
Client ID:	S-10O-C072-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 19:40	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.35	--	2
Cl3-BZ#28	6.30		ug/kg	3.35	--	2
Cl4-BZ#52	16.2		ug/kg	3.35	--	2
Cl4-BZ#44	4.94		ug/kg	3.35	--	2
Cl5-BZ#101	3.84		ug/kg	3.35	--	2
Cl6-BZ#153	ND		ug/kg	3.35	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	71		30-150
BZ 198	80		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-12	Date Collected:	10/28/10 09:09
Client ID:	S-10O-C072-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 16:14	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	71.1		ug/kg	17.3	--	10
Cl3-BZ#18	216		ug/kg	17.3	--	10
Cl4-BZ#44	166		ug/kg	17.3	--	10
Cl4-BZ#66	310		ug/kg	17.3	--	10
Cl5-BZ#118	220		ug/kg	17.3	--	10
Cl6-BZ#138	141		ug/kg	17.3	--	10
Cl6-BZ#128	36.7		ug/kg	17.3	--	10
Cl7-BZ#180	26.4		ug/kg	17.3	--	10
Cl7-BZ#170	20.9		ug/kg	17.3	--	10
Cl8-BZ#195	ND		ug/kg	17.3	--	10
Cl9-BZ#206	ND		ug/kg	17.3	--	10
Cl10-BZ#209	ND		ug/kg	17.3	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-12	Date Collected:	10/28/10 09:09
Client ID:	S-10O-C072-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 16:14	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	329		ug/kg	17.3	--	10
Cl5-BZ#101	183		ug/kg	17.3	--	10
Cl6-BZ#153	135		ug/kg	17.3	--	10
Cl5-BZ#105	50.2		ug/kg	17.3	--	10
Cl7-BZ#187	25.4		ug/kg	17.3	--	10

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-12 D	Date Collected:	10/28/10 09:09
Client ID:	S-10O-C072-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/18/10 11:28	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	549		ug/kg	173	--	100

DBOB	61	30-150
BZ 198	63	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-13	Date Collected:	10/28/10 08:55
Client ID:	S-10O-C073-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/18/10 13:32	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	384		ug/kg	166	--	100
Cl4-BZ#52	706		ug/kg	166	--	100
Cl4-BZ#66	667		ug/kg	166	--	100
Cl5-BZ#118	455		ug/kg	166	--	100
Cl6-BZ#138	269		ug/kg	166	--	100
Cl7-BZ#187	ND		ug/kg	166	--	100
Cl6-BZ#128	ND		ug/kg	166	--	100
Cl7-BZ#180	ND		ug/kg	166	--	100
Cl7-BZ#170	ND		ug/kg	166	--	100
Cl8-BZ#195	ND		ug/kg	166	--	100
Cl9-BZ#206	ND		ug/kg	166	--	100
Cl10-BZ#209	ND		ug/kg	166	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	61		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-13	Date Collected:	10/28/10 08:55
Client ID:	S-10O-C073-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/18/10 13:32	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	190		ug/kg	166	--	100
Cl3-BZ#28	822		ug/kg	166	--	100
Cl4-BZ#44	375		ug/kg	166	--	100
Cl5-BZ#101	444		ug/kg	166	--	100
Cl6-BZ#153	278		ug/kg	166	--	100
Cl5-BZ#105	ND		ug/kg	166	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	61		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-14	Date Collected:	10/28/10 08:55
Client ID:	S-10O-C073-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 20:21	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.36	--	2
Cl3-BZ#18	ND		ug/kg	3.36	--	2
Cl3-BZ#28	ND		ug/kg	3.36	--	2
Cl4-BZ#52	ND		ug/kg	3.36	--	2
Cl4-BZ#44	ND		ug/kg	3.36	--	2
Cl4-BZ#66	ND		ug/kg	3.36	--	2
Cl5-BZ#101	ND		ug/kg	3.36	--	2
Cl5-BZ#118	ND		ug/kg	3.36	--	2
Cl5-BZ#105	ND		ug/kg	3.36	--	2
Cl6-BZ#138	ND		ug/kg	3.36	--	2
Cl7-BZ#187	ND		ug/kg	3.36	--	2
Cl6-BZ#128	ND		ug/kg	3.36	--	2
Cl7-BZ#180	ND		ug/kg	3.36	--	2
Cl7-BZ#170	ND		ug/kg	3.36	--	2
Cl8-BZ#195	ND		ug/kg	3.36	--	2
Cl9-BZ#206	ND		ug/kg	3.36	--	2
Cl10-BZ#209	ND		ug/kg	3.36	--	2

DBOB	70	30-150
BZ 198	66	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-14	Date Collected:	10/28/10 08:55
Client ID:	S-10O-C073-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 20:21	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	3.36	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	70		30-150
BZ 198	66		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-15	Date Collected:	10/28/10 09:20
Client ID:	S-10O-C074-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/18/10 14:54	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	164	--	100
Cl3-BZ#18	304		ug/kg	164	--	100
Cl4-BZ#52	593		ug/kg	164	--	100
Cl4-BZ#66	420		ug/kg	164	--	100
Cl5-BZ#118	305		ug/kg	164	--	100
Cl5-BZ#105	ND		ug/kg	164	--	100
Cl6-BZ#138	194		ug/kg	164	--	100
Cl7-BZ#187	ND		ug/kg	164	--	100
Cl6-BZ#128	ND		ug/kg	164	--	100
Cl7-BZ#180	ND		ug/kg	164	--	100
Cl7-BZ#170	ND		ug/kg	164	--	100
Cl8-BZ#195	ND		ug/kg	164	--	100
Cl9-BZ#206	ND		ug/kg	164	--	100
Cl10-BZ#209	ND		ug/kg	164	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	63		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-15	Date Collected:	10/28/10 09:20
Client ID:	S-10O-C074-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/18/10 14:54	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	592		ug/kg	164	--	100
Cl4-BZ#44	252		ug/kg	164	--	100
Cl5-BZ#101	296		ug/kg	164	--	100
Cl6-BZ#153	215		ug/kg	164	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	63		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-16	Date Collected:	10/28/10 09:20
Client ID:	S-10O-C074-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 21:02	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.36	--	2
Cl3-BZ#18	ND		ug/kg	3.36	--	2
Cl3-BZ#28	ND		ug/kg	3.36	--	2
Cl4-BZ#52	ND		ug/kg	3.36	--	2
Cl4-BZ#44	ND		ug/kg	3.36	--	2
Cl4-BZ#66	ND		ug/kg	3.36	--	2
Cl5-BZ#101	ND		ug/kg	3.36	--	2
Cl5-BZ#118	ND		ug/kg	3.36	--	2
Cl5-BZ#105	ND		ug/kg	3.36	--	2
Cl6-BZ#138	ND		ug/kg	3.36	--	2
Cl7-BZ#187	ND		ug/kg	3.36	--	2
Cl6-BZ#128	ND		ug/kg	3.36	--	2
Cl7-BZ#180	ND		ug/kg	3.36	--	2
Cl7-BZ#170	ND		ug/kg	3.36	--	2
Cl8-BZ#195	ND		ug/kg	3.36	--	2
Cl9-BZ#206	ND		ug/kg	3.36	--	2
Cl10-BZ#209	ND		ug/kg	3.36	--	2

DBOB	62	30-150
BZ 198	70	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-16	Date Collected:	10/28/10 09:20
Client ID:	S-10O-C074-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 21:02	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	3.36	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	62		30-150
BZ 198	70		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-17	Date Collected:	10/28/10 09:35
Client ID:	S-10O-C075-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 16:55	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	59.7		ug/kg	16.4	--	10
Cl3-BZ#18	159		ug/kg	16.4	--	10
Cl4-BZ#52	303		ug/kg	16.4	--	10
Cl4-BZ#66	202		ug/kg	16.4	--	10
Cl5-BZ#118	143		ug/kg	16.4	--	10
Cl6-BZ#138	95.0		ug/kg	16.4	--	10
Cl6-BZ#128	23.0		ug/kg	16.4	--	10
Cl7-BZ#170	ND		ug/kg	16.4	--	10
Cl8-BZ#195	ND		ug/kg	16.4	--	10
Cl9-BZ#206	ND		ug/kg	16.4	--	10
Cl10-BZ#209	ND		ug/kg	16.4	--	10

DBOB	65	30-150
BZ 198	72	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-17	Date Collected:	10/28/10 09:35
Client ID:	S-10O-C075-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 16:55	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	258		ug/kg	16.4	--	10
Cl4-BZ#44	124		ug/kg	16.4	--	10
Cl5-BZ#101	134		ug/kg	16.4	--	10
Cl6-BZ#153	99.9		ug/kg	16.4	--	10
Cl5-BZ#105	35.0		ug/kg	16.4	--	10
Cl7-BZ#187	19.2		ug/kg	16.4	--	10
Cl7-BZ#180	18.8		ug/kg	16.4	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	72		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-18	Date Collected:	10/28/10 09:35
Client ID:	S-10O-C075-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 21:43	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.34	--	2
Cl3-BZ#18	ND		ug/kg	3.34	--	2
Cl3-BZ#28	ND		ug/kg	3.34	--	2
Cl4-BZ#52	ND		ug/kg	3.34	--	2
Cl4-BZ#44	ND		ug/kg	3.34	--	2
Cl4-BZ#66	ND		ug/kg	3.34	--	2
Cl5-BZ#101	ND		ug/kg	3.34	--	2
Cl5-BZ#118	ND		ug/kg	3.34	--	2
Cl5-BZ#105	ND		ug/kg	3.34	--	2
Cl6-BZ#138	ND		ug/kg	3.34	--	2
Cl7-BZ#187	ND		ug/kg	3.34	--	2
Cl6-BZ#128	ND		ug/kg	3.34	--	2
Cl7-BZ#180	ND		ug/kg	3.34	--	2
Cl7-BZ#170	ND		ug/kg	3.34	--	2
Cl8-BZ#195	ND		ug/kg	3.34	--	2
Cl9-BZ#206	ND		ug/kg	3.34	--	2
Cl10-BZ#209	ND		ug/kg	3.34	--	2

DBOB	77	30-150
BZ 198	86	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

SAMPLE RESULTS

Lab ID:	L1018129-18	Date Collected:	10/28/10 09:35
Client ID:	S-10O-C075-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:52
Analytical Date:	12/20/10 21:43	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	3.34	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	77		30-150
BZ 198	86		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/18/10 01:11
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 11/30/10 14:50
Cleanup Method1: EPA 3630
Cleanup Date1: 12/07/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-18 Batch: WG445388-1					
Cl2-BZ#8	ND		ug/kg	1.67	--
Cl3-BZ#18	ND		ug/kg	1.67	--
Cl3-BZ#28	ND		ug/kg	1.67	--
Cl4-BZ#52	ND		ug/kg	1.67	--
Cl4-BZ#44	ND		ug/kg	1.67	--
Cl4-BZ#66	ND		ug/kg	1.67	--
Cl5-BZ#101	ND		ug/kg	1.67	--
Cl5-BZ#118	ND		ug/kg	1.67	--
Cl5-BZ#105	ND		ug/kg	1.67	--
Cl6-BZ#138	ND		ug/kg	1.67	--
Cl7-BZ#187	ND		ug/kg	1.67	--
Cl6-BZ#128	ND		ug/kg	1.67	--
Cl7-BZ#180	ND		ug/kg	1.67	--
Cl7-BZ#170	ND		ug/kg	1.67	--
Cl8-BZ#195	ND		ug/kg	1.67	--
Cl9-BZ#206	ND		ug/kg	1.67	--
Cl10-BZ#209	ND		ug/kg	1.67	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	94		30-150
BZ 198	109		30-150

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/18/10 01:11
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 11/30/10 14:50
Cleanup Method1: EPA 3630
Cleanup Date1: 12/07/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-18 Batch: WG445388-1					
Cl6-BZ#153	ND		ug/kg	1.67	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	94		30-150
BZ 198	109		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018129
Report Date: 12/22/10

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): 01-18 QC Batch ID: WG445388-4 WG445388-5 QC Sample: L1018129-12 Client ID: S-10O-C072-1.0-2.0												
Cl2-BZ#8	71.1	1720	1230	68		1020	55		40-140	19		30
Cl3-BZ#18	216	1720	1580	80		1360	67		40-140	15		30
Cl4-BZ#52	549	1720	1660	65		1520	56		40-140	9		30
Cl4-BZ#44	166	1720	1320	67		1220	61		40-140	8		30
Cl4-BZ#66	310	1720	1550	72		1420	65		40-140	9		30
Cl5-BZ#118	220	1720	1480	74		1380	68		40-140	7		30
Cl6-BZ#138	141	1720	1340	70		1260	65		40-140	6		30
Cl6-BZ#128	36.7	1720	1200	68		1120	63		40-140	7		30
Cl7-BZ#180	26.4	1720	1170	67		1100	62		40-140	6		30
Cl7-BZ#170	20.9	1720	1230	71		1160	66		40-140	6		30
Cl8-BZ#195	ND	1720	1230	72		1150	67		40-140	7		30
Cl9-BZ#206	ND	1720	1370	80		1320	77		40-140	4		30
Cl10-BZ#209	ND	1720	1200	70		1130	66		40-140	6		30
Cl3-BZ#28	329	1720	2140	106		1900	91		40-140	12		30
Cl5-BZ#101	183	1720	1390	70		1280	64		40-140	8		30
Cl6-BZ#153	135	1720	1260	66		1180	61		40-140	7		30
Cl5-BZ#105	50.2	1720	1300	73		1240	69		40-140	5		30
Cl7-BZ#187	25.4	1720	1190	68		1110	63		40-140	7		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018129
Report Date: 12/22/10

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): 01-18 QC Batch ID: WG445388-4 WG445388-5 QC Sample: L1018129-12 Client ID: S-10O-C072-1.0-2.0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	72		66		30-150
DBOB	74		61		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018129

Project Number: TO-0010-03 **Report Date:** 12/22/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-18 Batch: WG445388-2 WG445388-3							
Cl2-BZ#8	89		97		40-140	9		30
Cl3-BZ#18	96		136		40-140	**34**	Q	30
Cl3-BZ#28	109		**155**	Q	40-140	**35**	Q	30
Cl4-BZ#52	101		133		40-140	27		30
Cl4-BZ#44	103		106		40-140	3		30
Cl4-BZ#66	108		115		40-140	6		30
Cl5-BZ#101	109		112		40-140	3		30
Cl5-BZ#118	112		109		40-140	3		30
Cl5-BZ#105	104		100		40-140	4		30
Cl6-BZ#138	109		107		40-140	2		30
Cl7-BZ#187	110		101		40-140	9		30
Cl6-BZ#128	104		100		40-140	4		30
Cl7-BZ#180	106		100		40-140	6		30
Cl7-BZ#170	110		110		40-140	0		30
Cl8-BZ#195	109		104		40-140	5		30
Cl9-BZ#206	125		120		40-140	4		30
Cl10-BZ#209	112		106		40-140	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-18		Batch: WG445388-2		WG445388-3			
DBOB	112		112		30-150			
BZ 198	117		117		30-150			

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-18		Batch: WG445388-2		WG445388-3			
Cl6-BZ#153	105		109		40-140	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	112		112		30-150
BZ 198	117		117		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-01
Client ID: S-10O-C065-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 09:05
Date Received: 11/05/10
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	99.4		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	88.0		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-02
Client ID: S-10O-C066-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 10:07
Date Received: 11/05/10
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	99.1		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	82.6		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-03
Client ID: S-10O-C066-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 10:07
Date Received: 11/05/10
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	98.4		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	71.2		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-04
Client ID: S-10O-C067-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 10:25
Date Received: 11/05/10
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	99.3		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	89.9		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-05
Client ID: S-10O-C067-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 10:25
Date Received: 11/05/10
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	99.4		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	88.0		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-06
Client ID: S-10O-C068-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 11:10
Date Received: 11/05/10
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	99.8		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	93.5		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-07
Client ID: S-10O-C068-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 11:10
Date Received: 11/05/10
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	99.8		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	94.9		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-08
Client ID: S-10O-C069-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 11:30
Date Received: 11/05/10
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	99.1		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	83.9		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-09
Client ID: S-10O-C069-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/27/10 11:30
Date Received: 11/05/10
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	99.1		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	91.0		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-10
Client ID: S-10O-C071-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 08:33
Date Received: 11/05/10
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	95.4		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	38.6		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-11
Client ID: S-10O-C072-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 09:09
Date Received: 11/05/10
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	98.6		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	49.5		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-12
Client ID: S-10O-C072-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 09:09
Date Received: 11/05/10
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	95.2		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	51.2		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-13
Client ID: S-10O-C073-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 08:55
Date Received: 11/05/10
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	98.1		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	65.6		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-14
Client ID: S-10O-C073-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 08:55
Date Received: 11/05/10
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	98.0		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	51.5		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-15
Client ID: S-10O-C074-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 09:20
Date Received: 11/05/10
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	98.9		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	62.0		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-16
Client ID: S-10O-C074-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 09:20
Date Received: 11/05/10
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	98.0		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	46.3		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-17
Client ID: S-10O-C075-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 09:35
Date Received: 11/05/10
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	98.8		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	72.5		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018129
Report Date: 12/22/10

SAMPLE RESULTS

Lab ID: L1018129-18
Client ID: S-10O-C075-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 09:35
Date Received: 11/05/10
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	98.9		%	0.100	--	1	-	12/01/10 14:20	30,2540G	KB
Solids, Total (Pre-Dried)	63.1		%	0.100	NA	1	-	11/22/10 16:20	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018129
Report Date: 12/22/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-18 QC Batch ID: WG445689-1 QC Sample: L1018129-01 Client ID: S-10O-C065-1.0-2.0						
Solids, Total	99.4	99.4	%	0		20

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018129
Report Date: 12/22/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information

Cooler	Custody Seal
A	Absent
D	Absent
ABCD	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018129-01A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-02A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-03A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-04A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-05A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-06A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-07A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-08A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-09A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-10A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-11A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-11B	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-12A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-13A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-14A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018129
Report Date: 12/22/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018129-15A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-16A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-17A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018129-18A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

Container Comments

L1018129-01A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-02A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-03A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-04A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-05A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-06A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-07A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-08A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-09A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-10A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-11A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-12A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-13A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-14A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-15A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-16A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-17A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018129-18A	SAMPLES FROZEN UPON RECEIPT 11/5/10

*Values in parentheses indicate holding time in days

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018129
Project Number:	TO-0010-03	**Report Date:**	12/22/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018129
Project Number:	TO-0010-03	**Report Date:**	12/22/10

Data Qualifiers

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:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018129
Project Number:	TO-0010-03	**Report Date:**	12/22/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018129

Client Information
Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Project Information
Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time
☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☒ Same as Client info PO #:

Regulatory Requirements/Report Limits
State/Fed Program: FED Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
	S-10O-C062-0-1.0	10/25/10	13:00	SED	MW	☒	BH-N2	1
	S-10O-C062-1.0-2.0	10/25/10	13:00	SED	MW	☒	BH-N2	1
	S-10O-C063-0-1.0	10/25/10	13:19	SED	MW	☒	BH-O1	1
	S-10O-C063-1.0-2.0	10/25/10	13:19	SED	MW	☒	BH-O1	1
	S-10O-C064-0-1.0	10/25/10	13:38	SED	MW	☒	BH-P1	1
	S-10O-C064-1.0-2.0	10/25/10	13:38	SED	MW	☒	BH-P1	1
	S-10O-C065-0-1.0	10/27/10	09:05	SED	MW	☒	BH-SOIL1	1
18127-1	S-10O-C065-1.0-2.0	10/27/10	09:05	SED	MW	☒	BH-SOIL1	1
2	S-10O-C066-0-1.0	10/27/10	10:07	SED	MW	☒	BH-SOIL2	1
3	S-10O-C066-1.0-2.0	10/27/10	10:07	SED	MW	☒	BH-SOIL2	1
				Container Type		A		
				Preservative		A		

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. All samples submitted are subject to Alpha's Payment Terms.

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	11/5/10 19:00	[signature]	11/5/10 1900

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Serial_No:12221015:02

CHAIN OF CUSTODY

ALPHA TECHNICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018129

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	SAMPLE HANDLING Filtration ☐ Done ☒ Not Needed ☐ Lab to do Preservation ☐ Lab to do (Please specify below)	TOTAL # BOTTLES	Sample Specific Comments
18/29 4	S-10O-C067-0-1.0	10/27/10	10:25	SED	MW	☒		1	BH-SOIL3
5	S-10O-C067-1.0-2.0	10/27/10	10:25	SED	MW	☒		1	BH-SOIL3
6	S-10O-C068-0-1.0	10/27/10	11:10	SED	MW	☒		1	BH-SOIL4
7	S-10O-C068-1.0-2.0	10/27/10	11:10	SED	MW	☒		1	BH-SOIL4
8	S-10O-C069-0-1.0	10/27/10	11:30	SED	MW	☒		1	BH-SOIL5
9	S-10O-C069-1.0-2.0	10/27/10	11:30	SED	MW	☒		1	BH-SOIL5
	S-10O-C070-0-1.0	10/27/10	15:18	SED	DB	☒		1	BH-CSO
	S-10O-C071-0-1.0	10/28/10	08:33	SED	MW	☒		1	BH-A2
10	S-10O-C071-1.0-2.0	10/28/10	08:33	SED	MW	☒		1	BH-A2
						☐			
				Container Type		A			
				Preservative		A			

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 01-07 (6-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-739
Sediment Monitoring Summary Report
W912WJ-09-D-0001

CHAIN OF CUSTODY

PAGE 6 OF 11

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018129

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

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E. Falmouth, MA 02536
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Project Location: New Bedford, MA
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Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
1018129.11	S-10O-C072-0-1.0	10/28/10	09:09	SED	MW	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-G4	1
12	S-10O-C072-1.0-2.0	10/28/10	09:09	SED	MW	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-G4	1
13	S-10O-C073-0-1.0	10/28/10	08:55	SED	MW	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-F4	1
14	S-10O-C073-1.0-2.0	10/28/10	08:55	SED	MW	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-F4	1
15	S-10O-C074-0-1.0	10/28/10	09:20	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-H1	1
16	S-10O-C074-1.0-2.0	10/28/10	09:20	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-H1	1
17	S-10O-C075-0-1.0	10/28/10	09:35	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-I3	1
18	S-10O-C075-1.0-2.0	10/28/10	09:35	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-I3	1
	S-10O-C076-0-1.0	10/28/10	10:00	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-J1	1
	S-10O-C076-1.0-2.0	10/28/10	10:00	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-J1	1
				Container Type		A	-	-	-	-	-	-	-	-	-	-	-		
				Preservative		A	-	-	-	-	-	-	-	-	-	-	-		

ANALYSIS

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

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Serial_No:12221015:02

11/5/10 L1018129

CHAIN OF CUSTODY

PAGE 11 OF 11

Date Rec'd in Lab: | ALPHA Job #:

ALPHA Analytical
Westborough, 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 Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Project Information
Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time
☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☒ Same as Client Info PO #:

Regulatory Requirements/Report Limits
State/Fed Program: FED Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	SAMPLE HANDLING Filtration: ☐ Done ☒ Not Needed ☐ Lab to do; Preservation: ☐ Lab to do (Please specify below)	Sample Specific Comments	TOTAL # BOTTLES
	S-10N-C017-0-1.0	11/03/10	09:12	SED	KGM	☒		BH-M2	1
	S-10N-C017-1.0-2.0	11/03/10	09:12	SED	KGM	☒		BH-M2	1
L1018129-12	S-10O-C072-1.0-2.0MSMSD	10/28/10	09:09	SED	MW	☒		MS/MSD	1
	S-10O-C076-0-1.0MSMSD	10/28/10	10:00	SED	DR	☒		MS/MSD	1
	S-10O-C079-1.0-2.0MSMSD	10/28/10	10:38	SED	DR	☒		MS/MSD	1
	S-10N-C001-0-1.0MSMSD	11/03/10	13:43	SED	KGM	☒		MS/MSD	1
	S-10O-C070-0-1.0MS/MSD	10/27/10	15:18	SED	DB	☐		CSO MS/MSD	1
	S-10O-C071-0-1.0MS/MSD	10/28/10	08:33	SED	MW	☐		MS/MSD	1
						☐			
						☐			

Container Type	A	-	-	-	-	-	-	-	-	-	-	-	
Preservative	A	-	-	-	-	-	-	-	-	-	-	-	

Relinquished By:	Date/Time	Received By:	Date/Time
DWalsh	11/5/10 19:00	[illegible]	11/5/10 1900

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

FORM NO: 01-01(0-NJ) (rev. 09-APR-09)

Delivery Order-0010-03
April 2011
B-741
Sediment Monitoring Summary Report
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1018130
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NBH ENVIRONMENTAL MONITORING
Project Number:	TO-0010-03
Report Date:	12/29/10

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

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018130
Report Date: 12/29/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1018130-01	S-10O-C076-0-1.0	NEW BEDFORD, MA	10/28/10 10:00
L1018130-02	S-10O-C076-1.0-2.0	NEW BEDFORD, MA	10/28/10 10:00
L1018130-03	S-10O-C077-0-1.0	NEW BEDFORD, MA	10/28/10 10:09
L1018130-04	S-10O-C077-1.0-2.0	NEW BEDFORD, MA	10/28/10 10:09
L1018130-05	S-10O-C078-0-1.0	NEW BEDFORD, MA	10/28/10 10:25
L1018130-06	S-10O-C078-1.0-2.0	NEW BEDFORD, MA	10/28/10 10:25
L1018130-07	S-10O-C079-0-1.0	NEW BEDFORD, MA	10/28/10 10:38
L1018130-08	S-10O-C080-0-1.0	NEW BEDFORD, MA	10/28/10 10:52
L1018130-09	S-10O-C080-1.0-2.0	NEW BEDFORD, MA	10/28/10 10:52
L1018130-10	S-10N-C001-1.0-2.0	NEW BEDFORD, MA	11/03/10 13:43
L1018130-11	S-10N-C002-0-1.0	NEW BEDFORD, MA	11/03/10 13:20
L1018130-12	S-10N-C002-1.0-2.0	NEW BEDFORD, MA	11/03/10 13:20
L1018130-13	S-10N-C003-0-1.0	NEW BEDFORD, MA	11/03/10 14:02
L1018130-14	S-10N-C003-1.0-2.0	NEW BEDFORD, MA	11/03/10 14:02
L1018130-15	S-10N-C004-0-1.0	NEW BEDFORD, MA	11/03/10 13:03
L1018130-16	S-10N-C004-1.0-2.0	NEW BEDFORD, MA	11/03/10 13:03
L1018130-17	S-10N-C005-0-1.0	NEW BEDFORD, MA	11/03/10 15:10
L1018130-18	S-10N-C005-1.0-2.0	NEW BEDFORD, MA	11/03/10 15:10
L1018130-19	S-10N-C006-0-1.0	NEW BEDFORD, MA	11/03/10 12:46
L1018130-20	S-10N-C006-1.0-2.0	NEW BEDFORD, MA	11/03/10 12:46

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018130
Project Number:	TO-0010-03	**Report Date:**	12/29/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on November 05, 2010 and placed in frozen storage until November 29, 2010 when aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until they were removed December 02, 2010 to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

PCB Congeners by 8082

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

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018130
Project Number:	TO-0010-03	**Report Date:**	12/29/10

Case Narrative (continued)

whether it was the higher or lower value.

The majority of samples were analyzed at the dilution required by the elevated concentrations of target compounds in the sample.

The WG445831-4/-5 MS/MSD recoveries, performed on L1018130-01, are outside the acceptance criteria for several congeners. The unacceptable percent recoveries are attributed to the high concentrations of the same compounds present in the sample utilized for the MS/MSD.

Sample L1018130-02 was analyzed via GC/MS-SIM to confirm the presence of Cl9-BZ#206 and Cl10-BZ#209 as these congeners are not usually detected in samples from this location.

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: 12/29/10

ORGANICS

PCBS

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-01	Date Collected:	10/28/10 10:00
Client ID:	S-10O-C076-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 13:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1570		ug/kg	695	--	200
Cl3-BZ#18	3050		ug/kg	695	--	200
Cl4-BZ#52	6070		ug/kg	695	--	200
Cl4-BZ#44	3850		ug/kg	695	--	200
Cl4-BZ#66	10600		ug/kg	695	--	200
Cl5-BZ#118	10900		ug/kg	695	--	200
Cl6-BZ#138	5470		ug/kg	695	--	200
Cl6-BZ#128	1320		ug/kg	695	--	200
Cl7-BZ#180	1090		ug/kg	695	--	200
Cl7-BZ#170	804		ug/kg	695	--	200
Cl8-BZ#195	ND		ug/kg	695	--	200
Cl9-BZ#206	ND		ug/kg	695	--	200
Cl10-BZ#209	ND		ug/kg	695	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	77		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-01	Date Collected:	10/28/10 10:00
Client ID:	S-10O-C076-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 13:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5300		ug/kg	695	--	200
Cl5-BZ#101	8950		ug/kg	695	--	200
Cl6-BZ#153	4960		ug/kg	695	--	200
Cl5-BZ#105	1920		ug/kg	695	--	200
Cl7-BZ#187	788		ug/kg	695	--	200

DBOB	81	30-150
BZ 198	77	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-02	Date Collected:	10/28/10 10:00
Client ID:	S-10O-C076-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/22/10 18:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.36	--	2
Cl3-BZ#18	ND		ug/kg	3.36	--	2
Cl3-BZ#28	ND		ug/kg	3.36	--	2
Cl4-BZ#52	ND		ug/kg	3.36	--	2
Cl4-BZ#44	ND		ug/kg	3.36	--	2
Cl4-BZ#66	11.9		ug/kg	3.36	--	2
Cl5-BZ#118	ND		ug/kg	3.36	--	2
Cl5-BZ#105	ND		ug/kg	3.36	--	2
Cl6-BZ#138	ND		ug/kg	3.36	--	2
Cl7-BZ#187	ND		ug/kg	3.36	--	2
Cl6-BZ#128	ND		ug/kg	3.36	--	2
Cl7-BZ#180	ND		ug/kg	3.36	--	2
Cl7-BZ#170	ND		ug/kg	3.36	--	2
Cl8-BZ#195	ND		ug/kg	3.36	--	2

DBOB	82	30-150
BZ 198	71	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-02	Date Collected:	10/28/10 10:00
Client ID:	S-10O-C076-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/22/10 18:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#101	ND		ug/kg	3.36	--	2
Cl6-BZ#153	ND		ug/kg	3.36	--	2
Cl9-BZ#206	39.4		ug/kg	3.36	--	2
Cl10-BZ#209	57.3		ug/kg	3.36	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	71		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-03	Date Collected:	10/28/10 10:09
Client ID:	S-10O-C077-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/19/10 04:34	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	183		ug/kg	171	--	100
Cl3-BZ#18	435		ug/kg	171	--	100
Cl4-BZ#52	1210		ug/kg	171	--	100
Cl4-BZ#66	880		ug/kg	171	--	100
Cl5-BZ#118	737		ug/kg	171	--	100
Cl6-BZ#138	525		ug/kg	171	--	100
Cl7-BZ#187	ND		ug/kg	171	--	100
Cl6-BZ#128	ND		ug/kg	171	--	100
Cl7-BZ#180	ND		ug/kg	171	--	100
Cl7-BZ#170	ND		ug/kg	171	--	100
Cl8-BZ#195	ND		ug/kg	171	--	100
Cl9-BZ#206	ND		ug/kg	171	--	100
Cl10-BZ#209	ND		ug/kg	171	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	70		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-03	Date Collected:	10/28/10 10:09
Client ID:	S-10O-C077-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/19/10 04:34	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	939		ug/kg	171	--	100
Cl4-BZ#44	566		ug/kg	171	--	100
Cl5-BZ#101	703		ug/kg	171	--	100
Cl6-BZ#153	482		ug/kg	171	--	100
Cl5-BZ#105	210		ug/kg	171	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	70		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-04	Date Collected:	10/28/10 10:09
Client ID:	S-10O-C077-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 19:22	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.38	--	2
Cl3-BZ#18	ND		ug/kg	3.38	--	2
Cl3-BZ#28	ND		ug/kg	3.38	--	2
Cl4-BZ#52	ND		ug/kg	3.38	--	2
Cl4-BZ#44	ND		ug/kg	3.38	--	2
Cl4-BZ#66	ND		ug/kg	3.38	--	2
Cl5-BZ#101	ND		ug/kg	3.38	--	2
Cl5-BZ#118	ND		ug/kg	3.38	--	2
Cl5-BZ#105	ND		ug/kg	3.38	--	2
Cl6-BZ#138	ND		ug/kg	3.38	--	2
Cl7-BZ#187	ND		ug/kg	3.38	--	2
Cl6-BZ#128	ND		ug/kg	3.38	--	2
Cl7-BZ#180	ND		ug/kg	3.38	--	2
Cl7-BZ#170	ND		ug/kg	3.38	--	2
Cl8-BZ#195	ND		ug/kg	3.38	--	2
Cl9-BZ#206	ND		ug/kg	3.38	--	2
Cl10-BZ#209	ND		ug/kg	3.38	--	2

DBOB	79	30-150
BZ 198	82	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-04	Date Collected:	10/28/10 10:09
Client ID:	S-10O-C077-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 19:22	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	3.38	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	82		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-05	Date Collected:	10/28/10 10:25
Client ID:	S-10O-C078-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/18/10 22:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	293		ug/kg	170	--	50
Cl3-BZ#18	690		ug/kg	170	--	50
Cl4-BZ#52	1310		ug/kg	170	--	50
Cl4-BZ#66	1020		ug/kg	170	--	50
Cl5-BZ#118	560		ug/kg	170	--	50
Cl6-BZ#138	328		ug/kg	170	--	50
Cl7-BZ#187	ND		ug/kg	170	--	50
Cl6-BZ#128	ND		ug/kg	170	--	50
Cl7-BZ#180	ND		ug/kg	170	--	50
Cl7-BZ#170	ND		ug/kg	170	--	50
Cl8-BZ#195	ND		ug/kg	170	--	50
Cl9-BZ#206	ND		ug/kg	170	--	50
Cl10-BZ#209	ND		ug/kg	170	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	65		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-05	Date Collected:	10/28/10 10:25
Client ID:	S-10O-C078-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/18/10 22:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1190		ug/kg	170	--	50
Cl4-BZ#44	626		ug/kg	170	--	50
Cl5-BZ#101	545		ug/kg	170	--	50
Cl6-BZ#153	338		ug/kg	170	--	50
Cl5-BZ#105	ND		ug/kg	170	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	65		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-06	Date Collected:	10/28/10 10:25
Client ID:	S-10O-C078-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 20:03	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	46.5		ug/kg	17.2	--	10
Cl3-BZ#18	96.2		ug/kg	17.2	--	10
Cl4-BZ#52	253		ug/kg	17.2	--	10
Cl4-BZ#44	94.3		ug/kg	17.2	--	10
Cl4-BZ#66	174		ug/kg	17.2	--	10
Cl5-BZ#118	139		ug/kg	17.2	--	10
Cl6-BZ#138	92.6		ug/kg	17.2	--	10
Cl6-BZ#128	23.7		ug/kg	17.2	--	10
Cl7-BZ#180	ND		ug/kg	17.2	--	10
Cl7-BZ#170	ND		ug/kg	17.2	--	10
Cl8-BZ#195	ND		ug/kg	17.2	--	10
Cl9-BZ#206	ND		ug/kg	17.2	--	10
Cl10-BZ#209	ND		ug/kg	17.2	--	10

DBOB	79	30-150
BZ 198	74	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-06	Date Collected:	10/28/10 10:25
Client ID:	S-10O-C078-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 20:03	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	155		ug/kg	17.2	--	10
Cl5-BZ#101	118		ug/kg	17.2	--	10
Cl6-BZ#153	79.8		ug/kg	17.2	--	10
Cl5-BZ#105	30.5		ug/kg	17.2	--	10
Cl7-BZ#187	ND		ug/kg	17.2	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	74		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-07	Date Collected:	10/28/10 10:38
Client ID:	S-10O-C079-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/19/10 06:38	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	93%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	347		ug/kg	176	--	100
Cl3-BZ#18	866		ug/kg	176	--	100
Cl4-BZ#52	2100		ug/kg	176	--	100
Cl4-BZ#66	1610		ug/kg	176	--	100
Cl5-BZ#118	1290		ug/kg	176	--	100
Cl6-BZ#138	812		ug/kg	176	--	100
Cl6-BZ#128	211		ug/kg	176	--	100
Cl7-BZ#180	ND		ug/kg	176	--	100
Cl7-BZ#170	ND		ug/kg	176	--	100
Cl8-BZ#195	ND		ug/kg	176	--	100
Cl9-BZ#206	ND		ug/kg	176	--	100
Cl10-BZ#209	ND		ug/kg	176	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	68		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-07	Date Collected:	10/28/10 10:38
Client ID:	S-10O-C079-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/19/10 06:38	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	93%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1870		ug/kg	176	--	100
Cl4-BZ#44	981		ug/kg	176	--	100
Cl5-BZ#101	1210		ug/kg	176	--	100
Cl6-BZ#153	828		ug/kg	176	--	100
Cl5-BZ#105	313		ug/kg	176	--	100
Cl7-BZ#187	ND		ug/kg	176	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	68		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-08	Date Collected:	10/28/10 10:52
Client ID:	S-10O-C080-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/19/10 07:19	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	315		ug/kg	176	--	100
Cl3-BZ#18	790		ug/kg	176	--	100
Cl4-BZ#52	2070		ug/kg	176	--	100
Cl4-BZ#44	870		ug/kg	176	--	100
Cl4-BZ#66	1710		ug/kg	176	--	100
Cl5-BZ#118	1440		ug/kg	176	--	100
Cl6-BZ#138	886		ug/kg	176	--	100
Cl6-BZ#128	236		ug/kg	176	--	100
Cl7-BZ#180	ND		ug/kg	176	--	100
Cl7-BZ#170	ND		ug/kg	176	--	100
Cl8-BZ#195	ND		ug/kg	176	--	100
Cl9-BZ#206	ND		ug/kg	176	--	100
Cl10-BZ#209	ND		ug/kg	176	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	68		30-150
BZ 198	64		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-08	Date Collected:	10/28/10 10:52
Client ID:	S-10O-C080-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/19/10 07:19	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1720		ug/kg	176	--	100
Cl5-BZ#101	1340		ug/kg	176	--	100
Cl6-BZ#153	895		ug/kg	176	--	100
Cl5-BZ#105	325		ug/kg	176	--	100
Cl7-BZ#187	ND		ug/kg	176	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	68		30-150
BZ 198	64		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-09	Date Collected:	10/28/10 10:52
Client ID:	S-10O-C080-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 18:00	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.41	--	1
Cl3-BZ#18	ND		ug/kg	3.41	--	1
Cl3-BZ#28	11.3		ug/kg	3.41	--	1
Cl4-BZ#52	9.08		ug/kg	3.41	--	1
Cl4-BZ#44	4.10		ug/kg	3.41	--	1
Cl4-BZ#66	13.5		ug/kg	3.41	--	1
Cl5-BZ#101	12.2		ug/kg	3.41	--	1
Cl5-BZ#105	ND		ug/kg	3.41	--	1
Cl6-BZ#138	5.16		ug/kg	3.41	--	1
Cl7-BZ#187	ND		ug/kg	3.41	--	1
Cl6-BZ#128	ND		ug/kg	3.41	--	1
Cl7-BZ#180	ND		ug/kg	3.41	--	1
Cl7-BZ#170	ND		ug/kg	3.41	--	1
Cl8-BZ#195	ND		ug/kg	3.41	--	1
Cl9-BZ#206	ND		ug/kg	3.41	--	1
Cl10-BZ#209	ND		ug/kg	3.41	--	1

DBOB	78	30-150
BZ 198	77	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-09	Date Collected:	10/28/10 10:52
Client ID:	S-10O-C080-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 18:00	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#118	6.78		ug/kg	3.41	--	1
Cl6-BZ#153	4.62		ug/kg	3.41	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	77		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-10	Date Collected:	11/03/10 13:43
Client ID:	S-10N-C001-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 15:10	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1270		ug/kg	847	--	250
Cl3-BZ#18	5490		ug/kg	847	--	250
Cl5-BZ#118	2800		ug/kg	847	--	250
Cl6-BZ#138	979		ug/kg	847	--	250
Cl7-BZ#187	ND		ug/kg	847	--	250
Cl6-BZ#128	ND		ug/kg	847	--	250
Cl7-BZ#180	ND		ug/kg	847	--	250
Cl7-BZ#170	ND		ug/kg	847	--	250
Cl8-BZ#195	ND		ug/kg	847	--	250
Cl9-BZ#206	ND		ug/kg	847	--	250
Cl10-BZ#209	ND		ug/kg	847	--	250

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

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-10	Date Collected:	11/03/10 13:43
Client ID:	S-10N-C001-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:03
Analytical Date:	12/21/10 15:10	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6140		ug/kg	847	--	250
Cl4-BZ#52	7580		ug/kg	847	--	250
Cl4-BZ#44	6540		ug/kg	847	--	250
Cl4-BZ#66	8240		ug/kg	847	--	250
Cl5-BZ#101	2970		ug/kg	847	--	250
Cl6-BZ#153	923		ug/kg	847	--	250
Cl5-BZ#105	1250		ug/kg	847	--	250

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

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-11	Date Collected:	11/03/10 13:20
Client ID:	S-10N-C002-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/22/10 18:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	22.0		ug/kg	3.38	--	2
Cl4-BZ#52	53.9		ug/kg	3.38	--	2
Cl4-BZ#44	29.8		ug/kg	3.38	--	2
Cl4-BZ#66	46.6		ug/kg	3.38	--	2
Cl5-BZ#118	23.0		ug/kg	3.38	--	2
Cl6-BZ#138	12.4		ug/kg	3.38	--	2
Cl7-BZ#187	ND		ug/kg	3.38	--	2
Cl6-BZ#128	ND		ug/kg	3.38	--	2
Cl8-BZ#195	ND		ug/kg	3.38	--	2
Cl9-BZ#206	ND		ug/kg	3.38	--	2
Cl10-BZ#209	ND		ug/kg	3.38	--	2

DBOB	67	30-150
BZ 198	71	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-11	Date Collected:	11/03/10 13:20
Client ID:	S-10N-C002-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/22/10 18:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	12.6		ug/kg	3.38	--	2
Cl3-BZ#28	42.7		ug/kg	3.38	--	2
Cl5-BZ#101	19.8		ug/kg	3.38	--	2
Cl6-BZ#153	11.6		ug/kg	3.38	--	2
Cl5-BZ#105	5.80		ug/kg	3.38	--	2
Cl7-BZ#180	ND		ug/kg	3.38	--	2
Cl7-BZ#170	3.40		ug/kg	3.38	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	67		30-150
BZ 198	71		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-12	Date Collected:	11/03/10 13:20
Client ID:	S-10N-C002-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/21/10 21:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.38	--	2
Cl3-BZ#18	ND		ug/kg	3.38	--	2
Cl3-BZ#28	ND		ug/kg	3.38	--	2
Cl4-BZ#52	ND		ug/kg	3.38	--	2
Cl4-BZ#44	ND		ug/kg	3.38	--	2
Cl4-BZ#66	ND		ug/kg	3.38	--	2
Cl5-BZ#101	ND		ug/kg	3.38	--	2
Cl5-BZ#118	ND		ug/kg	3.38	--	2
Cl5-BZ#105	ND		ug/kg	3.38	--	2
Cl6-BZ#138	ND		ug/kg	3.38	--	2
Cl7-BZ#187	ND		ug/kg	3.38	--	2
Cl6-BZ#128	ND		ug/kg	3.38	--	2
Cl7-BZ#180	ND		ug/kg	3.38	--	2
Cl7-BZ#170	ND		ug/kg	3.38	--	2
Cl8-BZ#195	ND		ug/kg	3.38	--	2
Cl9-BZ#206	ND		ug/kg	3.38	--	2
Cl10-BZ#209	ND		ug/kg	3.38	--	2

DBOB	69	30-150
BZ 198	79	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-12	Date Collected:	11/03/10 13:20
Client ID:	S-10N-C002-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/21/10 21:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	3.38	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	79		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-13	Date Collected:	11/03/10 14:02
Client ID:	S-10N-C003-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/19/10 00:28	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	378		ug/kg	167	--	50
Cl3-BZ#18	1140		ug/kg	167	--	50
Cl4-BZ#52	1820		ug/kg	167	--	50
Cl4-BZ#66	1680		ug/kg	167	--	50
Cl5-BZ#118	1220		ug/kg	167	--	50
Cl6-BZ#138	734		ug/kg	167	--	50
Cl6-BZ#128	191		ug/kg	167	--	50
Cl7-BZ#170	ND		ug/kg	167	--	50
Cl8-BZ#195	ND		ug/kg	167	--	50
Cl9-BZ#206	ND		ug/kg	167	--	50
Cl10-BZ#209	ND		ug/kg	167	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	69		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-13	Date Collected:	11/03/10 14:02
Client ID:	S-10N-C003-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/19/10 00:28	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1960		ug/kg	167	--	50
Cl4-BZ#44	841		ug/kg	167	--	50
Cl5-BZ#101	1160		ug/kg	167	--	50
Cl6-BZ#153	786		ug/kg	167	--	50
Cl5-BZ#105	252		ug/kg	167	--	50
Cl7-BZ#187	ND		ug/kg	167	--	50
Cl7-BZ#180	ND		ug/kg	167	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	69		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-14	Date Collected:	11/03/10 14:02
Client ID:	S-10N-C003-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/21/10 22:06	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.29	--	2
Cl3-BZ#18	15.0		ug/kg	3.29	--	2
Cl4-BZ#52	13.3		ug/kg	3.29	--	2
Cl4-BZ#44	5.89		ug/kg	3.29	--	2
Cl5-BZ#118	8.36		ug/kg	3.29	--	2
Cl6-BZ#138	5.09		ug/kg	3.29	--	2
Cl7-BZ#187	ND		ug/kg	3.29	--	2
Cl6-BZ#128	ND		ug/kg	3.29	--	2
Cl7-BZ#180	ND		ug/kg	3.29	--	2
Cl7-BZ#170	ND		ug/kg	3.29	--	2
Cl8-BZ#195	ND		ug/kg	3.29	--	2
Cl9-BZ#206	ND		ug/kg	3.29	--	2
Cl10-BZ#209	ND		ug/kg	3.29	--	2

DBOB	92	30-150
BZ 198	76	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-14	Date Collected:	11/03/10 14:02
Client ID:	S-10N-C003-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/21/10 22:06	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	11.6		ug/kg	3.29	--	2
Cl4-BZ#66	7.50		ug/kg	3.29	--	2
Cl5-BZ#101	7.40		ug/kg	3.29	--	2
Cl6-BZ#153	5.01		ug/kg	3.29	--	2
Cl5-BZ#105	ND		ug/kg	3.29	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	76		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-15	Date Collected:	11/03/10 13:03
Client ID:	S-10N-C004-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/19/10 01:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	732		ug/kg	170	--	50
Cl4-BZ#52	1440		ug/kg	170	--	50
Cl4-BZ#66	1070		ug/kg	170	--	50
Cl5-BZ#118	624		ug/kg	170	--	50
Cl6-BZ#138	358		ug/kg	170	--	50
Cl7-BZ#187	ND		ug/kg	170	--	50
Cl6-BZ#128	ND		ug/kg	170	--	50
Cl7-BZ#180	ND		ug/kg	170	--	50
Cl7-BZ#170	ND		ug/kg	170	--	50
Cl8-BZ#195	ND		ug/kg	170	--	50
Cl9-BZ#206	ND		ug/kg	170	--	50
Cl10-BZ#209	ND		ug/kg	170	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	76		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-15	Date Collected:	11/03/10 13:03
Client ID:	S-10N-C004-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/19/10 01:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	292		ug/kg	170	--	50
Cl3-BZ#28	1160		ug/kg	170	--	50
Cl4-BZ#44	674		ug/kg	170	--	50
Cl5-BZ#101	592		ug/kg	170	--	50
Cl6-BZ#153	362		ug/kg	170	--	50
Cl5-BZ#105	175		ug/kg	170	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	76		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-16	Date Collected:	11/03/10 13:03
Client ID:	S-10N-C004-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/21/10 22:47	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.36	--	2
Cl3-BZ#18	ND		ug/kg	3.36	--	2
Cl3-BZ#28	ND		ug/kg	3.36	--	2
Cl4-BZ#52	ND		ug/kg	3.36	--	2
Cl4-BZ#44	ND		ug/kg	3.36	--	2
Cl4-BZ#66	ND		ug/kg	3.36	--	2
Cl5-BZ#101	ND		ug/kg	3.36	--	2
Cl5-BZ#118	ND		ug/kg	3.36	--	2
Cl5-BZ#105	ND		ug/kg	3.36	--	2
Cl6-BZ#138	ND		ug/kg	3.36	--	2
Cl7-BZ#187	ND		ug/kg	3.36	--	2
Cl6-BZ#128	ND		ug/kg	3.36	--	2
Cl7-BZ#180	ND		ug/kg	3.36	--	2
Cl7-BZ#170	ND		ug/kg	3.36	--	2
Cl8-BZ#195	ND		ug/kg	3.36	--	2
Cl9-BZ#206	ND		ug/kg	3.36	--	2
Cl10-BZ#209	ND		ug/kg	3.36	--	2

DBOB	79	30-150
BZ 198	81	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-16	Date Collected:	11/03/10 13:03
Client ID:	S-10N-C004-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/21/10 22:47	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	3.36	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	79		30-150
BZ 198	81		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-17	Date Collected:	11/03/10 15:10
Client ID:	S-10N-C005-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/21/10 15:51	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	911		ug/kg	327	--	100
Cl3-BZ#18	3230		ug/kg	327	--	100
Cl4-BZ#52	4860		ug/kg	327	--	100
Cl4-BZ#66	3860		ug/kg	327	--	100
Cl5-BZ#118	1670		ug/kg	327	--	100
Cl6-BZ#138	570		ug/kg	327	--	100
Cl7-BZ#187	ND		ug/kg	327	--	100
Cl6-BZ#128	ND		ug/kg	327	--	100
Cl7-BZ#180	ND		ug/kg	327	--	100
Cl7-BZ#170	ND		ug/kg	327	--	100
Cl8-BZ#195	ND		ug/kg	327	--	100
Cl9-BZ#206	ND		ug/kg	327	--	100
Cl10-BZ#209	ND		ug/kg	327	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	78		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-17	Date Collected:	11/03/10 15:10
Client ID:	S-10N-C005-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:07
Analytical Date:	12/21/10 15:51	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4000		ug/kg	327	--	100
Cl4-BZ#44	3370		ug/kg	327	--	100
Cl5-BZ#101	1610		ug/kg	327	--	100
Cl6-BZ#153	560		ug/kg	327	--	100
Cl5-BZ#105	543		ug/kg	327	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	78		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-18	Date Collected:	11/03/10 15:10
Client ID:	S-10N-C005-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:08
Analytical Date:	12/21/10 23:28	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.29	--	2
Cl3-BZ#18	ND		ug/kg	3.29	--	2
Cl4-BZ#52	ND		ug/kg	3.29	--	2
Cl4-BZ#44	ND		ug/kg	3.29	--	2
Cl4-BZ#66	ND		ug/kg	3.29	--	2
Cl5-BZ#101	ND		ug/kg	3.29	--	2
Cl5-BZ#118	ND		ug/kg	3.29	--	2
Cl5-BZ#105	ND		ug/kg	3.29	--	2
Cl6-BZ#138	ND		ug/kg	3.29	--	2
Cl7-BZ#187	ND		ug/kg	3.29	--	2
Cl6-BZ#128	ND		ug/kg	3.29	--	2
Cl7-BZ#180	ND		ug/kg	3.29	--	2
Cl7-BZ#170	ND		ug/kg	3.29	--	2
Cl8-BZ#195	ND		ug/kg	3.29	--	2
Cl9-BZ#206	ND		ug/kg	3.29	--	2
Cl10-BZ#209	ND		ug/kg	3.29	--	2

DBOB	73	30-150
BZ 198	67	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-18	Date Collected:	11/03/10 15:10
Client ID:	S-10N-C005-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:08
Analytical Date:	12/21/10 23:28	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/kg	3.29	--	2
Cl6-BZ#153	ND		ug/kg	3.29	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	67		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-19	Date Collected:	11/03/10 12:46
Client ID:	S-10N-C006-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:08
Analytical Date:	12/21/10 16:32	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	905		ug/kg	349	--	100
Cl3-BZ#18	1760		ug/kg	349	--	100
Cl4-BZ#52	3250		ug/kg	349	--	100
Cl4-BZ#44	2310		ug/kg	349	--	100
Cl4-BZ#66	4100		ug/kg	349	--	100
Cl5-BZ#118	1980		ug/kg	349	--	100
Cl6-BZ#138	846		ug/kg	349	--	100
Cl7-BZ#187	ND		ug/kg	349	--	100
Cl6-BZ#128	ND		ug/kg	349	--	100
Cl7-BZ#180	ND		ug/kg	349	--	100
Cl7-BZ#170	ND		ug/kg	349	--	100
Cl8-BZ#195	ND		ug/kg	349	--	100
Cl9-BZ#206	ND		ug/kg	349	--	100
Cl10-BZ#209	ND		ug/kg	349	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	68		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-19	Date Collected:	11/03/10 12:46
Client ID:	S-10N-C006-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:08
Analytical Date:	12/21/10 16:32	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3860		ug/kg	349	--	100
Cl5-BZ#101	1990		ug/kg	349	--	100
Cl6-BZ#153	837		ug/kg	349	--	100
Cl5-BZ#105	593		ug/kg	349	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	75		30-150
BZ 198	68		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-20	Date Collected:	11/03/10 12:46
Client ID:	S-10N-C006-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:08
Analytical Date:	12/22/10 19:29	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	81.8	--	50
Cl3-BZ#18	114		ug/kg	81.8	--	50
Cl7-BZ#187	ND		ug/kg	81.8	--	50
Cl6-BZ#128	ND		ug/kg	81.8	--	50
Cl7-BZ#180	ND		ug/kg	81.8	--	50
Cl7-BZ#170	ND		ug/kg	81.8	--	50
Cl8-BZ#195	ND		ug/kg	81.8	--	50
Cl9-BZ#206	ND		ug/kg	81.8	--	50
Cl10-BZ#209	ND		ug/kg	81.8	--	50

DBOB	67	30-150
BZ 198	70	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018130-20	Date Collected:	11/03/10 12:46
Client ID:	S-10N-C006-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/02/10 11:08
Analytical Date:	12/22/10 19:29	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	106		ug/kg	81.8	--	50
Cl4-BZ#52	405		ug/kg	81.8	--	50
Cl4-BZ#44	177		ug/kg	81.8	--	50
Cl4-BZ#66	396		ug/kg	81.8	--	50
Cl5-BZ#101	435		ug/kg	81.8	--	50
Cl5-BZ#118	345		ug/kg	81.8	--	50
Cl6-BZ#153	201		ug/kg	81.8	--	50
Cl5-BZ#105	105		ug/kg	81.8	--	50
Cl6-BZ#138	188		ug/kg	81.8	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	67		30-150
BZ 198	70		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018130

Project Number: TO-0010-03 **Report Date:** 12/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/18/10 18:19
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 12/02/10 11:03
Cleanup Method1: EPA 3630
Cleanup Date1: 12/08/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG445831-1					
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	91		30-150
BZ 198	100		30-150

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/18/10 18:19
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 12/02/10 11:03
Cleanup Method1: EPA 3630
Cleanup Date1: 12/08/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-20 Batch: WG445831-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	100		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018130
Report Date: 12/29/10

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: WG445831-4 WG445831-5 QC Sample: L1018130-01 Client ID: S-10O-C076-0-1.0												
Cl2-BZ#8	1570	1720	2470	52		2610	60		40-140	6		30
Cl3-BZ#18	3050	1720	4490	84		4890	107		40-140	9		30
Cl4-BZ#52	6070	1720	6510	**26**	Q	6640	**33**	Q	40-140	2		30
Cl4-BZ#44	3850	1720	4400	**32**	Q	4640	46		40-140	5		30
Cl4-BZ#66	10600	1720	10400	**0**	Q	10500	**0**	Q	40-140	1		30
Cl5-BZ#118	10900	1720	10600	**0**	Q	10900	**0**	Q	40-140	3		30
Cl6-BZ#138	5470	1720	5820	**20**	Q	5970	**29**	Q	40-140	3		30
Cl6-BZ#128	1320	1720	2290	57		2300	57		40-140	0		30
Cl7-BZ#180	1090	1720	2070	57		2090	58		40-140	1		30
Cl7-BZ#170	804	1720	1910	64		1880	62		40-140	2		30
Cl8-BZ#195	ND	1720	1360	79		1310	76		40-140	4		30
Cl9-BZ#206	ND	1720	1410	82		1430	83		40-140	1		30
Cl10-BZ#209	ND	1720	1250	73		1260	73		40-140	1		30
Cl3-BZ#28	5300	1720	6100	47		6440	66		40-140	5		30
Cl5-BZ#101	8950	1720	8770	**0**	Q	8870	**0**	Q	40-140	1		30
Cl6-BZ#153	4960	1720	5180	**13**	Q	5250	**17**	Q	40-140	1		30
Cl5-BZ#105	1920	1720	2650	43		2730	47		40-140	3		30
Cl7-BZ#187	788	1720	1590	47		1610	48		40-140	1		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018130
Report Date: 12/29/10

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: WG445831-4 WG445831-5 QC Sample: L1018130-01 Client ID: S-10O-C076-0-1.0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	68		67		30-150
DBOB	74		76		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018130
Report Date: 12/29/10

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: WG445831-2 WG445831-3							
Cl2-BZ#8	76		69		40-140	10		30
Cl3-BZ#18	85		74		40-140	14		30
Cl3-BZ#28	93		88		40-140	6		30
Cl4-BZ#52	105		84		40-140	22		30
Cl4-BZ#44	94		84		40-140	11		30
Cl4-BZ#66	92		88		40-140	4		30
Cl5-BZ#101	92		87		40-140	6		30
Cl5-BZ#118	97		92		40-140	5		30
Cl5-BZ#105	91		86		40-140	6		30
Cl6-BZ#138	95		90		40-140	5		30
Cl7-BZ#187	94		86		40-140	9		30
Cl6-BZ#128	90		87		40-140	3		30
Cl7-BZ#180	92		89		40-140	3		30
Cl7-BZ#170	93		98		40-140	5		30
Cl8-BZ#195	90		95		40-140	5		30
Cl9-BZ#206	104		101		40-140	3		30
Cl10-BZ#209	90		91		40-140	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018130
Report Date: 12/29/10

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: WG445831-2 WG445831-3							
DBOB	90		82		30-150			
BZ 198	94		92		30-150			

INORGANICS
&
MISCELLANEOUS

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-01
Client ID: S-10O-C076-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:00
Date Received: 11/05/10
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	95.1		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	44.1		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-02
Client ID: S-10O-C076-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:00
Date Received: 11/05/10
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	97.0		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	46.9		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-03
Client ID: S-10O-C077-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:09
Date Received: 11/05/10
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	95.1		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	59.4		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-04
Client ID: S-10O-C077-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:09
Date Received: 11/05/10
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	96.9		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	52.7		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-05
Client ID: S-10O-C078-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:25
Date Received: 11/05/10
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	97.0		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	45.6		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-06
Client ID: S-10O-C078-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:25
Date Received: 11/05/10
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	95.9		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	44.5		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-07
Client ID: S-10O-C079-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:38
Date Received: 11/05/10
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	93.1		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	50.4		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-08
Client ID: S-10O-C080-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:52
Date Received: 11/05/10
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	93.8		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	53.0		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-09
Client ID: S-10O-C080-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:52
Date Received: 11/05/10
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	96.3		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	50.3		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-10
Client ID: S-10N-C001-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 13:43
Date Received: 11/05/10
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	97.2		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	49.2		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-11
Client ID: S-10N-C002-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 13:20
Date Received: 11/05/10
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	96.4		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	51.6		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-12
Client ID: S-10N-C002-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 11/03/10 13:20
Date Received: 11/05/10
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	97.7		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	51.8		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-13
Client ID: S-10N-C003-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 14:02
Date Received: 11/05/10
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	98.2		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	53.8		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-14
Client ID: S-10N-C003-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 14:02
Date Received: 11/05/10
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	99.0		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	71.1		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-15
Client ID: S-10N-C004-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 13:03
Date Received: 11/05/10
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	97.0		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	50.9		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-16
Client ID: S-10N-C004-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 11/03/10 13:03
Date Received: 11/05/10
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	98.0		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	55.6		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-17
Client ID: S-10N-C005-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 15:10
Date Received: 11/05/10
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	99.3		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	76.1		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-18
Client ID: S-10N-C005-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 15:10
Date Received: 11/05/10
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	99.5		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	82.3		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-19
Client ID: S-10N-C006-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 12:46
Date Received: 11/05/10
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	94.2		%	0.100	--	1	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	68.6		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018130
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018130-20
Client ID: S-10N-C006-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 11/03/10 12:46
Date Received: 11/05/10
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	-	12/01/10 14:45	30,2540G	KB
Solids, Total (Pre-Dried)	76.9		%	0.100	NA	1	-	11/29/10 12:25	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018130
Report Date: 12/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG445698-1 QC Sample: L1018130-01 Client ID: S-10O-C076-0-1.0						
Solids, Total	95.1	94.5	%	1		20

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018130
Report Date: 12/29/10

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
ABCD	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018130-01A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-01B	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-02A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-03A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-04A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-05A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-06A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-07A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-08A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-09A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-10A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-11A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-12A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-13A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-14A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018130
Report Date: 12/29/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018130-15A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-16A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-17A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-18A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-19A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018130-20A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

Container Comments

L1018130-01A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-01B	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-02A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-03A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-04A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-05A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-06A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-07A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-08A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-09A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-10A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-11A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-12A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-13A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-14A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-15A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-16A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-17A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-18A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-19A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018130-20A	SAMPLES FROZEN UPON RECEIPT 11/5/10

*Values in parentheses indicate holding time in days

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018130
Project Number:	TO-0010-03	**Report Date:**	12/29/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018130
Project Number:	TO-0010-03	**Report Date:**	12/29/10

Data Qualifiers

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:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018130
Project Number:	TO-0010-03	**Report Date:**	12/29/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial_No:12291014:24

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018150

Project Information
Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Client Information
Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Turn-Around Time
☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☒ Same as Client Info PO #:

Regulatory Requirements/Report Limits
State/Fed Program: FED Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB congeners - NOAA 18	SAMPLE HANDLING	Sample Specific Comments	TOTAL # BOTTLES
L1018150-11	S-10N-C002-0-1.0	11/03/10	13:20	SED	KGM	☒	Filtration: ☐ Done ☒ Not Needed ☐ Lab to do; Preservation: ☐ Lab to do (Please specify below)	BH-C3	1
-12	S-10N-C002-1.0-2.0	11/03/10	13:20	SED	KGM	☒		BH-C3	1
-13	S-10N-C003-0-1.0	11/03/10	14:02	SED	KGM	☒		BH-D2	1
-14	S-10N-C003-1.0-2.0	11/03/10	14:02	SED	KGM	☒		BH-D2	1
-15	S-10N-C004-0-1.0	11/03/10	13:03	SED	KGM	☒		BH-D3	1
-16	S-10N-C004-1.0-2.0	11/03/10	13:03	SED	KGM	☒		BH-D3	1
-17	S-10N-C005-0-1.0	11/03/10	15:10	SED	KGM	☒		BH-E2	1
-18	S-10N-C005-1.0-2.0	11/03/10	15:10	SED	KGM	☒		BH-E2	1
-19	S-10N-C006-0-1.0	11/03/10	12:46	SED	KGM	☒		BH-E3	1
-20	S-10N-C006-1.0-2.0	11/03/10	12:46	SED	KGM	☒		BH-E3	1
				Container Type		A			
				Preservative		A			

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 31-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-823
Sediment Monitoring Summary Report
W912WJ-09-D-0001

CHAIN OF CUSTODY

PAGE 7 OF 11

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018130

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information — Data Deliverables — **Billing Information**

☐ FAX ☒ EMAIL ☒ Same as Client Info PO #:
☒ ADEx ☐ Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
18130-3	S-10O-C077-0-1.0	10/28/10	10:09	SED	DR	☒	BH-K4	1
4	S-10O-C077-1.0-2.0	10/28/10	10:09	SED	DR	☒	BH-K4	1
5	S-10O-C078-0-1.0	10/28/10	10:25	SED	DR	☒	BH-L4	1
6	S-10O-C078-1.0-2.0	10/28/10	10:25	SED	DR	☒	BH-L4	1
7	S-10O-C079-0-1.0	10/28/10	10:38	SED	DR	☒	BH-M3	1
	S-10O-C079-1.0-2.0	10/28/10	10:38	SED	DR	☒	BH-M3	1
8	S-10O-C080-0-1.0	10/28/10	10:52	SED	DR	☒	BH-N3	1
9	S-10O-C080-1.0-2.0	10/28/10	10:52	SED	DR	☒	BH-N3	1
	S-10N-C001-0-1.0	11/03/10	13:43	SED	KGM	☒	BH-C2	1
10	S-10N-C001-1.0-2.0	11/03/10	13:43	SED	KGM	☒	BH-C2	1
	Container Type					A		
	Preservative					A		

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-05)

Serial_No:12291014:24

11/5/10 4019130

CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Data Rec'd in Lab: ALPHA Job #:

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	SAMPLE HANDLING Filtration: ☐ Done ☒ Not Needed ☐ Lab to do Preservation: ☐ Lab to do (Please specify below)	TOTAL # BOTTLES	Sample Specific Comments
	S-10N-C017-0-1.0	11/03/10	09:12	SED	KGM	☒		1	BH-M2
	S-10N-C017-1.0-2.0	11/03/10	09:12	SED	KGM	☒		1	BH-M2
	S-10O-C072-1.0-2.0MSMSD	10/28/10	09:09	SED	MW	☒		1	MS/MSD
18130 1	S-10O-C076-0-1.0MSMSD	10/28/10	10:00	SED	DR	☒		1	MS/MSD
	S-10O-C079-1.0-2.0MSMSD	10/28/10	10:38	SED	DR	☒		1	MS/MSD
	S-10N-C001-0-1.0MSMSD	11/03/10	13:43	SED	KGM	☒		1	MS/MSD
	S-10O-C071-0-1.0MSMSD	10/27/10	15:18	SED	DB	☐		1	CSO MS/MSD
	S-10O-C071-0-1.0MSMSD	10/29/10	0833	SED	MW	☐		1	MS/MSD
						☐			
						☐			
						☐			

ANALYSIS

Container Type	A	-	-	-	-	-	-	-	-	-	-	-
Preservative	A	-	-	-	-	-	-	-	-	-	-	-

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	11/5/10 19:00	[signature]	11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-825
Sediment Monitoring Summary Report
W912WJ-09-D-0001

Serial_No:12291014:24

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018130

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18												Sample Specific Comments	TOTAL # BOTTLES
	S-10O-C072-0-1.0	10/28/10	09:09	SED	MW	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-G4	1
	S-10O-C072-1.0-2.0	10/28/10	09:09	SED	MW	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-G4	1
	S-10O-C073-0-1.0	10/28/10	08:55	SED	MW	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-F4	1
	S-10O-C073-1.0-2.0	10/28/10	08:55	SED	MW	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-F4	1
	S-10O-C074-0-1.0	10/28/10	09:20	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-H1	1
	S-10O-C074-1.0-2.0	10/28/10	09:20	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-H1	1
	S-10O-C075-0-1.0	10/28/10	09:35	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-I3	1
	S-10O-C075-1.0-2.0	10/28/10	09:35	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-I3	1
18130 1	S-10O-C076-0-1.0	10/28/10	10:00	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-J1	1
2	S-10O-C076-1.0-2.0	10/28/10	10:00	SED	DR	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	BH-J1	1
				Container Type		A	-	-	-	-	-	-	-	-	-	-	-		
				Preservative		A	-	-	-	-	-	-	-	-	-	-	-		

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

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 01-01S (HJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-826
Sediment Monitoring Summary Report
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1018133
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NBH ENVIRONMENTAL MONITORING
Project Number:	TO-0010-03
Report Date:	12/29/10

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 NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

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

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1018133-01	S-10O-C079-1.0-2.0	NEW BEDFORD, MA	10/28/10 10:38
L1018133-02	S-10N-C007-0-1.0	NEW BEDFORD, MA	11/03/10 12:34
L1018133-03	S-10N-C007-1.0-2.0	NEW BEDFORD, MA	11/03/10 12:34
L1018133-04	S-10N-C008-0-1.0	NEW BEDFORD, MA	11/03/10 14:22
L1018133-05	S-10N-C008-1.0-2.0	NEW BEDFORD, MA	11/03/10 14:22
L1018133-06	S-10N-C009-0-1.0	NEW BEDFORD, MA	11/03/10 12:16
L1018133-07	S-10N-C009-1.0-2.0	NEW BEDFORD, MA	11/03/10 12:16
L1018133-08	S-10N-C010-0-1.0	NEW BEDFORD, MA	11/03/10 11:42
L1018133-09	S-10N-C010-1.0-2.0	NEW BEDFORD, MA	11/03/10 11:42
L1018133-10	S-10N-C011-0-1.0	NEW BEDFORD, MA	11/03/10 11:56
L1018133-11	S-10N-C011-1.0-2.0	NEW BEDFORD, MA	11/03/10 11:56
L1018133-12	S-10N-C017-0-1.0	NEW BEDFORD, MA	11/03/10 09:12
L1018133-13	S-10N-C017-1.0-2.0	NEW BEDFORD, MA	11/03/10 09:12

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018133
Project Number:	TO-0010-03	**Report Date:**	12/29/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on November 05, 2010 and placed in frozen storage until November 19, 2010 when aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage until they were removed November 30, 2010 to extract samples for PCB Congener analysis and analyze for air-dried percent solids. samples were placed back in frozen storage December 1, 2010. Sample L1018133-09 was removed from frozen storage on December 7, 2010 to re-extract this sample due to a laboratory accident.

PCB Congeners by 8082

The PCB Congener analysis was performed utilizing dual column confirmation with the higher of the two values

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018133
Project Number:	TO-0010-03	**Report Date:**	12/29/10

Case Narrative (continued)

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.

Several samples were analyzed at the dilution required by the elevated concentrations of target compounds in the sample.

Sample L1018133-05 was analyzed via GC/MS-SIM to confirm the presence of Cl10-BZ#209 as this congener is not usually detected in samples from this location.

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: 12/29/10

ORGANICS

PCBS

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-01	Date Collected:	10/28/10 10:38
Client ID:	S-10O-C079-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/24/10 11:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	9.35		ug/kg	3.36	--	1
Cl4-BZ#52	16.8		ug/kg	3.36	--	1
Cl4-BZ#44	8.68		ug/kg	3.36	--	1
Cl5-BZ#118	9.68		ug/kg	3.36	--	1
Cl6-BZ#138	6.10		ug/kg	3.36	--	1
Cl7-BZ#187	ND		ug/kg	3.36	--	1
Cl6-BZ#128	ND		ug/kg	3.36	--	1
Cl7-BZ#180	ND		ug/kg	3.36	--	1
Cl7-BZ#170	ND		ug/kg	3.36	--	1
Cl8-BZ#195	ND		ug/kg	3.36	--	1
Cl9-BZ#206	ND		ug/kg	3.36	--	1
Cl10-BZ#209	ND		ug/kg	3.36	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	77		30-150
BZ 198	70		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-01	Date Collected:	10/28/10 10:38
Client ID:	S-10O-C079-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/24/10 11:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3.86		ug/kg	3.36	--	1
Cl3-BZ#28	14.5		ug/kg	3.36	--	1
Cl4-BZ#66	9.97		ug/kg	3.36	--	1
Cl5-BZ#101	8.23		ug/kg	3.36	--	1
Cl6-BZ#153	5.67		ug/kg	3.36	--	1
Cl5-BZ#105	ND		ug/kg	3.36	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	77		30-150
BZ 198	70		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-02	Date Collected:	11/03/10 12:34
Client ID:	S-10N-C007-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 22:29	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	65.3		ug/kg	32.9	--	10
Cl3-BZ#18	158		ug/kg	32.9	--	10
Cl4-BZ#52	263		ug/kg	32.9	--	10
Cl4-BZ#44	153		ug/kg	32.9	--	10
Cl4-BZ#66	281		ug/kg	32.9	--	10
Cl5-BZ#118	158		ug/kg	32.9	--	10
Cl6-BZ#138	84.1		ug/kg	32.9	--	10
Cl7-BZ#187	ND		ug/kg	32.9	--	10
Cl6-BZ#128	ND		ug/kg	32.9	--	10
Cl7-BZ#180	ND		ug/kg	32.9	--	10
Cl7-BZ#170	ND		ug/kg	32.9	--	10
Cl8-BZ#195	ND		ug/kg	32.9	--	10
Cl9-BZ#206	ND		ug/kg	32.9	--	10
Cl10-BZ#209	ND		ug/kg	32.9	--	10

DBOB	65	30-150
BZ 198	63	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-02	Date Collected:	11/03/10 12:34
Client ID:	S-10N-C007-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 22:29	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	266		ug/kg	32.9	--	10
Cl5-BZ#101	159		ug/kg	32.9	--	10
Cl6-BZ#153	74.6		ug/kg	32.9	--	10
Cl5-BZ#105	47.7		ug/kg	32.9	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	65		30-150
BZ 198	63		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-03	Date Collected:	11/03/10 12:34
Client ID:	S-10N-C007-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 19:04	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.32	--	1
Cl3-BZ#18	ND		ug/kg	3.32	--	1
Cl3-BZ#28	ND		ug/kg	3.32	--	1
Cl4-BZ#44	ND		ug/kg	3.32	--	1
Cl4-BZ#66	ND		ug/kg	3.32	--	1
Cl5-BZ#101	ND		ug/kg	3.32	--	1
Cl5-BZ#118	ND		ug/kg	3.32	--	1
Cl5-BZ#105	ND		ug/kg	3.32	--	1
Cl6-BZ#138	ND		ug/kg	3.32	--	1
Cl7-BZ#187	ND		ug/kg	3.32	--	1
Cl6-BZ#128	ND		ug/kg	3.32	--	1
Cl7-BZ#180	ND		ug/kg	3.32	--	1
Cl7-BZ#170	ND		ug/kg	3.32	--	1
Cl8-BZ#195	ND		ug/kg	3.32	--	1
Cl9-BZ#206	ND		ug/kg	3.32	--	1
Cl10-BZ#209	ND		ug/kg	3.32	--	1

DBOB	90	30-150
BZ 198	78	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-03	Date Collected:	11/03/10 12:34
Client ID:	S-10N-C007-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 19:04	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	3.35		ug/kg	3.32	--	1
Cl6-BZ#153	ND		ug/kg	3.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	90		30-150
BZ 198	78		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-04	Date Collected:	11/03/10 14:22
Client ID:	S-10N-C008-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 16:20	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1270		ug/kg	332	--	100
Cl3-BZ#18	2560		ug/kg	332	--	100
Cl4-BZ#52	4480		ug/kg	332	--	100
Cl4-BZ#66	4330		ug/kg	332	--	100
Cl5-BZ#118	2190		ug/kg	332	--	100
Cl6-BZ#138	1130		ug/kg	332	--	100
Cl6-BZ#128	ND		ug/kg	332	--	100
Cl7-BZ#180	ND		ug/kg	332	--	100
Cl7-BZ#170	ND		ug/kg	332	--	100
Cl8-BZ#195	ND		ug/kg	332	--	100
Cl9-BZ#206	ND		ug/kg	332	--	100
Cl10-BZ#209	ND		ug/kg	332	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	56		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-04	Date Collected:	11/03/10 14:22
Client ID:	S-10N-C008-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 16:20	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4870		ug/kg	332	--	100
Cl4-BZ#44	3050		ug/kg	332	--	100
Cl5-BZ#101	2340		ug/kg	332	--	100
Cl6-BZ#153	1160		ug/kg	332	--	100
Cl5-BZ#105	564		ug/kg	332	--	100
Cl7-BZ#187	ND		ug/kg	332	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	78		30-150
BZ 198	56		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-05	Date Collected:	11/03/10 14:22
Client ID:	S-10N-C008-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/22/10 22:54	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	376		ug/kg	166	--	50
Cl3-BZ#18	1090		ug/kg	166	--	50
Cl4-BZ#52	2640		ug/kg	166	--	50
Cl4-BZ#44	1120		ug/kg	166	--	50
Cl4-BZ#66	2240		ug/kg	166	--	50
Cl5-BZ#118	1680		ug/kg	166	--	50
Cl6-BZ#138	838		ug/kg	166	--	50
Cl6-BZ#128	220		ug/kg	166	--	50
Cl7-BZ#180	ND		ug/kg	166	--	50
Cl7-BZ#170	ND		ug/kg	166	--	50
Cl8-BZ#195	ND		ug/kg	166	--	50
Cl9-BZ#206	ND		ug/kg	166	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	64		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-05	Date Collected:	11/03/10 14:22
Client ID:	S-10N-C008-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/22/10 22:54	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1270		ug/kg	166	--	50
Cl5-BZ#101	1770		ug/kg	166	--	50
Cl6-BZ#153	985		ug/kg	166	--	50
Cl5-BZ#105	259		ug/kg	166	--	50
Cl7-BZ#187	ND		ug/kg	166	--	50
Cl10-BZ#209	563		ug/kg	166	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	64		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-06	Date Collected:	11/03/10 12:16
Client ID:	S-10N-C009-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 17:01	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1000		ug/kg	331	--	100
Cl3-BZ#18	2160		ug/kg	331	--	100
Cl4-BZ#52	3280		ug/kg	331	--	100
Cl4-BZ#44	2260		ug/kg	331	--	100
Cl4-BZ#66	4940		ug/kg	331	--	100
Cl5-BZ#118	3480		ug/kg	331	--	100
Cl6-BZ#138	1610		ug/kg	331	--	100
Cl6-BZ#128	416		ug/kg	331	--	100
Cl7-BZ#180	ND		ug/kg	331	--	100
Cl7-BZ#170	ND		ug/kg	331	--	100
Cl8-BZ#195	ND		ug/kg	331	--	100
Cl9-BZ#206	ND		ug/kg	331	--	100
Cl10-BZ#209	ND		ug/kg	331	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	63		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-06	Date Collected:	11/03/10 12:16
Client ID:	S-10N-C009-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 17:01	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3720		ug/kg	331	--	100
Cl5-BZ#101	3280		ug/kg	331	--	100
Cl6-BZ#153	1660		ug/kg	331	--	100
Cl5-BZ#105	774		ug/kg	331	--	100
Cl7-BZ#187	ND		ug/kg	331	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	63		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-07	Date Collected:	11/03/10 12:16
Client ID:	S-10N-C009-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/24/10 11:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.34	--	1
Cl3-BZ#18	ND		ug/kg	3.34	--	1
Cl4-BZ#52	ND		ug/kg	3.34	--	1
Cl4-BZ#44	ND		ug/kg	3.34	--	1
Cl4-BZ#66	ND		ug/kg	3.34	--	1
Cl5-BZ#118	ND		ug/kg	3.34	--	1
Cl5-BZ#105	ND		ug/kg	3.34	--	1
Cl6-BZ#138	ND		ug/kg	3.34	--	1
Cl7-BZ#187	ND		ug/kg	3.34	--	1
Cl6-BZ#128	ND		ug/kg	3.34	--	1
Cl7-BZ#180	ND		ug/kg	3.34	--	1
Cl7-BZ#170	ND		ug/kg	3.34	--	1
Cl8-BZ#195	ND		ug/kg	3.34	--	1
Cl9-BZ#206	ND		ug/kg	3.34	--	1
Cl10-BZ#209	ND		ug/kg	3.34	--	1

DBOB	97	30-150
BZ 198	70	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-07	Date Collected:	11/03/10 12:16
Client ID:	S-10N-C009-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/24/10 11:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/kg	3.34	--	1
Cl5-BZ#101	ND		ug/kg	3.34	--	1
Cl6-BZ#153	ND		ug/kg	3.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	70		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-08	Date Collected:	11/03/10 11:42
Client ID:	S-10N-C010-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 17:42	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	666		ug/kg	332	--	100
Cl3-BZ#18	1520		ug/kg	332	--	100
Cl4-BZ#52	2980		ug/kg	332	--	100
Cl4-BZ#44	1800		ug/kg	332	--	100
Cl4-BZ#66	3830		ug/kg	332	--	100
Cl5-BZ#118	2820		ug/kg	332	--	100
Cl6-BZ#138	1310		ug/kg	332	--	100
Cl6-BZ#128	359		ug/kg	332	--	100
Cl7-BZ#180	ND		ug/kg	332	--	100
Cl7-BZ#170	ND		ug/kg	332	--	100
Cl8-BZ#195	ND		ug/kg	332	--	100
Cl9-BZ#206	ND		ug/kg	332	--	100
Cl10-BZ#209	ND		ug/kg	332	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	59		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-08	Date Collected:	11/03/10 11:42
Client ID:	S-10N-C010-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 17:42	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2930		ug/kg	332	--	100
Cl5-BZ#101	2810		ug/kg	332	--	100
Cl6-BZ#153	1440		ug/kg	332	--	100
Cl5-BZ#105	575		ug/kg	332	--	100
Cl7-BZ#187	ND		ug/kg	332	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	59		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-09	Date Collected:	11/03/10 11:42
Client ID:	S-10N-C010-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/07/10 11:20
Analytical Date:	12/23/10 20:26	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.33	--	1
Cl3-BZ#18	ND		ug/kg	1.33	--	1
Cl3-BZ#28	ND		ug/kg	1.33	--	1
Cl4-BZ#52	ND		ug/kg	1.33	--	1
Cl4-BZ#44	ND		ug/kg	1.33	--	1
Cl4-BZ#66	ND		ug/kg	1.33	--	1
Cl5-BZ#118	ND		ug/kg	1.33	--	1
Cl5-BZ#105	ND		ug/kg	1.33	--	1
Cl6-BZ#138	ND		ug/kg	1.33	--	1
Cl7-BZ#187	ND		ug/kg	1.33	--	1
Cl6-BZ#128	ND		ug/kg	1.33	--	1
Cl7-BZ#180	ND		ug/kg	1.33	--	1
Cl7-BZ#170	ND		ug/kg	1.33	--	1
Cl8-BZ#195	ND		ug/kg	1.33	--	1
Cl9-BZ#206	ND		ug/kg	1.33	--	1
Cl10-BZ#209	ND		ug/kg	1.33	--	1

DBOB	111	30-150
BZ 198	94	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-09	Date Collected:	11/03/10 11:42
Client ID:	S-10N-C010-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/07/10 11:20
Analytical Date:	12/23/10 20:26	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/08/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#101	ND		ug/kg	1.33	--	1
Cl6-BZ#153	ND		ug/kg	1.33	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	111		30-150
BZ 198	94		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-10	Date Collected:	11/03/10 11:56
Client ID:	S-10N-C011-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 02:19	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	314		ug/kg	166	--	50
Cl4-BZ#52	815		ug/kg	166	--	50
Cl4-BZ#66	638		ug/kg	166	--	50
Cl5-BZ#118	471		ug/kg	166	--	50
Cl6-BZ#138	287		ug/kg	166	--	50
Cl7-BZ#187	ND		ug/kg	166	--	50
Cl6-BZ#128	ND		ug/kg	166	--	50
Cl7-BZ#180	ND		ug/kg	166	--	50
Cl7-BZ#170	ND		ug/kg	166	--	50
Cl8-BZ#195	ND		ug/kg	166	--	50
Cl9-BZ#206	ND		ug/kg	166	--	50
Cl10-BZ#209	ND		ug/kg	166	--	50

DBOB	73	30-150
BZ 198	61	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-10	Date Collected:	11/03/10 11:56
Client ID:	S-10N-C011-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:51
Analytical Date:	12/23/10 02:19	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	166	--	50
Cl3-BZ#28	805		ug/kg	166	--	50
Cl4-BZ#44	387		ug/kg	166	--	50
Cl5-BZ#101	478		ug/kg	166	--	50
Cl6-BZ#153	310		ug/kg	166	--	50
Cl5-BZ#105	ND		ug/kg	166	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	73		30-150
BZ 198	61		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-11	Date Collected:	11/03/10 11:56
Client ID:	S-10N-C011-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:55
Analytical Date:	12/23/10 21:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.34	--	1
Cl3-BZ#18	ND		ug/kg	3.34	--	1
Cl3-BZ#28	ND		ug/kg	3.34	--	1
Cl4-BZ#52	ND		ug/kg	3.34	--	1
Cl4-BZ#44	ND		ug/kg	3.34	--	1
Cl4-BZ#66	ND		ug/kg	3.34	--	1
Cl5-BZ#101	ND		ug/kg	3.34	--	1
Cl5-BZ#118	ND		ug/kg	3.34	--	1
Cl5-BZ#105	ND		ug/kg	3.34	--	1
Cl6-BZ#138	ND		ug/kg	3.34	--	1
Cl7-BZ#187	ND		ug/kg	3.34	--	1
Cl6-BZ#128	ND		ug/kg	3.34	--	1
Cl7-BZ#180	ND		ug/kg	3.34	--	1
Cl7-BZ#170	ND		ug/kg	3.34	--	1
Cl8-BZ#195	ND		ug/kg	3.34	--	1
Cl9-BZ#206	ND		ug/kg	3.34	--	1
Cl10-BZ#209	ND		ug/kg	3.34	--	1

DBOB	95	30-150
BZ 198	72	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-11	Date Collected:	11/03/10 11:56
Client ID:	S-10N-C011-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:55
Analytical Date:	12/23/10 21:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/kg	3.34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	95		30-150
BZ 198	72		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-12	Date Collected:	11/03/10 09:12
Client ID:	S-10N-C017-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:55
Analytical Date:	12/23/10 03:41	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	530		ug/kg	168	--	50
Cl3-BZ#18	1210		ug/kg	168	--	50
Cl4-BZ#52	2560		ug/kg	168	--	50
Cl4-BZ#44	1350		ug/kg	168	--	50
Cl4-BZ#66	2740		ug/kg	168	--	50
Cl5-BZ#118	2360		ug/kg	168	--	50
Cl6-BZ#138	1310		ug/kg	168	--	50
Cl6-BZ#128	331		ug/kg	168	--	50
Cl7-BZ#180	246		ug/kg	168	--	50
Cl7-BZ#170	183		ug/kg	168	--	50
Cl8-BZ#195	ND		ug/kg	168	--	50
Cl9-BZ#206	ND		ug/kg	168	--	50
Cl10-BZ#209	ND		ug/kg	168	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	82		30-150
BZ 198	66		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-12	Date Collected:	11/03/10 09:12
Client ID:	S-10N-C017-0-1.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:55
Analytical Date:	12/23/10 03:41	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2190		ug/kg	168	--	50
Cl5-BZ#101	2090		ug/kg	168	--	50
Cl6-BZ#153	1240		ug/kg	168	--	50
Cl5-BZ#105	477		ug/kg	168	--	50
Cl7-BZ#187	208		ug/kg	168	--	50

DBOB	82	30-150
BZ 198	66	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-13	Date Collected:	11/03/10 09:12
Client ID:	S-10N-C017-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:55
Analytical Date:	12/23/10 21:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	3.33	--	1
Cl3-BZ#18	ND		ug/kg	3.33	--	1
Cl4-BZ#52	ND		ug/kg	3.33	--	1
Cl4-BZ#44	ND		ug/kg	3.33	--	1
Cl4-BZ#66	ND		ug/kg	3.33	--	1
Cl5-BZ#118	ND		ug/kg	3.33	--	1
Cl5-BZ#105	ND		ug/kg	3.33	--	1
Cl6-BZ#138	ND		ug/kg	3.33	--	1
Cl7-BZ#187	ND		ug/kg	3.33	--	1
Cl6-BZ#128	ND		ug/kg	3.33	--	1
Cl7-BZ#180	ND		ug/kg	3.33	--	1
Cl7-BZ#170	ND		ug/kg	3.33	--	1
Cl8-BZ#195	ND		ug/kg	3.33	--	1
Cl9-BZ#206	ND		ug/kg	3.33	--	1
Cl10-BZ#209	ND		ug/kg	3.33	--	1

DBOB	88	30-150
BZ 198	72	30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

SAMPLE RESULTS

Lab ID:	L1018133-13	Date Collected:	11/03/10 09:12
Client ID:	S-10N-C017-1.0-2.0	Date Received:	11/05/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	11/30/10 14:55
Analytical Date:	12/23/10 21:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/07/10
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	ND		ug/kg	3.33	--	1
Cl5-BZ#101	ND		ug/kg	3.33	--	1
Cl6-BZ#153	ND		ug/kg	3.33	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	72		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/22/10 11:16
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 11/30/10 14:51
Cleanup Method1: EPA 3630
Cleanup Date1: 12/07/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-08,10-13 Batch: WG445393-1					
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	102		30-150
BZ 198	82		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/22/10 11:16
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 11/30/10 14:51
Cleanup Method1: EPA 3630
Cleanup Date1: 12/07/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-08,10-13 Batch: WG445393-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	102		30-150
BZ 198	82		30-150

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/22/10 11:57
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 12/07/10 11:20
Cleanup Method1: EPA 3630
Cleanup Date1: 12/08/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 09 Batch: WG446518-1					
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	93		30-150
BZ 198	81		30-150

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/22/10 11:57
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 12/07/10 11:20
Cleanup Method1: EPA 3630
Cleanup Date1: 12/08/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 09 Batch: WG446518-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	81		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

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): 01-08,10-13 QC Batch ID: WG445393-4 WG445393-5 QC Sample: L1018133-01 Client ID: S-10O-C079-1.0-2.0												
Cl3-BZ#18	9.35	1680	1470	87		1510	89		40-140	3		30
Cl4-BZ#52	16.8	1680	1500	88		1580	93		40-140	5		30
Cl4-BZ#44	8.68	1680	1520	90		1550	92		40-140	2		30
Cl5-BZ#118	9.68	1680	1500	89		1640	97		40-140	9		30
Cl6-BZ#138	6.10	1680	1370	81		1510	90		40-140	10		30
Cl7-BZ#187	ND	1680	1250	74		1380	82		40-140	10		30
Cl6-BZ#128	ND	1680	1310	78		1420	85		40-140	8		30
Cl7-BZ#180	ND	1680	1250	74		1390	83		40-140	11		30
Cl7-BZ#170	ND	1680	1250	74		1430	85		40-140	13		30
Cl8-BZ#195	ND	1680	1230	73		1370	82		40-140	11		30
Cl9-BZ#206	ND	1680	1550	92		1550	92		40-140	0		30
Cl10-BZ#209	ND	1680	1210	72		1350	80		40-140	11		30
Cl2-BZ#8	3.86	1680	1500	89		1570	93		40-140	5		30
Cl3-BZ#28	14.5	1680	1640	97		1720	101		40-140	5		30
Cl4-BZ#66	9.97	1680	1530	90		1610	95		40-140	5		30
Cl5-BZ#101	8.23	1680	1460	86		1540	91		40-140	5		30
Cl6-BZ#153	5.67	1680	1240	73		1380	82		40-140	11		30
Cl5-BZ#105	ND	1680	1410	84		1570	93		40-140	11		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

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): 01-08,10-13 QC Batch ID: WG445393-4 WG445393-5 QC Sample: L1018133-01 Client ID: S-10O-C079-1.0-2.0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
DBOB	94		98		30-150
BZ 198	79		88		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING **Lab Number:** L1018133

Project Number: TO-0010-03 **Report Date:** 12/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-08,10-13 Batch: WG445393-2 WG445393-3							
Cl2-BZ#8	65		74		40-140	13		30
Cl3-BZ#18	78		87		40-140	11		30
Cl3-BZ#28	89		100		40-140	12		30
Cl4-BZ#52	89		92		40-140	3		30
Cl4-BZ#44	89		90		40-140	1		30
Cl4-BZ#66	95		97		40-140	2		30
Cl5-BZ#101	92		95		40-140	3		30
Cl5-BZ#118	95		97		40-140	2		30
Cl5-BZ#105	86		89		40-140	3		30
Cl6-BZ#138	88		91		40-140	3		30
Cl7-BZ#187	82		86		40-140	5		30
Cl6-BZ#128	82		86		40-140	5		30
Cl7-BZ#180	78		82		40-140	5		30
Cl7-BZ#170	76		81		40-140	6		30
Cl8-BZ#195	75		79		40-140	5		30
Cl9-BZ#206	84		88		40-140	5		30
Cl10-BZ#209	81		78		40-140	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-08,10-13		Batch: WG445393-2 WG445393-3					
DBOB	92		99		30-150			
BZ 198	79		84		30-150			

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-08,10-13		Batch: WG445393-2 WG445393-3					
Cl6-BZ#153	83		86		40-140	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	92		99		30-150
BZ 198	79		84		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 09		Batch: WG446518-2		WG446518-3			
Cl2-BZ#8	77		81		40-140	5		30
Cl3-BZ#18	83		82		40-140	1		30
Cl3-BZ#28	93		84		40-140	10		30
Cl4-BZ#52	90		87		40-140	3		30
Cl4-BZ#44	86		86		40-140	0		30
Cl4-BZ#66	90		87		40-140	3		30
Cl5-BZ#101	89		87		40-140	2		30
Cl5-BZ#118	93		90		40-140	3		30
Cl5-BZ#105	86		83		40-140	4		30
Cl6-BZ#138	87		84		40-140	4		30
Cl7-BZ#187	81		80		40-140	1		30
Cl6-BZ#128	80		80		40-140	0		30
Cl7-BZ#180	76		75		40-140	1		30
Cl7-BZ#170	77		75		40-140	3		30
Cl8-BZ#195	75		75		40-140	0		30
Cl9-BZ#206	86		82		40-140	5		30
Cl10-BZ#209	76		74		40-140	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 09		Batch: WG446518-2		WG446518-3			
DBOB	91		91		30-150			
BZ 198	77		75		30-150			

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 09		Batch: WG446518-2		WG446518-3			
Cl6-BZ#153	80		76		40-140	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	91		91		30-150
BZ 198	77		75		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-01
Client ID: S-10O-C079-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/28/10 10:38
Date Received: 11/05/10
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	98.0		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	45.8		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-02
Client ID: S-10N-C007-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 12:34
Date Received: 11/05/10
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	98.4		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	52.6		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-03
Client ID: S-10N-C007-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 12:34
Date Received: 11/05/10
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	98.5		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	46.7		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-04
Client ID: S-10N-C008-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 14:22
Date Received: 11/05/10
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	98.8		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	66.7		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-05
Client ID: S-10N-C008-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 14:22
Date Received: 11/05/10
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	99.0		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	63.6		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-06
Client ID: S-10N-C009-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 12:16
Date Received: 11/05/10
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	98.7		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	61.1		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-07
Client ID: S-10N-C009-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 11/03/10 12:16
Date Received: 11/05/10
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	98.7		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	54.3		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-08
Client ID: S-10N-C010-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 11:42
Date Received: 11/05/10
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	98.8		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	54.8		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-09
Client ID: S-10N-C010-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 11:42
Date Received: 11/05/10
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	98.7		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	49.4		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-10
Client ID: S-10N-C011-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 11:56
Date Received: 11/05/10
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	99.1		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	56.4		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-11
Client ID: S-10N-C011-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 11:56
Date Received: 11/05/10
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	98.4		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	50.3		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-12
Client ID: S-10N-C017-0-1.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 09:12
Date Received: 11/05/10
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	98.1		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	49.5		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03
Lab Number: L1018133
Report Date: 12/29/10

SAMPLE RESULTS

Lab ID: L1018133-13
Client ID: S-10N-C017-1.0-2.0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/03/10 09:12
Date Received: 11/05/10
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	98.6		%	0.100	--	1	-	12/01/10 15:10	30,2540G	KB
Solids, Total (Pre-Dried)	47.3		%	0.100	NA	1	-	11/19/10 15:20	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-13 QC Batch ID: WG444343-1 QC Sample: L1018133-01 Client ID: S-10O-C079-1.0-2.0						
Solids, Total	98.0	97.7	%	0		20

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

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
ABCD	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018133-01A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-01B	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-02A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-03A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-04A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-05A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-06A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-07A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-08A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-09A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-10A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-11A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-12A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1018133-13A	Glass 250ml unpreserved	ABCD	N/A	3,3,2,3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

Container Comments

*Values in parentheses indicate holding time in days

Project Name: NBH ENVIRONMENTAL MONITORING
Project Number: TO-0010-03

Lab Number: L1018133
Report Date: 12/29/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)

Container Comments

L1018133-01A	SAMPLES FROZEN UPON RECEIPT 11/5/10 OPREP EMPTIED SAMPLE CONTAINER
L1018133-01B	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-02A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-03A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-04A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-05A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-06A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-07A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-08A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-09A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-10A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-12A	SAMPLES FROZEN UPON RECEIPT 11/5/10
L1018133-13A	SAMPLES FROZEN UPON RECEIPT 11/5/10

*Values in parentheses indicate holding time in days

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018133
Project Number:	TO-0010-03	**Report Date:**	12/29/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018133
Project Number:	TO-0010-03	**Report Date:**	12/29/10

Data Qualifiers

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:	NBH ENVIRONMENTAL MONITORING	**Lab Number:**	L1018133
Project Number:	TO-0010-03	**Report Date:**	12/29/10

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial_No:12291014:31

CHAIN OF CUSTODY

PAGE 7 OF 11

Date Rec'd in Lab: 11/5/10 | ALPHA Job #: L1018133

ALPHA ANALYTICAL
Westborough, 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 Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client Info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: FED
Criteria:

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
	S-10O-C077-0-1.0	10/28/10	10:09	SED	DR	☒	BH-K4	1
	S-10O-C077-1.0-2.0	10/28/10	10:09	SED	DR	☒	BH-K4	1
	S-10O-C078-0-1.0	10/28/10	10:25	SED	DR	☒	BH-L4	1
	S-10O-C078-1.0-2.0	10/28/10	10:25	SED	DR	☒	BH-L4	1
	S-10O-C079-0-1.0	10/28/10	10:38	SED	DR	☒	BH-M3	1
18133 1	S-10O-C079-1.0-2.0	10/28/10	10:38	SED	DR	☒	BH-M3	1
	S-10O-C080-0-1.0	10/28/10	10:52	SED	DR	☒	BH-N3	1
	S-10O-C080-1.0-2.0	10/28/10	10:52	SED	DR	☒	BH-N3	1
	S-10N-C001-0-1.0	11/03/10	13:43	SED	KGM	☒	BH-C2	1
	S-10N-C001-1.0-2.0	11/03/10	13:43	SED	KGM	☒	BH-C2	1
					Container Type	A		
					Preservative	A		

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 19:00		11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-891
Sediment Monitoring Summary Report
W912WJ-09-D-0001

CHAIN OF CUSTODY

PAGE 11 OF 11

Date Rec'd in Lab: 11/5/10 | ALPHA Job #: L1018133

ALPHA ANALYTICAL

Westborough, 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 Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client Info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
	S-10N-C017-0-1.0	11/03/10	09:12	SED	KGM	☒	BH-M2	1
	S-10N-C017-1.0-2.0	11/03/10	09:12	SED	KGM	☒	BH-M2	1
	S-10O-C072-1.0-2.0MSMSD	10/28/10	09:09	SED	MW	☒	MS/MSD	1
	S-10O-C076-0-1.0MSMSD	10/28/10	10:00	SED	DR	☒	MS/MSD	1
18133.1	S-10O-C079-1.0-2.0MSMSD	10/28/10	10:38	SED	DR	☒	MS/MSD	1
	S-10N-C001-0-1.0MSMSD	11/03/10	13:43	SED	KGM	☒	MS/MSD	1
	S-10O-C074-0-1.0MS/MSD	10/27/10	15:18	SED	DB	☐	CSO MS/MSD	1
	S-10O-C071-0-1.0MS/MSD	10/29/10	0833	SED	MW	☐	MS/MSD	1
						☐		
						☐		

ANALYSIS

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

Container Type	A	-	-	-	-	-	-	-	-	-	-	-
Preservative	A	-	-	-	-	-	-	-	-	-	-	-

Relinquished By:	Date/Time	Received By:	Date/Time
	11/5/10 12:00		11/5/10 1950

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Serial_No:12291014:31

CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 11/5/10 ALPHA Job #: L1018133

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
FED	

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & Project-specific EDD

PLEASE HOMOGENIZE SEDIMENTS BEFORE ANALYSIS

BOATHOUSE CORES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB congeners - NOAA 18	Sample Specific Comments	TOTAL # BOTTLES
L1013132	S-10N-C007-0-1.0	11/03/10	12:34	SED	KGM	☒	BH-E4	1
3	S-10N-C007-1.0-2.0	11/03/10	12:34	SED	KGM	☒	BH-E4	1
4	S-10N-C008-0-1.0	11/03/10	14:22	SED	KGM	☒	BH-F2	1
5	S-10N-C008-1.0-2.0	11/03/10	14:22	SED	KGM	☒	BH-F2	1
6	S-10N-C009-0-1.0	11/03/10	12:16	SED	KGM	☒	BH-F3	1
7	S-10N-C009-1.0-2.0	11/03/10	12:16	SED	KGM	☒	BH-F3	1
8	S-10N-C010-0-1.0	11/03/10	11:42	SED	KGM	☒	BH-G2	1
9	S-10N-C010-1.0-2.0	11/03/10	11:42	SED	KGM	☒	BH-G2	1
10	S-10N-C011-0-1.0	11/03/10	11:56	SED	KGM	☒	BH-G3	1
11	S-10N-C011-1.0-2.0	11/03/10	11:56	SED	KGM	☒	BH-G3	1
	Container Type					A		
	Preservative					A		

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

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	11/5/10 19:00	[signature]	11/5/10 1900

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

FORM NO: 01-01(I-NJ) (rev. 29-APR-09)

Delivery Order-0010-03
April 2011
B-893
Sediment Monitoring Summary Report
W912WJ-09-D-0001

APPENDIX C. NEW ENVIRONMENTAL HORIZONS, INC. DATA VALIDATION REPORTS (ON CD)

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APPENDIX C: NEW ENVIRONMENTAL HORIZONS, INC. DATA VALIDATION REPORTS

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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):	L1014584
Date(s) of Collection:	August 17, 2010 – August 18, 2010
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:	November 23, 2010

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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.

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Phone: (908) 874-5686 ◊ (781) 643-4294
Email: nrothman_neh@comcast.net ◊ s.chapnick@comcast.net
www.neh-inc.com

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-10S-C001-0-0.5	L1014584-01	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C002-0-0.5	L1014584-02	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C003-0-0.5	L1014584-03	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C004-0-0.5	L1014584-04	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C005-0-0.5	L1014584-05	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C006-0-0.5	L1014584-06	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C007-0-0.5	L1014584-07	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C008-0-0.5	L1014584-08	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C009-0-0.5	L1014584-09	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C010-0-0.5	L1014584-10	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C011-0-0.5	L1014584-11	8/17/10	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-10S-C012-0-0.5	L1014584-12	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C013-0-0.5	L1014584-13	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C014-0-0.5	L1014584-14	8/17/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C015-0-0.5	L1014584-15	8/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C016-0-0.5	L1014584-16	8/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C017-0-0.5	L1014584-17	8/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C018-0-0.5	L1014584-18	8/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C019-0-0.5	L1014584-19	8/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-C020-0-0.5	L1014584-20	8/18/10	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 2010 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 2010 requirements. The database was unchanged as a consequence of this review (i.e., there were no DV qualifiers added to the data). 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 2010 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 Receipt and Holding Time

The post-dredge sediment cores were collected on August 17, 2010 and August 18, 2010 and frozen to arrest holding times. Cores were thawed and aliquots of the cores were generated by Dave Walsh, WHG, on September 15, 2010 for PCB Congener analysis. The post-dredge sediment core samples were received at the laboratory intact at 3°C on the day of after sample aliquoting, September 16, 2010. Aliquots of the "as received" samples were analyzed for percent solids. All samples had percent solids content of 39.5 to 70.7%; 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 83.5%. These air-dried samples were frozen on September 26, 2010, to arrest the holding time for sample extraction. As a consequence of the freezing (both prior to aliquoting and after air-drying), these samples were considered to have been extracted and analyzed within holding time.

Accuracy

The Method Blank was non-detect for all 18 NOAA Congeners and there was no Equipment Blank required to be collected these core samples. Therefore, blank action to negate sample data was not required.

LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners, indicating that the method of analysis was accurate for these Congeners.

MS/MSD analysis was not reported, according the narrative, since the level of Congeners in the unspiked sample was too high for recovery results to be applicable to the levels in the samples. Therefore, there was no accuracy information for the site matrix available for the reported Congeners.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners indicating acceptable precision in the laboratory analysis of these samples.

There were no MS/MSD or field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be 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 780 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010). 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.

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):	L1017458
Date(s) of Collection:	October 19, 2010 – October 20, 2010
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 16, 2010

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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.

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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-10O-C016-0-0.5	L1017458-01	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C017-0-0.5	L1017458-02	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C018-0-0.5	L1017458-03	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C019-0-0.5	L1017458-04	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C020-0-0.5	L1017458-05	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C021-0-0.5	L1017458-06	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C022-0-0.5	L1017458-07	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C023-0-0.5	L1017458-08	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C024-0-0.5	L1017458-09	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C025-0-0.5	L1017458-10	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C026-0-0.5	L1017458-11	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]

Table 1. Sample Descriptions and Analytical Parameters Validated - *continued*

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-10O-C027-0-0.5	L1017458-12	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C028-0-0.5	L1017458-13	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C029-0-0.5	L1017458-14	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C030-0-0.5	L1017458-15	10/20/10	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 2010 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 2010 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 2010 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 Receipt and Holding Time

The post-dredge sediment cores were collected on October 19, 2010 and October 20, 2010 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. The cores and aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The post-dredge sediment core samples were received intact frozen at -2°C and -3°C on October 29, 2010. Aliquots of the "as received" samples were analyzed for percent solids. All samples had percent solids content of 31 to 49%; 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 96%. These air-dried samples were refrigerated until extraction of the samples on November 8, 2010. As a consequence of the freezing of the aliquots by WHG, these samples were considered to have been extracted and analyzed within holding time.

Accuracy

The Method Blank reported low-level detects for five Congeners. All samples reported levels of these Congeners greater than five times Method Blank levels; therefore, blank action to negate sample data was not required. There was no Equipment Blank required to be collected these core samples.

One surrogate was recovered high compared to criteria in sample S-10O-C016-0-0.5; therefore, all detected Congeners (15 total) were estimated (DJ) with a possible high bias due to high surrogate recovery. The three non-detect Congeners in this sample were unaffected by the surrogate recovery.

LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners except 2,2',5,5'-Tetrachlorobiphenyl (BZ 52), which was recovered high in the LCSD. Since the LCS recovery and LCS/LCSD precision were acceptable, professional judgment was used to accept sample data without qualification.

MS/MSD analysis was performed on sample S-10O-C026-0-0.5. MS/MSD accuracy was acceptable for all 18 NOAA Congeners.

All of the samples required multiple dilutions to report results within the calibration range. Three results (2,3',4,4',5-Pentachlorobiphenyl (BZ 18) in sample S-10O-C022-0-0.5 and 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ138) in samples S-10O-C022-0-0.5 and S-10O-C023-0-0.5) were initially reported over the instrument calibration range (qualified "DE" by the laboratory) but were non-detect in the dilution analysis of the sample (qualified "DU"). Professional judgment was used to accept these three over-calibration range results as estimated data (DJ) rather than to report the data as non-detect. The affected results are shown in Table 2.

Precision

LCS/LCSD and MS/MSD precision was acceptable for all 18 NOAA Congeners indicating acceptable precision in the laboratory analysis of these samples.

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be 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 27 to over 1000 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010). 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-10O-C022-0-0.5	2,3',4,4',5-Pentachlorobiphenyl	DJ	I	Result uncertain at a level above the calibration range
S-10O-C022-0-0.5 & S-10O-C023-0-0.5	2,2',3,4,4',5'-Hexachlorobiphenyl	DJ	I	Result uncertain at a level above the calibration range
S-10O-C016-0-0.5	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, 2,3,3',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	DJ	H	High Surrogate 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

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):	L1017218
Date(s) of Collection:	October 18, 2010 – October 19, 2010
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 16, 2010

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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.

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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-10O-C001-0-0.5	L1017218-01	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C002-0-0.5	L1017218-02	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C003-0-0.5	L1017218-03	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C004-0-0.5	L1017218-04	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C005-0-0.5	L1017218-05	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C006-0-0.5	L1017218-06	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C007-0-0.5	L1017218-07	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C008-0-0.5	L1017218-08	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C009-0-0.5	L1017218-09	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C010-0-0.5	L1017218-10	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C011-0-0.5	L1017218-11	10/18/10	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-10O-C012-0-0.5	L1017218-12	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C013-0-0.5	L1017218-13	10/18/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C014-0-0.5	L1017218-14	10/19/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]
S-10O-C015-0-0.5	L1017218-15	10/19/10	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 2010 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 2010 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 2010 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 Receipt and Holding Time

The post-dredge sediment cores were collected on October 18, 2010 and October 19, 2010 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. The cores and aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The post-dredge sediment core samples were received intact frozen at -2°C and -3°C on October 29, 2010. Aliquots of the "as received" samples were analyzed for percent solids. All samples had percent solids content of 33 to 55%; 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 96%. These air-dried samples were refrigerated until extraction of the samples on November 4, 2010. As a consequence of the freezing of the aliquots by WHG, these samples were considered to have been extracted and analyzed within holding time.

Accuracy

The Method Blank was non-detect for all 18 NOAA Congeners and there was no Equipment Blank required to be collected these core samples. Therefore, blank action to negate sample data was not required.

LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners, indicating that the method of analysis was accurate for these Congeners.

MS/MSD analysis was performed on sample S-10O-C014-0-0.5. MS/MSD accuracy was acceptable for all 18 NOAA Congeners.

All of the samples required multiple dilutions to report results within the calibration range. Three results (2,2',4,5,5'-Pentachlorobiphenyl (BZ 101) in S-10O-C002-0-0.5 and 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138) and 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153) in sample S-10O-C003-

0-0.5) were initially reported over the instrument calibration range (qualified "DE" by the laboratory) but were non-detect in the dilution analysis of the sample (qualified "DU"). Professional judgment was used to accept these three over-calibration range results as estimated data (DJ) rather than to report the data as non-detect. The affected results are shown in Table 2.

Precision

LCS/LCSD and MS/MSD precision was acceptable for all 18 NOAA Congeners indicating acceptable precision in the laboratory analysis of these samples.

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be 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 27 to over 1000 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010). 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-10O-C002-0-0.5	2,2',4,5,5'-Pentachlorobiphenyl	DJ	I	Result uncertain at a level above the calibration range
S-10O-C003-0-0.5	2,2',3,4,4',5'-Hexachlorobiphenyl & 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	I	Result uncertain at a level above the calibration range

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

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):	L1017460
Date(s) of Collection:	August 18, 2020, October 20, 2010 – October 21, 2010
Number / Type Samples & Analyses	16 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 16, 2010

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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.

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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-10O-C031-0-0.5	L1017460-01	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C032-0-0.5	L1017460-02	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C033-0-0.5	L1017460-03	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C034-0-0.5	L1017460-04	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C035-0-0.5	L1017460-05	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C036-0-0.5	L1017460-06	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C037-0-0.5	L1017460-07	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C038-0-0.5	L1017460-08	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C039-0-0.5	L1017460-09	10/21/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C040-0-0.5	L1017460-10	10/21/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C041-0-0.5	L1017460-11	10/20/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]

Table 1. Sample Descriptions and Analytical Parameters Validated - *continued*

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-10O-C042-0-0.5	L1017460-12	10/21/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C043-0-0.5	L1017460-13	10/21/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C044-0-0.5	L1017460-14	10/21/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C045-0-0.5	L1017460-15	10/21/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C046-0-0.5	L1017460-16	8/18/10	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 2010 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 2010 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 2010 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 Receipt and Holding Time

All of the post-dredge sediment cores, except S-10O-C046-0-0.5, were collected on October 20, 2010 and October 21, 2010 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. Sample S-10O-C046-0-0.5 was collected on August 18,2010. All sample aliquots were frozen by WHG to arrest holding time prior to shipment to the laboratory. The post-dredge sediment core samples were received intact frozen at -2°C and -3°C on October 29, 2010. Aliquots of the "as received" samples were analyzed for percent solids. All samples had percent solids content of 31 to 49%; 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 96%. These air-dried samples were refrigerated until extraction of the samples on November 8, 2010. As a consequence of the freezing of the aliquots by WHG, these samples were considered to have been extracted and analyzed within holding time.

Accuracy

The Method Blank reported low-level detects for five Congeners. All samples reported levels of these Congeners greater than five times Method Blank levels; therefore, blank action to negate sample data was not required. There was no Equipment Blank required to be collected these core samples.

LCS/LCSD recoveries were acceptable for all 18 NOAA Congeners, indicating that the method of analysis was accurate for these Congeners.

MS/MSD analysis was performed on sample S-10O-C041-0-0.5. MS/MSD accuracy was acceptable for all 18 NOAA Congeners except the MSD recovery was low for six Congeners, as shown in Table 2. Two other Congeners reported low MS and/or MSD recovery; however, no action was required

because the spike level was too low relative to the level of these Congeners in the unspiked samples and therefore the MS/MSD results were not relevant. See the DV Checklist for further details.

Precision

LCS/LCSD and MS/MSD precision was acceptable for all 18 NOAA Congeners indicating acceptable precision in the laboratory analysis of these samples.

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be 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 27 to over 2500 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010). 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-10O-C041-0-0.5	2,4'-Dichlorobiphenyl, 2,4,4'-Trichlorobiphenyl, 2,2',3,5'-Tetrachlorobiphenyl, 2,3',4,4'-Tetrachlorobiphenyl, 2,2',3,4,4',5'-Hexachlorobiphenyl, & 2,2',4,4',5,5'-Hexachlorobiphenyl	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

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):	L1018124
Date(s) of Collection:	November 3, 2010
Number / Type Samples & Analyses	11 Boathouse 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:	January 4, 2011

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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.

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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-10N-C001-0-1.0	L1018124-01	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]
S-10N-C012-0-1.0	L1018124-02	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C012-1.0-2.0	L1018124-03	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C013-0-1.0	L1018124-04	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C013-1.0-2.0	L1018124-05	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C014-0-1.0	L1018124-06	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C014-1.0-2.0	L1018124-07	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C015-0-1.0	L1018124-08	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C015-1.0-2.0	L1018124-09	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C016-0-1.0	L1018124-10	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C016-1.0-2.0	L1018124-11	11/3/10	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

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The following QC elements, as applicable to the analytical methods, were reviewed:

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- Surrogate Recoveries
- Matrix Spike (MS) / Matrix Spike Duplicate (MSD) Recoveries
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- Sample result reporting (including compound lists, reporting limits, and units)
- Calibration criteria* (including tune criteria, initial calibration and continuing calibration verification)
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- Retention Time windows*
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- 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 2010 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 2010 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 Receipt and Holding Time

The Boathouse sediment cores were collected on November 3, 2010 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. The samples were shipped to Alpha Analytical where they were received intact at 4°C on November 5, 2010. Alpha froze the samples upon receipt and on November 17, 2010, the samples were thawed and the "as received" samples were analyzed for percent solids. All samples had percent solids content of 44 to 79%; 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 refrigerated until extraction of the samples on November 19, 2010. As a consequence of the freezing of the aliquots by Alpha, these samples were considered to have been extracted and analyzed within holding time.

Accuracy

There was no Equipment Blank required to be collected these core samples.

MS/MSD analysis was performed on sample S-10N-C001-0-1.0. MS/MSD accuracy was acceptable for all 18 NOAA Congeners except 2,2',4,5,5'-Pentachlorobiphenyl, (BZ#101), 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ#138), and 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ#153), which were recovered below criteria in the MS. These three Congeners were estimated (DJ) with possible low bias in the unspiked sample, as shown in Table 2.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners except 2,2',5,5'-Tetrachlorobiphenyl (BZ#52). All results for this Congener were estimated (DJ, J, or UJ), as shown in Table 2, with indeterminate bias.

Sample S-10N-C014-0-1.0 was analyzed initially at dilution factor (DF)=10 and five Congeners were reported over the instrument calibration range (flagged "DE" by the lab). The sample extract was reanalyzed at DF=100 and the lab reported results for six Congeners: the five Congeners over-range in DF=10 and 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ#153), which was within criteria in the DF=10 analysis. A comparison of the DF=10 and DF=100 data for this sample indicated poor replicate precision (RPD > 30%) between the results for these six Congeners. Therefore, all six Congeners from the DF=100 analysis, which were accepted for reporting, were estimated (DJ), as shown in Table 2.

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be evaluated.

Sensitivity & Reporting

Samples S-10N-C012-1.0-2.0, S-10N-C013-1.0-2.0, S-10N-C014-1.0-2.0, S-10N-C015-1.0-2.0, and S-10N-C016-1.0-2.0 were analyzed at DF=1. For these samples, the RLs were all less than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NBH OU1 QAPP Addendum 2010. The other six samples were analyzed at various dilutions (some with multiple analyses) to report all Congeners within the instrument calibration range. For these samples with multiple dilutions, the RLs were increased as a consequence of the dilutions made. 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.

The laboratory reported many 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-10N-C001-0-1.0, S-10N-C012-0-1.0, S-10N-C013-0-1.0, S-10N-C013-1.0-2.0, S-10N-C015-0-1.0, S-10N-C015-1.0-2.0, S-10N-C016-0-1.0, & S-10N-C016-1.0-2.0	2,2',5,5'-Tetrachlorobiphenyl	J / DJ	I	LCS/LCSD imprecision
S-10N-C012-1.0-2.0 & S-10N-C014-1.0-2.0	2,2',5,5'-Tetrachlorobiphenyl	UJ	I	LCS/LCSD imprecision
S-10N-C014-0-1.0	2,2',5,5'-Tetrachlorobiphenyl	DJ	I	LCS/LCSD imprecision + Replicate imprecision
S-10N-C001-0-1.0	2,2',4,5,5'-Pentachlorobiphenyl, 2,2',3,4,4',5'-Hexachlorobiphenyl, & 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	L	Low MS recovery
S-10N-C014-0-1.0	2,4,4'-Trichlorobiphenyl, 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	Replicate 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

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):	L1018125
Date(s) of Collection:	October 25, 2010 and October 27, 2010
Number / Type Samples & Analyses	19 Boathouse 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:	January 4, 2011

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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-10O-C047-0-1.0	L1018125-01	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C047-1.0-2.0	L1018125-02	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C048-0-1.0	L1018125-03	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C048-1.0-2.0	L1018125-04	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C049-0-1.0	L1018125-05	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C049-1.0-2.0	L1018125-06	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C050-0-1.0	L1018125-07	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C050-1.0-2.0	L1018125-08	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C051-0-1.0	L1018125-09	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C051-1.0-2.0	L1018125-10	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C052-0-1.0	L1018125-11	10/25/10	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-10O-C052-1.0-2.0	L1018125-12	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C053-0-1.0	L1018125-13	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C053-1.0-2.0	L1018125-14	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C054-0-1.0	L1018125-15	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C054-1.0-2.0	L1018125-16	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C055-0-1.0	L1018125-17	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C055-1.0-2.0	L1018125-18	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C070-0-1.0	L1018125-19	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]

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 2010 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 2010 requirements. No additional data qualification was required 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 2010 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 Receipt and Holding Time

The Boathouse sediment cores were collected on October 25, 2010 and October 27, 2010 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. The samples were frozen by WHG until shipment to Alpha Analytical where they were received intact at 4°C on November 5, 2010. Alpha froze the samples upon receipt and on November 12, 2010, the samples were thawed and the "as received" samples were analyzed for percent solids. All samples had percent solids content of 33 to 88%; 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 95%. These air-dried samples were refrigerated until extraction of the samples on November 19, 2010. 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

There was no Equipment Blank required to be collected with these core samples.

The LCS/LCSD and MS/MSD analysis, performed on sample S-10O-C070-0-1.0, demonstrated acceptable accuracy for recovery of the 18 NOAA Congeners.

Precision

LCS/LCSD and MS/MSD precision were acceptable for all 18 NOAA Congeners.

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be evaluated.

Sensitivity & Reporting

Samples S-10O-C049-1.0-2.0, S-10O-C050-1.0-2.0, S-10O-C052-1.0-2.0, S-10O-C054-1.0-2.0, and S-10O-C055-1.0-2.0 were analyzed at DF=1. For these samples the RLs were all less than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010. The other fourteen samples were analyzed at various dilutions (some with multiple analyses) 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, Total PCBs (as the sum of all detected Congener results) for these samples were at a level above the Project Action Limit (PAL) for Total PCBs given in Worksheet #15; therefore, sensitivity was considered acceptable.

The laboratory reported many results 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):	L1018126
Date(s) of Collection:	October 25, 2010, October 27, 2010, & October 28, 2010
Number / Type Samples & Analyses	20 Boathouse 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:	January 4, 2011

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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-10O-C056-0-1.0	L1018126-01	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C056-1.0-2.0	L1018126-02	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C057-0-1.0	L1018126-03	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C057-1.0-2.0	L1018126-04	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C058-0-1.0	L1018126-05	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C058-1.0-2.0	L1018126-06	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C059-0-1.0	L1018126-07	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C059-1.0-2.0	L1018126-08	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C060-0-1.0	L1018126-09	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C060-1.0-2.0	L1018126-10	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C061-0-1.0	L1018126-11	10/25/10	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-10O-C061-1.0-2.0	L1018126-12	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C062-0-1.0	L1018126-13	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C062-1.0-2.0	L1018126-14	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C063-0-1.0	L1018126-15	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C063-1.0-2.0	L1018126-16	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]
S-10O-C064-0-1.0	L1018126-17	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C064-1.0-2.0	L1018126-18	10/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C065-0-1.0	L1018126-19	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C071-0-1.0	L1018126-20	10/28/10	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 2010 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 2010 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 2010 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 Receipt and Holding Time

The Boathouse sediment cores were collected on October 25, 2010 through October 28, 2010 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. The samples were frozen by WHG until shipment to Alpha Analytical where they were received intact at 4°C on November 5, 2010. Alpha froze the samples upon receipt and on November 19, 2010, the samples were thawed and the "as received" samples were analyzed for percent solids. All samples had percent solids content of 37 to 79%; 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 97%. These air-dried samples were refrigerated until extraction of the samples on November 22, 2010. As a consequence of the freezing of the aliquots by Alpha, these samples were considered to have been extracted and analyzed within holding time.

Accuracy

There was no Equipment Blank required to be collected these core samples.
The LCS/LCSD and MS/MSD analysis, performed on sample S-10O-C063-1.0-2.0, demonstrated acceptable accuracy for recovery of the 18 NOAA Congeners.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners except 2,4'-Dichlorobiphenyl (BZ#8) and 2,4,4'-Trichlorobiphenyl (BZ#28). All results for these two Congeners, except for those associated with sample S-10O-C063-1.0-2.0, were estimated (DJ, J, UJ, or DUJ), as shown in Table 2, with indeterminate bias. Sample S-10O-C063-1.0-2.0 was used for the MS/MSD analysis and acceptable precision was demonstrated for all 18 NOAA Congeners. Therefore, professional judgment was used to accept the results for 2,4'-Dichlorobiphenyl (BZ#8) and 2,4,4'-Trichlorobiphenyl (BZ#28) unqualified in this sample based on acceptable precision in the MS/MSD.

Sample S-10O-C062-0-1.0 was analyzed initially at dilution factor (DF)=100 and four Congeners were reported over the instrument calibration range (flagged "DE" by the lab). The sample extract was reanalyzed at DF=400 and a comparison of the DF=100 and DF=400 data for this sample indicated poor replicate precision (RPD > 30%) between the results for the four Congeners reported from the dilution analysis. Therefore, all four Congeners from the DF=400 analysis, which were accepted for reporting, were estimated (DJ) with indeterminate bias as shown in Table 2.

Sample S-10O-C064-1.0-2.0 was analyzed initially at dilution factor (DF)=100 and seven Congeners were reported over the instrument calibration range (flagged "DE" by the lab). The sample extract was reanalyzed at DF=500 and a comparison of the DF=100 and DF=500 data for this sample indicated poor replicate precision (RPD > 30%) between the results for the seven Congeners reported from the dilution analysis. Therefore, all seven Congeners from the DF=500 analysis, which were accepted for reporting, were estimated (DJ) with indeterminate bias as shown in Table 2.

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be evaluated.

Sensitivity & Reporting

Samples S-10O-C056-1.0-2.0, S-10O-C057-1.0-2.0, S-10O-C058-1.0-2.0, S-10O-C060-1.0-2.0, S-10O-C061-1.0-2.0, S-10O-C062-1.0-2.0, and S-10O-C063-1.0-2.0 were analyzed at DF=1. For these samples, the RLs were all less than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NBH OU1 QAPP Addendum 2010. The other thirteen samples were analyzed at various dilutions (some with multiple analyses) to report all Congeners within the instrument calibration range. For these samples with multiple dilutions, the RLs were increased as a consequence of the dilutions made. 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.

The laboratory reported many 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-10O-C062-0-1.0	2,2',5,5'-Tetrachlorobiphenyl, 2,3',4,4'-Tetrachlorobiphenyl, & 2,3',4,4',5-Pentachlorobiphenyl	DJ	I	Replicate imprecision
S-10O-C064-1.0-2.0	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	DJ	I	Replicate imprecision
S-10O-C062-0-1.0 & S-10O-C064-1.0-2.0	2,4,4'-Trichlorobiphenyl	DJ	I	LCS/LCSD imprecision + Replicate imprecision
All samples except: S-10O-C063-1.0-2.0, S-10O-C062-0-1.0 & S-10O-C064-1.0-2.0	2,4,4'-Trichlorobiphenyl	DJ / J / UJ	I	LCS/LCSD imprecision
All samples except: S-10O-C063-1.0-2.0	2,4'-Dichlorobiphenyl	DJ / J / UJ / DUJ	I	LCS/LCSD 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

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):	L1018129
Date(s) of Collection:	October 27, 2010 & October 28, 2010
Number / Type Samples & Analyses	18 Boathouse 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:	January 20, 2011

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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-10O-C065-1.0-2.0	L1018129-01	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C066-0-1.0	L1018129-02	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C066-1.0-2.0	L1018129-03	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C067-0-1.0	L1018129-04	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C067-1.0-2.0	L1018129-05	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C068-0-1.0	L1018129-06	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C068-1.0-2.0	L1018129-07	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C069-0-1.0	L1018129-08	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C069-1.0-2.0	L1018129-09	10/27/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C071-1.0-2.0	L1018129-10	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C072-0-1.0	L1018129-11	10/28/10	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-10O-C072-1.0-2.0	L1018129-12	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]
S-10O-C073-0-1.0	L1018129-13	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C073-1.0-2.0	L1018129-14	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C074-0-1.0	L1018129-15	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C074-1.0-2.0	L1018129-16	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C075-0-1.0	L1018129-17	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C075-1.0-2.0	L1018129-18	10/28/10	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 2010 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 2010 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 2010 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 Receipt and Holding Time

The Boathouse sediment cores were collected on October 27, 2010 and October 28, 2010 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. The samples were frozen by WHG until shipment to Alpha Analytical where they were received intact at 2 to 3°C on November 5, 2010. Alpha froze the samples upon receipt and on November 22, 2010, the samples were thawed and the "as received" samples were analyzed for percent solids. All samples had percent solids content of 38 to 94%; 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 95%. These air-dried samples were frozen until extraction of the samples on November 30, 2010. 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

There was no Equipment Blank required to be collected these core samples.

The LCS/LCSD and MS/MSD analysis, performed on sample S-10O-C072-1.0-2.0, demonstrated acceptable accuracy for recovery of the 18 NOAA Congeners except for high recovery in the LCSD for 2,4,4'-Trichlorobiphenyl (BZ#28). All detected results for 2,4,4'-Trichlorobiphenyl (BZ#28), except for sample S-10O-C072-1.0-2.0, were estimated (DJ), as shown in Table 2. Non-detects for this Congener were unaffected by the high LCSD recovery results and professional judgment was used to accept this Congener result in sample S-10O-C072-1.0-2.0 based on acceptable accuracy in the MS/MSD.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners except 2,2',5-Trichlorobiphenyl (BZ#18) and 2,4,4'-Trichlorobiphenyl (BZ#28). All results for these two Congeners, except for those associated with sample S-10O-C072-1.0-2.0, were estimated (DJ or DUJ), as shown in Table 2, with indeterminate bias. Sample S-10O-C072-1.0-2.0 was used for the MS/MSD analysis and acceptable precision was demonstrated for all 18 NOAA Congeners. Therefore, professional judgment was used to accept the results for 2,2',5-Trichlorobiphenyl (BZ#18) and 2,4,4'-Trichlorobiphenyl (BZ#28) unqualified in this sample based on acceptable precision in the MS/MSD.

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be evaluated.

Sensitivity & Reporting

Samples S-10O-C069-0-1.0, S-10O-C069-1.0-2.0, S-10O-C072-0-1.0, S-10O-C073-1.0-2.0, S-10O-C074-1.0-2.0, and S-10O-C075-1.0-2.0 were analyzed with a dilution factor (DF) of 2. For these samples, the RLs were all less than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NBH OU1 QAPP Addendum 2010. The other twelve samples were analyzed at various dilutions (some with multiple analyses) to report all Congeners within the instrument calibration range. For these samples with multiple dilutions, the RLs were increased as a consequence of the dilutions made. 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.

The laboratory reported many 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
All samples except: S-10O-C072-1.0-2.0	2,2',5-Trichlorobiphenyl	DJ / DUJ	I	LCS/LCSD imprecision
S-10O-C066-0-1.0, S-10O-C069-1.0-2.0, S-10O-C073-1.0-2.0, S-10O-C074-1.0-2.0, & S-10O-C075-1.0-2.0	2,4,4'-Trichlorobiphenyl	DUJ	I	LCS/LCSD imprecision

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
S-10O-C065-1.0-2.0, S-10O-C066-1.0-2.0, S-10O-C067-0-1.0, S-10O-C067-1.0-2.0, S-10O-C068-0-1.0, S-10O-C068-1.0-2.0, S-10O-C069-0-1.0, S-10O-C071-1.0-2.0, S-10O-C072-0-1.0, S-10O-C073-0-1.0, S-10O-C074-0-1.0, & S-10O-C075-0-1.0	2,4,4'-Trichlorobiphenyl	DJ	I	High LCS + LCS/LCSD 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

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):	L1018130
Date(s) of Collection:	October 28, 2010 & November 3, 2010
Number / Type Samples & Analyses	20 Boathouse 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:	January 20, 2011

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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-10O-C076-0-1.0	L1018130-01	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]
S-10O-C076-1.0-2.0	L1018130-02	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C077-0-1.0	L1018130-03	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C077-1.0-2.0	L1018130-04	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C078-0-1.0	L1018130-05	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C078-1.0-2.0	L1018130-06	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C079-0-1.0	L1018130-07	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C080-0-1.0	L1018130-08	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10O-C080-1.0-2.0	L1018130-09	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C001-1.0-2.0	L1018130-10	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C002-0-1.0	L1018130-11	11/3/10	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-10N-C002-1.0-2.0	L1018130-12	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C003-0-1.0	L1018130-13	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C003-1.0-2.0	L1018130-14	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C004-0-1.0	L1018130-15	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C004-1.0-2.0	L1018130-16	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C005-0-1.0	L1018130-17	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C005-1.0-2.0	L1018130-18	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C006-0-1.0	L1018130-19	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C006-1.0-2.0	L1018130-20	11/3/10	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 2010 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 2010 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 2010 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 Receipt and Holding Time

The Boathouse sediment cores were collected on October 28, 2010 and November 3, 2101 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. The samples were frozen by WHG until shipment to Alpha Analytical where they were received intact at 2 to 3°C on November 5, 2010. Alpha froze the samples upon receipt and on November 29, 2010, the samples were thawed and the "as received" samples were analyzed for percent solids. All samples had percent solids content of 44 to 82%; 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 93%. These air-dried samples were refrigerated until extraction of the samples on December 2, 2010. 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

There was no Equipment Blank required to be collected these core samples.

The LCS/LCSD demonstrated acceptable accuracy for recovery of the 18 NOAA Congeners. The MS/MSD analysis, performed on sample S-10O-C076-0-1.0, demonstrated acceptable accuracy for recovery of the 18 NOAA Congeners except 2,3',4,4'-Tetrachlorobiphenyl (BZ#66), 2,3',4,4',5-

Pentachlorobiphenyl (BZ#118), and 2,2',4,5,5'-Pentachlorobiphenyl (BZ#101) were not recovered in the MS and MSD (0% recoveries); 2,2',5,5'-Tetrachlorobiphenyl (BZ #52), 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ#138), and 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ#153) recovered low, but above 10%, in both the MS and MSD; and 2,2',3,5'-Tetrachlorobiphenyl (BZ#44) recovered low, but above 10%, in the MS analysis. For the three Congeners that reported zero recoveries in the MS/ MSD, no action was required because the spike level was too low relative to the level of these Congeners in the unspiked samples and therefore the MS/MSD results were not relevant. The other four Congeners were estimated (DJ) with possible low bias due to low MS recovery results, as shown in Table 2.

The project narrative indicated that the detected results for 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ#206) and Decachlorobiphenyl (BZ#209) reported for sample S-10O-C076-1.0-2.0 (L1018130-02) were confirmed by a GC/MS-SIM analysis of the sample extract since these Congeners have not previously been detected in the core samples.

Precision

LCS/LCSD and MS/MSD precision was acceptable for all 18 NOAA Congeners.

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be evaluated.

Sensitivity & Reporting

Samples S-10O-C080-1.0-2.0, S-10N-C002-0-1.0, S-10N-C002-1.0-2.0, S-10N-C003-1.0-2.0, S-10N-C004-1.0-2.0, S-10N-C004-1.0-2.0, S-10O-C076-1.0-2.0, and S-10O-C077-1.0-2.0 were analyzed with dilution factors (DF) less than or equal to 2. For these samples, the RLs were all less than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NBH OU1 QAPP Addendum 2010. The other twelve samples were analyzed at various dilutions to report all Congeners within the instrument calibration range. For these samples with multiple dilutions, the RLs were increased as a consequence of the dilutions made. 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.

The laboratory reported many 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-10O-C076-0-1.0	2,2',3,5'-Tetrachlorobiphenyl, 2,2',5,5'-Tetrachlorobiphenyl, 2,2',3,4,4',5'-Hexachlorobiphenyl, & 2,2',4,4',5,5'-Hexachlorobiphenyl	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

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):	L1018133
Date(s) of Collection:	October 28, 2010 & November 3, 2010
Number / Type Samples & Analyses	13 Boathouse 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:	January 20, 2011

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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.

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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-10O-C079-1.0-2.0	L1018133-01	10/28/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD analysis]
S-10N-C007-0-1.0	L1018133-02	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C007-1.0-2.0	L1018133-03	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C008-0-1.0	L1018133-04	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C008-1.0-2.0	L1018133-05	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C009-0-1.0	L1018133-06	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C009-1.0-2.0	L1018133-07	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C010-0-1.0	L1018133-08	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C010-1.0-2.0	L1018133-09	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C011-0-1.0	L1018133-10	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C011-1.0-2.0	L1018133-11	11/3/10	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-10N-C017-0-1.0	L1018133-12	11/3/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-C017-1.0-2.0	L1018133-13	11/3/10	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 2010 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 2010 requirements. No additional data qualification was required 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 2010 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 Receipt and Holding Time

The Boathouse sediment cores were collected on October 28, 2010 and November 3, 2101 and aliquots of the cores were generated by Dave Walsh, WHG, for PCB Congener analysis. The samples were frozen by WHG until shipment to Alpha Analytical where they were received intact at 2 to 3°C on November 5, 2010. Alpha froze the samples upon receipt and on November 19, 2010, the samples were thawed and the "as received" samples were analyzed for percent solids. All samples had percent solids content of 45 to 67%; 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 frozen until extraction of the samples on November 30, 2010. Sample S-10N-C010-1.0-2.0 required re-extraction on December 7, 2010 due to a mishap in the laboratory. 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

There was no Equipment Blank required to be collected these core samples.

The LCS/LCSD and MS/MSD analysis, performed on sample S-10O-C079-1.0-2.0, demonstrated acceptable accuracy for recovery of the 18 NOAA Congeners.

The project narrative indicated that the detected result for Decachlorobiphenyl (BZ#209) reported for sample S-10N-C008-1.0-2.0 (L1018133-05) was confirmed by a GC/MS-SIM analysis of the sample extract since this Congener has not often been detected in the core samples.

Precision

LCS/LCSD and MS/MSD precision was acceptable for all 18 NOAA Congeners .

There were no field duplicate (FD) samples associated with the samples in this SDG. Therefore, precision and representativeness from sample collection thorough analysis could not be evaluated.

Sensitivity & Reporting

Samples S-10N-C007-1.0-2.0, S-10N-C009-1.0-2.0, S-10N-C010-1.0-2.0, S-10N-C011-1.0-2.0, S-10N-C017-1.0-2.0, and S-10O-C079-1.0-2.0 were analyzed with dilution factors (DF) of 1. For these samples, the RLs were all less than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NBH OU1

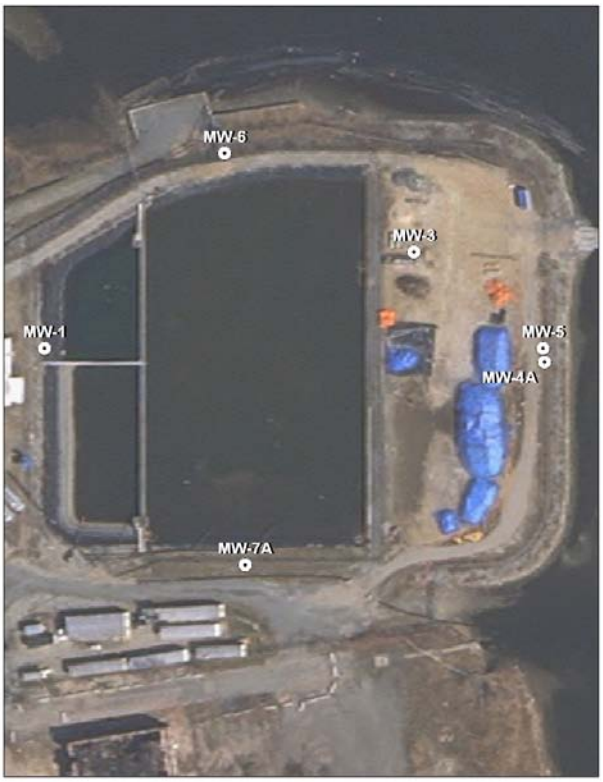
QAPP Addendum 2010. The other seven samples were analyzed at various dilutions to report all Congeners within the instrument calibration range. For these samples with multiple dilutions, the RLs were increased as a consequence of the dilutions made. However, the sum of all detected congener results in these diluted samples exceeded the Project Action Limit (PAL) for Total PCBs; therefore, sensitivity was considered acceptable.

The laboratory reported many results with a "D" qualifier. At Battelle's request, these "D" qualifiers were maintained during the DV process.

2010 Biannual Groundwater Monitoring
Sawyer Street Pilot Study Confined Disposal Facility

New Bedford, Massachusetts

Contract No. W912WJ-09-D-0001-0010-03



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

April 2011

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April 22, 2011

Mark Anderson
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742

Subject: July and October 2010 Groundwater Sampling Event
New Bedford Harbor Superfund Site
Sawyer Street Pilot Study Confined Disposal Facility (CDF)

Dear Mr. Anderson,

This Draft Technical Memorandum presents a summary of the groundwater monitoring activities conducted at the Sawyer Street pilot study Confined Disposal Facility (CDF) in New Bedford, Massachusetts during the 2010 biannual monitoring period. The 2010 monitoring study is a continuation of a multi-year program developed to sample six groundwater wells located on the perimeter of the CDF.

This monitoring program provides data that can be used to evaluate the integrity of the CDF, as well assess trends in groundwater concentrations of polychlorinated biphenyls (PCBs) as Aroclors, selected metals (cadmium, chromium, copper, and lead), volatile organic compounds (VOCs), and total suspended solids (TSS).

Groundwater Sampling

Woods Hole Group (WHG) collected groundwater samples, in accordance with the Field Sampling Plan (FSP) (Woods Hole Group, 2010a) on two events: 1) July 7-8, 2010 and, 2) October 10th and 20th, 2010. Groundwater samples were collected following the United States Environmental Protection Agency (USEPA) Low Flow Groundwater procedures with documentation of water quality parameters. Documented water quality parameters included dissolved oxygen (DO), acidity or basicity (pH), turbidity, oxidation reduction potential (ORP), temperature, and specific conductivity. Please refer to Table 1 for a summary of the water quality parameters recorded prior to sampling during both events and Appendix A for complete field data records.

Groundwater samples were collected from the following six monitoring wells at the Sawyer Street pilot study CDF (Figure 1):

- MW-1
- MW-3
- MW-4A
- MW-5
- MW-6
- MW-7A

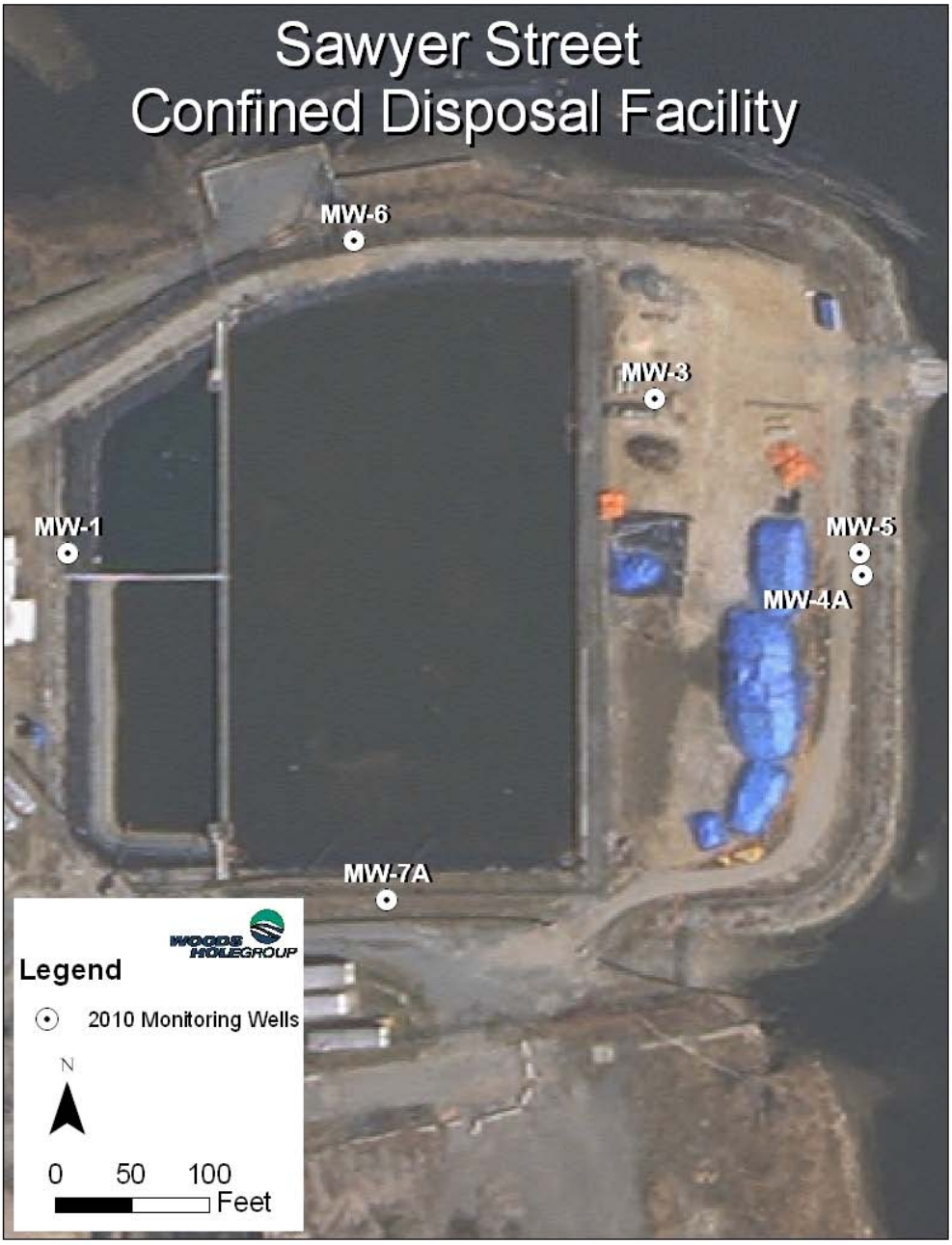


Figure 1. 2010 Monitoring Well Locations

WHG decontaminated all sampling equipment and used dedicated tubing and new bladders at each monitoring well. This procedure minimizes the potential for sample contamination and cross-contamination between monitoring wells.

Two deviations from the FSP occurred over the course of the 2010 monitoring study, both surrounding the sampling of well MW-1. The first deviation occurred during the July monitoring event; during this instance the well would not recharge, even at very low

purge rates. To ensure the sampling of formation water, MW-1 was pumped down to the intake level on July 7th, then allowed to recharge to 90% of the original well volume. MW-1 had recharged to 90% of the original well volume by the following day; at that point water quality parameters were recorded and a grab sample was collected using the bladder pump. The second deviation occurred during the October sampling event. During this instance MW-1 could not be sampled due to a blockage midway down the well. The blockage, which was found to be an abandoned length of tubing used prior to the 2010 sampling events, was later removed and the well was sampled per FSP specifications on the 20th of October. Since the sampling on October 20th occurred separately from the original October sampling date, additional equipment and trip blanks were collected to meet QC standards.

Laboratory Analysis

Groundwater samples were submitted to Alpha Analytical, a Massachusetts and USACE certified laboratory, for Volatile Organic Compounds (VOCs) - USEPA Method 8260B; Polychlorinated biphenyl (PCB) Aroclor analysis - USEPA Method 8082; selected metal analysis (Cadmium, Chromium, Copper, Lead) - USEPA Method 6020A; and TSS analysis - USEPA Method 2540D.

Quality control (QC) of samples was performed by collecting separate field duplicates (DUP), matrix spike (MS), and matrix spike duplicate (MSD) samples, which were submitted for analysis along with the field samples to Alpha Analytical. During the July 2010 sampling round, QC samples were collected from MW-4A and MW-03. These samples were identified as MW-04A-070810-DUP, MW-003-070810-MS, and MW-003-070810-MSD. During the October 2010 sampling round, QC samples were collected from MW-03 and MW-06, and were identified as MW-003-100510-DUP, MW-006-100510-MS, and MW-006-100510-MSD.

WHG also submitted equipment blanks (EB) and trip blanks (TB) for the July and October sampling events. The equipment blanks were collected using VOC-Free de-ionized (DI) water provided by AAL, which was run through the decontaminated bladder pumps into sample containers. The purpose of equipment blanks is to assess the effectiveness of decontamination procedures. Trip blanks were also prepared with VOC-Free DI water provided by AAL. Trip blanks are used to verify that field samples were not contaminated during transport to the laboratory. Trip blank and field duplicate samples were collected on July 8, October 5, and October 20.

The case narrative from Alpha Analytical noted that no significant deviations were encountered during the preparation or analysis of the groundwater samples (Appendix B). Sample Receipt, Container Information, and the Chain of Custody documents are also located at the end of the lab reports provided in Appendix B.

Quality assurance (QA) samples were submitted to ESS Laboratory for interlaboratory comparison on July 8 and October 5. WHG has not received, reviewed, nor incorporated the ESS Lab data package into this memo as the data were reported directly to the USACE project chemist for independent review.

Data Validation

Laboratory results were submitted to New Environmental Horizons, Inc. for EPA Region I Tier I+ validation of VOCs, PCB Aroclors, and Metals. The intention of data validation is: 1) to determine if the data were generated and reported in accordance with the *Field Sampling Plan* and *Quality Assurance Project Plan, New Bedford Harbor Superfund Site, Operable Unit (OU1)* (WHG, 2010b); 2) to determine if the data meet 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.

Based on this Tier I+ validation of VOCs, PCB Aroclors, and Metals, all results were considered usable for project (Appendix C). No contamination was observed in the associated Method Blanks or Trip Blanks. Acetone was detected in the July equipment blank (EB-070910); however, the associated field samples were all non-detect for acetone, and no action was required.

Copper and lead were detected in all equipment blanks (EB-070910, EB-100510, and EB-102010). Subsequent analysis of the AAL provided water (identified as "VOC-free water") used to generate the equipment blanks showed that it was contaminated with these two metals at levels similar to those measures in the equipment blanks (Table 2). Please refer to the Metals Data Validation Checklists in Appendix C for communication confirming the presence of copper and lead in the VOC-Free DI water provided by AAL to the field team. Based on the evidence, the copper and lead contamination observed in the equipment blanks is likely due to the water used to generate the equipment blanks and not due to sample collection or handling procedural contamination. Professional judgment was used to qualify associated copper and lead results as estimated (J) rather than negated, due to equipment blank action. These estimated results have an indeterminate bias (NEH, 2010a; NEH, 2010b). Unless AAL can provide evidence that the supplied DI water is free of Cu and Pb contamination, in future sampling events WHG will not use the AAL supplied VOC-Free DI water for an equipment blank sample that will be analyzed for metals; instead a commercial brand of DI water will be used for the sample collection. The data validation actions and the corrective lab and field procedures proposed for future sampling events have been reviewed and approved by the USACE-NAE Project Chemist, Mr. Mark Koenig (Appendix D).

The Lab Control Sample (LCS) and LCS Duplicate (LCSD) for VOCs reported low recoveries for bromomethane and dichlorodifluoromethane during the July event. Therefore, the results for these two compounds in all samples were estimated (UJ: non-detect is estimated) with possible low bias. Three LCS/LCSD pairs were analyzed for VOCs for the October sampling event. Dichlorodifluoromethane was estimated (UJ) in three samples due to low LCS/LCSD recoveries and acetone was estimated (J: result estimated) in three samples due to high LCS/LCSD recoveries.

The MS/MSD analysis for VOCs performed on sample MW-006-100510 found that tetrahydrofuran was not recovered in either the MS or MSD; therefore, the non-detect for tetrahydrofuran was rejected (R) since it may have been a false negative.

Results

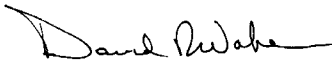
Table 3 provides a summary of detected analytes, which were limited to Aroclor 1242, acetone, cadmium, chromium, copper, lead, and total suspended solids (TSS). No analytes were detected above the Massachusetts Contingency Plan (MCP) GW-3 limits in either the July or October 2010 groundwater sampling events. No MCP GW-3 standards are promulgated for copper. All other compounds analyzed by Alpha Analytical were non-detects, estimated non-detects, or rejected based on QC finding. The complete lab results for the July and October 2010 sampling events are attached in Appendix B. Tables 4 and 5 contain the complete lab results as well as the validated data qualifiers.

The reporting limits achieved by Alpha Analytical lab were below MCP GW-3 standards, where MCP GW-3 standards exist. No notable changes were revealed between the July and October groundwater sampling events.

Conclusions

In July and October 2010, WHG collected groundwater samples at the Sawyer Street pilot study CDF. Groundwater samples were analyzed for VOCs, PCBs, selected metals (Cadmium, Chromium, Copper, and Lead) and TSS. Analytical results, from the samples collected during both events, indicate that none of the analytes have exceeded the promulgated MCP GW-3 standards.

Sincerely,
Woods Hole Group, Inc.



David R. Walsh
Chief Scientist

Attachments:

	Appendix A	Field Data Records
	Appendix B	Alpha Analytical Laboratory Reports
	Appendix C	New Environmental Horizons, Inc. Data Validation Reports
	Appendix D	USACE-NAE QA Review Memorandum

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Table 1. Summary of Groundwater Parameters Prior to Sampling

Event	Well ID	Sample Data/Time	Depth to Water (ft)	pH	Specific Cond. (µS/cm)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	ORP (mV)	Purge Volume (L)	Flow Rate (mL/min)
July 2010	MW-1*	7/9/10 12:55	16.98	6.92	0.574	23.83	1.3	8.8	150.8	N/A	150
	MW-3	7/9/10 9:40	16.3	7.2	3.88	22.22	0.33	2.3	-54.5	0.71	80
	MW-4A	7/8/10 14:40	12.5	6.97	3.05	25.87	-0.02	1	-323	0.58	80
	MW-5	7/8/10 0:00	12.2	7.85	0.765	22.63	0.48	1.1	-110.9	0.84	40
	MW-6	7/9/2010 9:40	13.55	7.25	0.489	25.33	1	42.2	-132.7	0.42	40
	MW-7A	7/8/10 10:45	11.71	6.56	0.59	23.46	1.15	1.2	164.7	0.87	100
October 2010	MW-1	10/20/10 13:45	16.4	6.89	0.558	17.18	0.95	0.79	34.7	0.735	100
	MW-3	10/5/10 10:29	15.45	7.28	5.27	15.23	0.93	3.14	-140	1.06	100
	MW-4A	10/5/10 14:11	11.35	7.18	2.53	16.95	0.04	3.29	-187.3	0.578	36
	MW-5	10/5/10 14:05	10.15	7.8	0.886	16.96	0.47	2.32	-145.3	0.4	40
	MW-6	10/5/10 9:50	13.2	7.4	0.426	15.92	0.95	4.16	-136.1	0.67	80
	MW-7A	10/5/10 17:34	11.19	7.31	0.618	16.32	6.33	1.54	31.7	1.2	70

Table 2. Copper and Lead Concentrations in Equipment Blanks and in Lab-Provided Water

Metal	EB-070910	EB- 100510	EB-102010	Lab-Provided Water used to generate EB*
	mg/L			
Copper	0.118	0.109	0.119	0.119
Lead	0.003	0.001	0.003	0.006

Table 3. Summary of Detected Analytes July and October 2010 Groundwater Sampling

Well ID	Sample Data/Time	Results (µg/L)		Results (mg/L)				
		Total PCB	Acetone	Cadmium	Chromium	Copper	Lead	TSS
MW-1	7/9/10 12:55	U	U	U	U	0.002 J	0.003 J	9.00
MW-1	10/20/10 13:45	U	7.4	0.0005	U	0.002 J	0.001 J	1.20
MW-3	7/9/10 9:40	U	U	U	U	0.007 J	0.001 J	26.20
MW-3	10/5/10 10:29	0.038	U	U	0.002	0.014 J	U	31.40
MW-3-DUP	10/5/10 10:29	U	5.7 J	U	0.002	0.014 J	U	32.30
MW-4A	7/8/10 14:40	U	U	U	U	0.004 J	U	2.50
MW-4A-DUP	7/8/10 14:40	U	U	U	U	0.004 J	U	2.50
MW-4A	10/5/10 14:11	U	U	U	0.001	0.005 J	U	U
MW-5	7/8/10 0:00	U	U	U	U	0.002 J	U	1.90
MW-5	10/5/10 14:05	U	U	U	0.001	0.003 J	0.001 J	2.20
MW-6	7/9/2010 9:40	U	U	U	U	0.002 J	U	12.30
MW-6	10/5/10 9:50	U	5.6 J	U	U	U	U	7.80
MW-7A	7/8/10 10:45	U	U	0.0006	U	0.006 J	U	1.20
MW-7A	10/5/10 17:34	U	31 J	U	U	0.002 J	U	1.00
MCP GW-3 Criteria		10	50000	4	300	N/A	0.01	N/A

Notes:

[(a)]- Total PCB calculated as the sum of Aroclors 1016, 1221, 1232, 1242, 1254 and 1260; a value of zero (0) used in summation for non-detects. 1242 was the only detected Aroclor

µg/L- micrograms per liter (ppb)

mg/L- milligrams per liter (ppm)

U- Analyte is non-detect at or above the sample-specific reporting limit

J – Result is estimated

Table 4. July Laboratory Results and Validated Qualifiers

Parameter Name	Units	Detection Limit	MW-001-070910			MW-003-070910			MW-005-070910			MW-006-070910			MW-04A-070810			MW-04A-070810-DUP			MW-07A-070810		
			Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier
Cadmium	mg/L	0.0005	0.0005	U	U	0.0005	U	U	0.0005	U	U	0.0005	U	U	0.0005	U	U	0.0005	U	U	0.0006		
Chromium	mg/L	0.005	0.005	U	U	0.005	U	U	0.005	U	U	0.005	U	U	0.005	U	U	0.005	U	U	0.005	U	U
Copper	mg/L	0.001	0.002		J	0.007		J	0.002		J	0.002		J	0.004		J	0.004		J	0.006		J
Lead	mg/L	0.001	0.003		J	0.001	U	U	0.001	U	U	0.001	U	U	0.001	U	U	0.001	U	U	0.001		J
Aroclor 1016	µg/L	0.213	0.213	U	U	0.213	U	U	0.215	U	U	0.22	U	U	0.225	U	U	0.235	U	U	0.213	U	U
Aroclor 1221	µg/L	0.213	0.213	U	U	0.213	U	U	0.215	U	U	0.22	U	U	0.225	U	U	0.235	U	U	0.213	U	U
Aroclor 1232	µg/L	0.213	0.213	U	U	0.213	U	U	0.215	U	U	0.22	U	U	0.225	U	U	0.235	U	U	0.213	U	U
Aroclor 1242	µg/L	0.213	0.213	U	U	0.213	U	U	0.215	U	U	0.22	U	U	0.225	U	U	0.235	U	U	0.213	U	U
Aroclor 1248	µg/L	0.213	0.213	U	U	0.213	U	U	0.215	U	U	0.22	U	U	0.225	U	U	0.235	U	U	0.213	U	U
Aroclor 1254	µg/L	0.213	0.213	U	U	0.213	U	U	0.215	U	U	0.22	U	U	0.225	U	U	0.235	U	U	0.213	U	U
Aroclor 1260	µg/L	0.213	0.213	U	U	0.213	U	U	0.215	U	U	0.22	U	U	0.225	U	U	0.235	U	U	0.213	U	U
Total DecaCB, Concentration	% rec	20	91			46			84			82			83			93			88		
2,4,5,6-Tetrachloro-Meta-Xylene	% rec	20	81			79			84			82			75			87			79		
Total suspended solids	mg/L		9			26.2			1.9			12.3			2.5			2.5			1.2		
Acetone	µg/L	5	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U
Benzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Bromobenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Bromochloromethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Bromodichloromethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Bromoform	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Bromomethane	µg/L	2	2	U	UJ	2	U	UJ	2	U	UJ	2	U	UJ	2	U	UJ	2	U	UJ	2	U	UJ
Carbon Disulfide	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Carbon Tetrachloride	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Chlorobenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Chloroethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Chloroform	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Chloromethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Cis-1,2-Dichloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Cis-1,3-Dichloropropene	µg/L	0.5	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U
Dibromochloromethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Dibromomethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Dichlorodifluoromethane	µg/L	2	2	U	UJ	2	U	UJ	2	U	UJ	2	U	UJ	2	U	UJ	2	U	UJ	2	U	UJ
Diethyl Ether	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Di-Isopropyl Ether	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Ethyl Tertiary-Butyl Ether	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Ethylbenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Hexachlorobutadiene	µg/L	0.6	0.6	U	U	0.6	U	U	0.6	U	U	0.6	U	U	0.6	U	U	0.6	U	U	0.6	U	U
Isopropylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Methylene Chloride	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Methyl-Tert-Butyl-Ether (Mtbe)	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
N-Butylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
N-Propylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
O-Xylene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
P-Isopropyltoluene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
P/M Xylene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Sec-Butylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Styrene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Tert-Butylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Tertiary-Amyl Methyl Ether	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Tetrachloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Toluene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Trans-1,2-Dichloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Trans-1,3-Dichloropropene	µg/L	0.5	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U
Trichloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Trichlorofluoromethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Vinyl Chloride	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1-Dichloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1-Dichloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1-Dichloropropene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,1,1-Trichloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1,1,2-Tetrachloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1,2-Trichloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1,2,2-Tetrachloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,2-Dibromoethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2-Dibromo-3-Chloropropane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2-Dichlorobenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,2-Dichloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,2-Dichloropropane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,2,3-Trichlorobenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2,3-Trichloropropane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2,4-Trichlorobenezene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2,4-Trimethylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,3-Dichlorobenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,3-Dichloropropane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,3,5-Trimethylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,4-Dichlorobenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,4-Dioxane (P-Dioxane)	µg/L	250	250	U	U	250	U	U	250	U	U	250	U	U	250	U	U	250	U	U	250	U	U
2-Butanone	µg/L	5	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U
2-Chlorotoluene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
2-Hexanone	µg/L	5	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U
2,2-Dichloropropane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
4-Chlorotoluene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
4-Methyl-2-Pentanone	µg/L	5	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U
Tetrahydrofuran	µg/L	10	10	U	U	10	U	U	10	U	U	10	U	U	10	U	U	10	U	U	10	U	U
Naphthalene	µg/L	5	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U

Notes: Shaded regions represent detected laboratory analytes or analytes for which the validated qualifier differs from the laboratory qualifier.
U- Analyte is non-detect at or above the sample-specific reporting limit
J – Result is estimated
UJ- Non-detect is estimated
R- Result is rejected and is unusable for project decisions

Table 5. October Laboratory Results and Validated Qualifiers

Parameter Name	Units	Detection Limit	MW-001-102010			MW-003-100510			MW-003-100510			MW-005-100510			MW-006-100510			MW-04A-100510			MW-07A-100510		
			Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier	Results	Lab Qualifier	DV Qualifier
Cadmium	mg/L	0.0005	0.0005			0.0005	U	U	0.0005	U	U	0.0005	U	U	0.0005	U	U	0.0005	U	U	0.0005	U	U
Chromium	mg/L	0.005	0.001	U	U	0.002			0.002			0.001			0.001	U	U	0.001			0.001	U	U
Copper	mg/L	0.001	0.002		J	0.014		J	0.014		J	0.003		J	0.001	U	U	0.005		J	0.002		J
Lead	mg/L	0.001	0.001		J	0.001	U	U	0.001	U	U	0.001		J	0.001	U	U	0.001	U	U	0.001	U	U
Aroclor 1016	µg/L	0.213	0.021	U	U	0.023	U	U	0.022	U	U	0.022	U	U	0.023	U	U	0.021	U	U	0.021	U	U
Aroclor 1221	µg/L	0.213	0.021	U	U	0.023	U	U	0.022	U	U	0.022	U	U	0.023	U	U	0.021	U	U	0.021	U	U
Aroclor 1232	µg/L	0.213	0.021	U	U	0.023	U	U	0.022	U	U	0.022	U	U	0.023	U	U	0.021	U	U	0.021	U	U
Aroclor 1242	µg/L	0.213	0.021	U	U	0.038			0.022	U	U	0.022	U	U	0.023	U	U	0.021	U	U	0.021	U	U
Aroclor 1248	µg/L	0.213	0.021	U	U	0.023	U	U	0.022	U	U	0.022	U	U	0.023	U	U	0.021	U	U	0.021	U	U
Aroclor 1254	µg/L	0.213	0.021	U	U	0.023	U	U	0.022	U	U	0.022	U	U	0.023	U	U	0.021	U	U	0.021	U	U
Aroclor 1260	µg/L	0.213	0.021	U	U	0.023	U	U	0.022	U	U	0.022	U	U	0.023	U	U	0.021	U	U	0.021	U	U
Total DecaCB, Concentration	% rec	20	99			45			44			88			87			99			87		
2,4,5,6-Tetrachloro-Meta-Xylene	% rec	20	85			94			94			93			91			100			82		
Total suspended solids	mg/L		1.2			31.4			32.3			2.2			7.8			1	U	U	1		
Acetone	µg/L	5	7.4			5	U	U	5.7		J	5	U	U	5.6		J	5	U	U	31		J
Benzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Bromobenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Bromochloromethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Bromodichloromethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Bromoform	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Bromomethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Carbon Disulfide	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Carbon Tetrachloride	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Chlorobenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Chloroethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Chloroform	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Chloromethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Cis-1,2-Dichloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Cis-1,3-Dichloropropene	µg/L	0.5	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U
Dibromochloromethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Dibromomethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Dichlorodifluoromethane	µg/L	2	2	U	UJ	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Diethyl Ether	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Di-Isopropyl Ether	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Ethyl Tertiary-Butyl Ether	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Ethylbenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Hexachlorobutadiene	µg/L	0.6	0.6	U	U	0.6	U	U	0.6	U	U	0.6	U	U	0.6	U	U	0.6	U	U	0.6	U	U
Isopropylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Methylene Chloride	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Methyl-Tert-Butyl-Ether (Mtbe)	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
N-Butylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
N-Propylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
O-Xylene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
P-Isopropyltoluene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
P/M Xylene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Sec-Butylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Styrene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Tert-Butylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Tertiary-Amyl Methyl Ether	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Tetrachloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Toluene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Trans-1,2-Dichloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Trans-1,3-Dichloropropene	µg/L	0.5	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U	0.5	U	U
Trichloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
Trichlorofluoromethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
Vinyl Chloride	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1-Dichloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1-Dichloroethene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1-Dichloropropene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,1,1-Trichloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1,1,2-Tetrachloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1,2-Trichloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,1,2,2-Tetrachloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,2-Dibromoethane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2-Dibromo-3-Chloropropane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2-Dichlorobenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,2-Dichloroethane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,2-Dichloropropane	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,2,3-Trichlorobenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2,3-Trichloropropane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2,4-Trichlorobenezene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,2,4-Trimethylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,3-Dichlorobenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,3-Dichloropropane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,3,5-Trimethylbenzene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
1,4-Dichlorobenzene	µg/L	1	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U	1	U	U
1,4-Dioxane (P-Dioxane)	µg/L	250	250	U	U	250	U	U	250	U	U	250	U	U	250	U	U	250	U	U	250	U	U
2-Butanone	µg/L	5	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U
2-Chlorotoluene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
2-Hexanone	µg/L	5	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U
2,2-Dichloropropane	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
4-Chlorotoluene	µg/L	2	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U
4-Methyl-2-Pentanone	µg/L	5	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U	5	U	U
Tetrahydrofuran	µg/L	10	10	U	U	10	U	U	10	U	U	10	U	U	10	U	R	10	U	U	10	U	U
Naphthalene	µg/L	5	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U	2	U	U

Notes: Shaded regions represent detected laboratory analytes or analytes for which the validated qualifier differs from the laboratory qualifier.
U- Analyte is non-detect at or above the sample-specific reporting limit
J – Result is estimated
UJ- Non-detect is estimated
R- Result is rejected and is unusable for project decisions

References

New Environmental Horizons, Inc.. 2010a. Data Validation Report. New Bedford Harbor Superfund Site – OU1. Prepared for Woods Hole Group, Inc. based on Alpha Analytical SDG L1010361. Completed: August 26, 2010. Revised: February 11, 2011

New Environmental Horizons, Inc.. 2010b. Data Validation Report. New Bedford Harbor Superfund Site – OU1. Prepared for Woods Hole Group, Inc. based on Alpha Analytical SDGs L1015773 and L1015775. Completed: December 14, 2010. Revised: February 11, 2011

Woods Hole Group. 2010a. Sawyer Street CDF Groundwater Monitoring 2010 Field Sampling Plan New Bedford Harbor Superfund Site, OU#1 Prepared under Contract W912WJ-09-D-0001 Task Order No 0010-03 for the U.S. Army Corps of Engineers New England District, Concord, MA.

Woods Hole Group. 2010b. Environmental Monitoring, Sampling and Analysis Quality Assurance Project Plan. New Bedford Harbor Superfund Site, New Bedford, Massachusetts. Prepared under Contract W912WJ-09-D-0001 Task Order No 0010-03 for the U.S. Army Corps of Engineers New England District, Concord, MA.

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APPENDIX A: FIELD DATA RECORDS

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FIELD INSTRUMENTATION CALIBRATION RECORD

Woods Hole Group, INC.

PROJECT: New Bedford Harbor | DATE: 7/8/10 | TIME: 0833 / 0650 7/9/10

CREW ID OR TASK ID: | JOB NUMBER: TO-0010-03

SAMPLER SIGNATURE: M.Walsh / Dan Bailey | CHECKED BY:

EQUIPMENT CALIBRATION			AM CALIBRATION		PM CALIBRATION CHECK		
METER TYPE YSI 600 XLM			STANDARD VALUE	METER VALUE	STANDARD VALUE	METER VALUE	ACCEPTANCE CRITERIA **
MODEL NO. 600XLM-V2-M							
UNIT ID NO. 08E 101296	pH	units	4.00	4.00	4.00	3.85	±0.2 unit
	pH	units	7.00	7.00	7.00	6.97	±0.2 unit
	Redox	+/- mV	+229mV	234.0	+229mV	~~258.2~~ 258.2	±20 mV
	Conductivity	mS/cm	1,000umhos	1.000mS/cm	1,000umhos	0.791mS/cm	0.5% of reading + 0.001 mS/cm
	DO	mg/L *		8.82mg/L		10.73	2% of reading or 0.2 mg/L., whichever is greater
	Temperature	deg. C		23.08C		15.41	
TURBIDITY							
METER TYPE Hach		NTU (low)	0	0	0	0.2	2% of reading or 0.3 NTU. Whichever is greater.
MODEL NO. 2100P							
UNIT ID NO. 09090C038194		NTU (high)	100	99.9	100		

Check One

☐ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.

☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above (see notes below).

MATERIALS RECORD

Calibration Fluids / Standard Source: Woods Hole Group, INC.

Disposable Filter Type: _____ _____

Lot Number	
pH /Conductivity	
ORP	
Turbidity	
Other	

NOTES: Afternoon calibration was done with next days morning calibration

Barometric Pressure 779.0 mmHg

~~0 wrong value (M.Walsh)~~

** = If the meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

* = standard based on saturated headspace at given temperature

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FIELD INSTRUMENTATION CALIBRATION RECORD

Woods Hole Group, INC.

PROJECT: New Bedford | DATE: 7/8/2010 | TIME: 0733 / 0701 7/9/10

CREW ID OR TASK ID: | JOB NUMBER: TO-0010-03

SAMPLER SIGNATURE: M. Walsh | CHECKED BY:

EQUIPMENT CALIBRATION			AM CALIBRATION		PM CALIBRATION CHECK		
METER TYPE 600 XLM-V2-m YSI			STANDARD VALUE	METER VALUE	STANDARD VALUE	METER VALUE	ACCEPTANCE CRITERIA **
MODEL NO. 600 XLM							
UNIT ID NO. 08E 101181	pH	units	4.00	4.00	4.00	4.04	±0.2 unit
	pH	units	7.00	7.00	7.00	6.93	±0.2 unit
	Redox	+/- mV	+229mV	228.9	+229mV	242.7	±20 mV
	Conductivity	mS/cm	1,000 µmhos	1.000 mS/cm	1,000	0.800	0.5% of reading + 0.001 mS/cm
	DO	mg/L *		8.71		9.96	2% of reading or 0.2 mg/L., whichever is
	Temperature	deg. C		21.31		15.41	greater
TURBIDITY							
METER TYPE Hach		NTU (low)	0	0.2	0	0.1	2% of reading or 0.3 NTU. Whichever is greater.
MODEL NO. 2100P							
UNIT ID NO. 10010C039333		NTU (high)	100	99.8	100	99.9	

Check One

☐ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.

☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above (see notes below).

MATERIALS RECORD

Calibration Fluids / Standard Source: Woods Hole Group, INC.

Disposable Filter Type: _____ _____

Lot Number

pH /Conductivity _____

ORP _____

Turbidity _____

Other _____

NOTES:

Afternoon calibration was done with next days morning calibration

Barometric Pressure: 779.5mmHg

** = If the meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

* = standard based on saturated headspace at given temperature

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FIELD INSTRUMENTATION CALIBRATION RECORD

Woods Hole Group, INC.

PROJECT: New Bedford Harbor | DATE: 7/9/10 | TIME: 0650

CREW ID OR TASK ID: | JOB NUMBER: TO-0010-03

SAMPLER SIGNATURE: Mike Walsh | CHECKED BY:

EQUIPMENT CALIBRATION		AM CALIBRATION		PM CALIBRATION CHECK		
METER TYPE: YSI 600 XLM		STANDARD VALUE	METER VALUE	STANDARD VALUE	METER VALUE	ACCEPTANCE CRITERIA **
MODEL NO.: 600 XLM-V2-M						
UNIT ID NO.: 08E 101296 pH	units	4.00	~~3.85~~ 4.00 ①	4.00	4.30	±0.2 unit
pH	units	7.00	7.00	7.00	7.07	±0.2 unit
Redox	+/- mV	+229	~~253.2~~ @mw (229.1) ②	+229	216.6	±20 mV
Conductivity	mS/cm	1,000 mS/cm	0.790	1,000 mS/cm	0.855	0.5% of reading + 0.001 mS/cm
DO	mg/L *		10.65		9.01	2% of reading or 0.2 mg/L., whichever is
Temperature	deg. C		15.41		18.08	greater
TURBIDITY						
METER TYPE: Hach	NTU (low)	0	0.2	0	1.2	2% of reading or 0.3 NTU. Whichever is greater.
MODEL NO.: 2100P						
UNIT ID NO.: 09090C038194	NTU (high)	100	99.9	100	99.9	

Check One

☐ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.

☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above (see notes below).

MATERIALS RECORD

Calibration Fluids / Standard Source: Woods Hole Group, INC.

Disposable Filter Type: _____ _____

Lot Number

pH /~~Conductivity~~ pH 7: 8092576 PH 4: 8102211

ORP _____

Turbidity N/A

Other Redox Buffer 9110934

Conductivity: 0021858

NOTES: Barometric Pressure 779.0 mmHg

① wrong value (M.WALSH)

② wrong value (M.WALSH

** = If the meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

* = standard based on saturated headspace at given temperature

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FIELD INSTRUMENTATION CALIBRATION RECORD

Woods Hole Group, INC.

PROJECT: New Bedford Harbor | DATE: 7/9/10 | TIME: 0701

CREW ID OR TASK ID: | JOB NUMBER: TO-0010-03

SAMPLER SIGNATURE: Mike Walsh | CHECKED BY:

EQUIPMENT CALIBRATION		AM CALIBRATION		PM CALIBRATION CHECK		
METER TYPE 600 XLM-U2-M YSI		STANDARD VALUE	METER VALUE	STANDARD VALUE	METER VALUE	ACCEPTANCE CRITERIA **
MODEL NO. 600 XLM						
UNIT ID NO. 08E 101181 pH	units	4.00	4.00	4.00	4.04	±0.2 unit
pH	units	7.00	7.00	7.00	6.97	±0.2 unit
Redox	+/- mV	+229	229.1mV	+229	224.6	±20 mV
Conductivity	mS/cm	1,000 mS/cm	0.802	1,000 mS/cm	0.879	0.5% of reading + 0.001 mS/cm
DO	mg/L *		10.26		4.86	2% of reading or 0.2 mg/L., whichever is
Temperature	deg. C		15.4		18.38	greater
TURBIDITY						
METER TYPE Hach	NTU (low)	0	0.1	0	1	2% of reading
MODEL NO. 2100P						or 0.3 NTU.
UNIT ID NO. 10010C039333	NTU (high)	100	99.9	100	99.9	Whichever is greater.

Check One

☐ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.

☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above (see notes below).

MATERIALS RECORD

Calibration Fluids / Standard Source: Woods Hole Group, INC.

Disposable Filter Type: _____ _____

Lot Number

pH /~~Conductivity~~ pH 7: 8092576 pH 4: 8102211

ORP 9110934

Turbidity N/A

Other Conductivity: 0021858

NOTES: Barometric Pressure: 779.5 mm Hg

** = If the meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

* = standard based on saturated headspace at given temperature

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FIELD INSTRUMENTATION CALIBRATION RECORD

Woods Hole Group, INC.

PROJECT: New Bedford Harbor Ground Water | DATE: 10/5/10 | TIME: 07:12

CREW ID OR TASK ID: TO-0010-03 | JOB NUMBER:

SAMPLER SIGNATURE: Michael Walsh | CHECKED BY:

EQUIPMENT CALIBRATION

METER TYPE: YSI 556
MODEL NO.: 556-02
UNIT ID NO.: 11154428

TURBIDITY
METER TYPE: HACH
MODEL NO.: 2100 P
UNIT ID NO.: 1095040

		AM CALIBRATION STANDARD VALUE	AM CALIBRATION METER VALUE	PM CALIBRATION CHECK STANDARD VALUE	PM CALIBRATION CHECK METER VALUE	ACCEPTANCE CRITERIA **
pH 4.0 units		4.02	4.00	4.0	3.99	±0.2 unit
pH 7.0 units		6.99	7.00	7.0	7.09	±0.2 unit
Redox 229 +/- mV		242.5	240.0 ~~234.0~~ ①	229	239.8	±20 mV
9.96 mS/cm / 1.000 mS/cm Conductivity 1,000 mS/cm		0.880	0.868	1.000 mS/cm 100%	0.997 100.7%	0.5% of reading + 0.001 mS/cm
DO	mg/L *	7.40	9.36		9.59	2% of reading or 0.2 mg/L., whichever is greater
Temperature	deg. C		18.74		17.56	
TURBIDITY METER TYPE: HACH	NTU (low)	0	0.20	0	0.14	2% of reading or 0.3 NTU. Whichever is greater.
MODEL NO.: 2100 P						
UNIT ID NO.: 1095040	NTU (high)	5	5.01	5	5.20	
		50	60.2	50	53.2	

Check One

☐ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.

☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above (see notes below).

MATERIALS RECORD

Calibration Fluids / Standard Source: Woods Hole Group, INC.

Disposable Filter Type: _____

Lot Number

~~pH~~/Conductivity 0021858

ORP 0070929

Turbidity N/A

Other —

NOTES: Lot #s Ph - 4.0 - 0061860
7.0 - 0031683
~~10.0 - 9060982~~
} Aqua-Solutions

① WN# M.WALSH 10/5/10

** = If the meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

* = standard based on saturated headspace at given temperature

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FIELD INSTRUMENTATION CALIBRATION RECORD

Woods Hole Group, INC.

PROJECT: NBH Groundwater | DATE: 10-5-10 | TIME: 0740

CREW ID OR TASK ID: TO-0010-03 | JOB NUMBER:

SAMPLER SIGNATURE: Michael Walsh | CHECKED BY:

EQUIPMENT CALIBRATION

METER TYPE: YSI 556
MODEL NO.: 556-02
UNIT ID NO.: 11154446

TURBIDITY
METER TYPE: HACH
MODEL NO.: 2100P
UNIT ID NO.: 1104441

		AM CALIBRATION STANDARD VALUE	AM CALIBRATION METER VALUE	PM CALIBRATION CHECK STANDARD VALUE	PM CALIBRATION CHECK METER VALUE	ACCEPTANCE CRITERIA **
pH 4.0	units	4.06	4.00	4.00	3.98	±0.2 unit
pH 7.0	units	7.02	7.00	7.00	6.92	±0.2 unit
Redox 228	+/- mV	244.3	240.0	229	239.2	±20 mV
1.065 mS/cm // 1.001 mS/cm Conductivity 5.00	mS/cm	0.914	0.858	1.000 mS/cm	0.988	0.5% of reading + 0.001 mS/cm
DO	mg/L *	9.81	9.72	100%	98.9% 9.50	2% of reading or 0.2 mg/L., whichever is greater
Temperature	deg. C		16.86		17.65	
TURBIDITY METER TYPE: HACH	NTU (low)	0	0.23	0	0.16	2% of reading or 0.3 NTU. Whichever is greater.
MODEL NO.: 2100P	NTU (high)	50	48.6	5	5.23	
UNIT ID NO.: 1104441		10	9.8	50	51.6	

Check One

- ☐ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.
- ☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above (see notes below).

MATERIALS RECORD

Calibration Fluids / Standard Source: Woods Hole Group, INC.

Disposable Filter Type: _____

Lot Number

pH/Conductivity: 0021858 } Aqua Solutions
ORP: 0070929 }
Turbidity: N/A
Other: —

NOTES: Lot# pH - 4.0 - 0061860 } Aqua Solutions
7.0 - 0031683 }

** = If the meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

* = standard based on saturated headspace at given temperature

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ATTACHMENT 1 FIELD INSTRUMENTATION CALIBRATION RECORD

FIELD INSTRUMENTATION CALIBRATION RECORD

Woods Hole Group, INC.

PROJECT: NBH Groundwater | DATE: 10/20/10 | TIME: 1200

CREW ID OR TASK ID: TO-0010-03 | JOB NUMBER:

SAMPLER SIGNATURE: Nick Nadeau | CHECKED BY:

EQUIPMENT CALIBRATION			AM CALIBRATION STANDARD VALUE	AM CALIBRATION METER VALUE	PM CALIBRATION CHECK STANDARD VALUE	PM CALIBRATION CHECK METER VALUE	ACCEPTANCE CRITERIA **
METER TYPE / MODEL NO. / UNIT ID NO.	pH	units	4.0	3.99	4.0	3.98	±0.2 unit
	pH	units	7.0	7.00	7.0	7.00	±0.2 unit
	Redox	+/- mV	+229	+244.5	+229	+236.6	±20 mV
	Conductivity	mS/cm	1.000	1.000	1.000	1.000	0.5% of reading + 0.001 mS/cm
	DO	mg/L *	10.28	10.18	10.39	10.27	2% of reading or 0.2 mg/L., whichever is
	Temperature	deg. C		14.86			greater
TURBIDITY METER TYPE: HACH / MODEL NO.: 2100 Turbidity / UNIT ID NO.: 46500-00		NTU (low)	0-10NTU	5.68	0-10	5.64	2% of reading or 0.3 NTU. Whichever is greater.
		NTU (high)					

Check One

- ☐ Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.
- ☐ Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above (see notes below).

MATERIALS RECORD

Calibration Fluids / Standard Source: Woods Hole Group, INC.

Disposable Filter Type: _____

	Lot Number
pH /Conductivity	Aqua Solutions / 0021858
ORP	" " / 0070929
Turbidity	NA
Other	" " / pH4.0-1022111, pH7.0-8092576

NOTES:

** = If the meter reading is not within acceptance criteria, clean or replace probe and re-calibrate, or use a different meter if available. If project requirements necessitate use of the instrument, clearly document on all data sheets and log book entries that the parameter was not calibrated to the acceptance criteria.

* = standard based on saturated headspace at given temperature

CONSULTANT Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 7/8/2010

PROJECT: NBH Ground Water | JOB NUMBER: TO-0010-03 | Bottle Time:

MONITORING WELL ID: MW-1 | ACTIVITY TIME: START 1115 END 1339

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC [X] - BLADDER

INITIAL DTW: 16.75 ft (TOR) | FINAL DTW: 22.85 ft (TOR) | DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L: | RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1229	18.9	100	26.76	0.564	6.53	0.74	1.2	124.6	
1232	19.25	100	25.36	0.55	6.54	1.37	1	129.6	
1236	19.61	100	23.28	0.536	6.56	2.58	1	134.8	
1239	20.11	100	23.98	0.544	6.59	3.26	1.4	134.8	
1243	20.56	100	24.13	0.549	6.6	4.43	1.4	135.8	
1249	20.71	80	23.63	0.523	6.5	1.85	1.3	130.4	
1253	21.15	80	24.34	0.524	6.48	1.86	1.3	128.3	
1256	21.3	80	23.81	0.523	6.49	1.93	1.4	127.6	
1300	21.6	80	23.65	0.515	6.47	1.42	2.6	87.1	
1304	21.85	80	23.92	0.514	6.47	2.35	2.3	72.7	
1307	22.15	80	23.45	0.518	6.52	3.14	2.3	45	
stopped pumping to check recharge									
1321	22	80	24.59	0.541	6.6	2.44	2	37.9	
1324	22.25	80	23.61	0.51	6.56	3.66	1.2	28.7	
1328	22.5	80	24.08	0.517	6.58	4.49	1.1	12.8	
1331	22.85	80	23.86	0.583	6.63	4.85	1.3	0.9	
1336	stopped pumping to let well recharge								
1339	stopped all activities/well pump too low								
1345	well was pumped down to intake level								

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Well was pumped down to intake level and allowed to recharge, once well charged to 90% of orginal well volume a sample will be taken.

SIGNATURE: Mike Walsh

CHECKED BY:

C:\Documents and Settings\dbailey\My Documents\New Bedford\Groundwater\MW1_070910

CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 7/9/2010

PROJECT: NBH Ground Water

JOB NUMBER: TO-0010-03

Bottle Time: 12:55

MONITORING WELL ID: MW-1

ACTIVITY TIME: START 1222 END 1330

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC; [X] - BLADDER

INITIAL DTW: 16.15 ft (TOR)

FINAL DTW: 21.98 ft (TOR)

DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L:

RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1238	16.8	40	23.91	0.574	6.83	1.56	9.1	163.5	
1241	16.98	40	23.83	0.574	6.92	1.3	8.8	150.8	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Well recharged to 90% of initial volume, grab sampled taken at 1255 on 7/9/10

SIGNATURE: Mike Walsh

CHECKED BY:

C:\Documents and Settings\dbailey\My Documents\New Bedford\Groundwater\MW1_070810

CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 7/9/2010

PROJECT: NBH Ground Water

JOB NUMBER: TO-0010-03

Bottle Time: 940

MONITORING WELL ID: MW-3

ACTIVITY TIME: START 845 END 1153

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC; [X] - BLADDER

INITIAL DTW: 15.00 ft (TOR)

FINAL DTW: 15.80 ft (TOR)

DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L:

RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
847	15.15	80	22.77	3.323	6.9	1.68	1.5	-13.3	
852	15.6	80	22.48	3.343	6.98	1.48	3.2	-41.8	
855	15.85	40	22.34	3.301	7.03	1.2	4.1	-44.6	
902	15.95	40	23.83	3.434	7.05	0.93	4.3	-45.7	
907	15.95	40	24.88	3.696	7.08	1.82	3.8	-47.7	
915	15.95	40	25.43	4.078	7.16	0.62	3.4	-52.5	
919	15.91	40	15.47	4.155	7.19	0.64	2.7	-54.2	
923	15.9	40	25.65	4.207	7.21	1.51	2.8	-55.5	
926	15.9	40	25.56	4.26	7.22	1.89	2.6	-56	
929	15.95	80	25.41	4.261	7.23	1.18	2.1	-56.4	Increased Flow
932	16.05	80	23.64	4.161	7.24	0.95	2.7	-57	
935	16.3	80	22.22	3.88	7.2	0.33	2.3	-54.5	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Depth to water with pump in well 14.55. Salinity: 2.14

Samples taken at 0940 sample ID MW-003-070910/MW-003-070910-MS/MW-003-070910-MSD

SIGNATURE: Mike Walsh

CHECKED BY:

C:\Documents and Settings\dbailey\My Documents\New Bedford\Groundwater\MW3_070910

CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 7/8/2010

PROJECT: NBH Ground Water | JOB NUMBER: TO-0010-03 | Bottle Time

MONITORING WELL ID: MW-04A | ACTIVITY TIME: START 1300 END | 1440

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC; [X] - BLADDER

INITIAL DTW: 11.23 ft (TOR) | FINAL DTW: 12.50 ft (TOR) | DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L: | RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1406	11.8	80	28.7	3.55	7.04	0.26	1.5	-212.8	
1411	12.1	80	24.09	3.18	6.86	0.09	1.2	-263.5	
1416	12.36	80	22.87	3	6.87	0.02	1	-286	
1421	12.45	80	23.5	3	6.92	0	1.1	-285	
1426	12.47	80	24.66	3	6.96	-0.01	1.1	-298	
1429	12.47	80	25.34	3	6.97	-0.01	1.2	-315	
1431	12.5	80	25.64	3.02	6.97	-0.02	1	-322	
1434	12.5	80	25.87	3.05	6.97	-0.02	1	-323	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES

SIGNATURE: Mike Walsh

CHECKED BY:

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 7/9/2010

PROJECT: NBH Ground Water | JOB NUMBER: TO-0010-03 | Bottle Time

MONITORING WELL ID: MW-5 | ACTIVITY TIME: START 1455 END | 1610

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC [X] - BLADDER

INITIAL DTW: 10.50 ft (TOR) | FINAL DTW: 13.45 ft (TOR) | DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L: | RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1517	10.85	100	24.17	0.745	7.46	2.04	2.1	8.5	
1520	11.11	100	23.27	0.732	7.47	1.62	1.9	-3.9	
1524	11.21	100	22.82	0.727	7.53	1.38	1.6	-21.9	
1527	11.55	100	22.27	0.732	7.62	1.15	2.1	-45.3	Changed Battery
1534	11.7	100	22.13	0.729	7.63	1.12	1.6	-54.7	
1540	11.9	100	22.02	0.742	7.72	0.8	1.3	-72.5	
1545	11.9	40	22.24	0.746	7.75	0.79	1.3	-82.5	
1550	11.9	40	23.24	0.761	7.78	0.67	1.1	-89.2	
1554	12.1	40	22.05	0.745	7.8	0.72	1.2	-98.6	
1559	12.13	40	22.37	0.748	7.8	0.62	1	-100.7	
1602	12.2	40	22.63	0.765	7.85	0.48	1.1	-110.9	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Pump depth: 13.20ft, Depth to water after sampling: 13.45

SIGNATURE: Mike Walsh

CHECKED BY:

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 7/9/2010

PROJECT: NBH Ground Water

JOB NUMBER: TO-0010-03

Bottle Time: 940

MONITORING WELL ID: MW-6

ACTIVITY TIME: START 840 END 1110

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC; [X] - BLADDER

INITIAL DTW: 12.15 ft (TOR)

FINAL DTW: ft (TOR)

DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L:

RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
852	13.4	40	24.11	0.468	7.21	2.03	98.9	70.7	
858	13.5	40	24.68	0.477	7.25	1.51	98	-43.2	
903	13.53	40	25.02	0.483	7.27	1.4	87.1	-77.3	
908	13.55	40	25.64	0.492	7.33	1.4	>100	-53	Turbidity out of range
913	13.55	40	25.94	0.495	7.28	1	85.1	-83.8	
918	13.55	40	26.02	0.496	7.36	1.03	74.4	-53.7	
923	13.55	40	26.03	0.496	7.26	0.96	45.6	-87.2	
926	13.55	40	25.74	0.493	7.24	0.93	41.5	-126	
929	13.55	40	25.53	0.491	7.25	0.94	42.9	-131.5	
932	13.55	40	25.33	0.489	7.25	1	42.2	-132.7	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Very high turbidity, lots of flock in water

SIGNATURE: David Bailey

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 7/9/2010

PROJECT: NBH Ground Water

JOB NUMBER: TO-0010-03

Bottle Time: 1045

MONITORING WELL ID: MW-7A

ACTIVITY TIME: START 1003 END 1123

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC; [X] - BLADDER

INITIAL DTW: 11.52 ft (TOR)

FINAL DTW: 11.73 ft (TOR)

DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L:

RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1007	11.63	200	25.75	0.67	6.78	2.22	33	98.3	
1010	11.67	100	22.6	0.65	6.54	2.17	6.8	125.3	
1013	11.7	100	23.44	0.62	6.56	2.27	5	134.4	
1017	11.7	100	23.86	0.6	6.6	2.14	3.3	138.4	
1020	11.7	100	22.9	0.56	6.6	1.92	2.7	145.1	
1026	11.71	100	23	0.58	6.63	1.95	2.3	149.7	
1031	11.71	100	23.22	0.57	6.57	1.3	1.3	157.6	
1034	11.71	100	23.38	0.58	6.57	1.13	1	160.7	
1037	11.71	100	23.46	0.59	6.56	1.15	1.2	164.7	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Pump depth: 14ft, Salinity: 0.30

SIGNATURE: David Bailey

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 10/20/2010

PROJECT: NBH Ground Water

JOB NUMBER: TO-0010-03

Bottle Time:

MONITORING WELL ID: MW-1

ACTIVITY TIME: START 1246 END 1432

WATER LEVEL / PUMP DATA

PUMP TYPE
- [ ] - PERISTALTIC
- [X] - BLADDER

INITIAL DTW: 16.0 ft (TOR)

FINAL DTW: 16.7 ft (TOR)

DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L:

RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1318	16.3	80	17.49	0.552	7.21	3.84	3.73	127.1	Salinity: 0.32
1321	16.4	100	17.39	0.552	6.99	3.01	2.96	123.5	
1324	16.4	100	17.23	0.551	6.95	2.1	2.38	114	
1327	16.4	100	17.11	0.551	6.93	1.82	2.27	100.2	
1329	16.4	100	17.04	0.551	6.91	1.54	1.41	82.7	
1332	16.4	100	17.02	0.552	6.9	1.42	1.45	71.2	
1335	16.4	100	17.01	0.553	6.9	1.31	1.43	60.8	
1338	16.55	130	16.96	0.553	6.89	1.17	0.99	51.7	
1341	16.4	100	17.09	0.555	6.88	1.08	0.86	41.7	
1346	16.4	100	17.18	0.558	6.89	0.95	0.79	34.7	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Depth to water with pump in well 15.55. Sample ID: MW-001-102010

SIGNATURE: _____

CHECKED BY: _____

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 10/5/2010

PROJECT: NBH Ground Water

JOB NUMBER: TO-0010-03

Bottle Time: 1029

MONITORING WELL ID: MW-3

ACTIVITY TIME: START 820 END 1204

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC; [X] - BLADDER

INITIAL DTW: 14.2 ft (TOR)

FINAL DTW: 14.95 ft (TOR)

DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L:

RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
944	14.61	50	16.04	2.645	6.93	1.69	10.4	46	
949	14.65	50	15.88	2.697	6.96	1.72	9.84	42.4	
952	14.75	48	15.87	2.853	7.01	1.52	7.97	31.1	
955	15.05	100	15.85	3.125	7.11	1.2	7.16	-11.3	
958	15.1	100	15.84	3.298	7.15	0.94	5.39	-14.5	
1001	15.3	100	15.83	3.399	7.18	0.65	4.7	-59	
1004	15.4	100	15.8	3.468	7.2	0.58	5.02	-79.1	Salinity: 1.84
1007	15.5	100	15.75	3.592	7.21	0.57	4.39	-91.9	
1010	15.55	100	15.71	3.73	7.23	0.51	3.7	-104.4	Salinity: 2.00
1013	15.58	100	15.6	4.085	7.24	0.45	2.99	-127.5	Salinity: 2.27
1018	15.62	100	15.36	4.779	7.26	0.38	3.35	-140.3	Salinity: 2.60
1022	15.6	100	15.26	5.116	7.27	0.26	3.29	-146.2	
1025	15.55	100	15.22	5.207	7.27	0.33	3.35	143.3	Salinity: 2.83
1028	15.45	100	15.23	5.27	7.28	0.43	3.14	-140	Salinity: 2.87

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Depth to water with pump in well 14.61. Sample ID: MW-003-100510 and MW-003-100510-DUP Samples collected at 1029

SIGNATURE: Mike Walsh

CHECKED BY:

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 10/5/2010

PROJECT: NBH Ground Water | JOB NUMBER: TO-0010-03 | Bottle Time

MONITORING WELL ID: MW-4A | ACTIVITY TIME: START 1315 END 1524 | 1411

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC [X] - BLADDER

INITIAL DTW: 10.2 ft (TOR) | FINAL DTW: 11.95 ft (TOR) | DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L: | RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1335	10.51	100	17.2	2.617	7.3	9.73		-97.1	Salinity: 1.36
1339	10.75	100	17.21	2.58	7.23	0.93	7.82	-118	
1343	11.1	100	17.16	2.579	7.22	0.43	5.91	-127.4	
1352	11.1	50	17.08	2.567	7.2	0.09	5.34	-144.8	Salinity: 1.33
1354	11.31	50	16.99	2.55	7.19	0.04	4.26	-157	
1403	11.35	36	16.95	2.543	7.19	0.03	4.18	-167	
1406	11.35	36	16.96	2.541	7.18	0.04	3.48	-175.5	Salinity: 1.32
1410	11.35	36	16.95	2.53	7.18	0.04	3.29	-187.3	Salinity: 1.31

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Depth to water with pump in well 9.95. Sample ID: MW-04A-100510 Samples collected at 1411

SIGNATURE: _____

CHECKED BY: _____

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 10/5/2010

PROJECT: NBH Ground Water | JOB NUMBER: TO-0010-03 | Bottle Time

MONITORING WELL ID: MW-5 | ACTIVITY TIME: START 1325 END 1507 | 1405

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC; [X] - BLADDER

INITIAL DTW: 8.4 ft (TOR) | FINAL DTW: 10.20 ft (TOR) | DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L: | RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1330	9.65	80	16.93	0.872	7.8	9.65	6.45	-89.6	
1335	9.8	60	16.92	0.881	7.79	0.98	3.76	-108.9	
1340	9.9	60	16.91	0.884	7.79	0.8	3.14	-119.4	
1345	10.06	40	16.91	0.887	7.79	0.55	2.56	-132.2	
1350	10.11	40	16.93	0.887	7.8	0.49	2.73	-135.8	
1355	10.13	40	16.94	0.886	7.8	0.46	2.39	-141.2	
1400	10.15	40	16.96	0.886	7.8	0.47	2.32	-145.3	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Samples taken: 1405, pump depth: 11.5ft, Salinity: 1.05

SIGNATURE: David Bailey

CHECKED BY: _____

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 10/5/2010

PROJECT: NBH Ground Water

JOB NUMBER: TO-0010-03

Bottle Time: 950

MONITORING WELL ID: MW-6

ACTIVITY TIME: START 815 END 1145

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC; [X] - BLADDER

INITIAL DTW: 12.4 ft (TOR)

FINAL DTW: 13.27 ft (TOR)

DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L:

RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
910	13.1	80	16.14	0.415	7.33	4.25	19.9	-63.8	
920	13.2	80	16.1	0.419	7.36	2.16	14.2	-93.4	
925	13.2	80	16.07	0.422	7.37	1.75	7.5	-108.5	
930	13.19	80	16.05	0.424	7.37	1.37	6.07	-112	
933	13.2	80	15.98	0.424	7.39	1.36	5.68	-127.7	
936	13.2	80	15.95	0.425	7.4	1.24	5.06	-133.6	
939	13.2	80	15.94	0.426	7.4	0.98	4.22	-136.2	
942	13.2	80	15.92	0.426	7.4	0.95	4.16	-136.1	

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Samples taken: 950, pumping started: 0910, Salinity: 0.25

SIGNATURE: David Bailey

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CONSULTANT: Woods Hole Group INC.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

Date: 10/5/2010

PROJECT: NBH Ground Water | JOB NUMBER: TO-0010-03 | Bottle Time

MONITORING WELL ID: MW-7A | ACTIVITY TIME: START 1549 END 1835 | 1734

WATER LEVEL / PUMP DATA

PUMP TYPE: [ ] - PERISTALTIC [X] - BLADDER

INITIAL DTW: 11.0 ft (TOR) | FINAL DTW: 11.19 ft (TOR) | DRAWDOWN VOL INITIAL - FINAL X 0.16 gal/ft:

TOTAL VOLUME PURGED ml/m X minutes X 0.00026 gal/L: | RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME:

TIME	DTW (ft)	PURGE RATE (ml/m)	TEMP (Deg. C)	SPECIFIC CONDUCTANCE (mS/cm)	pH	DO (MG/L)	TURBIDITY (NTU)	ORP (mV)	COMMENTS
1624	11.23	80	16.46	0.659	6.85	3.49	5.78	7.9	Salinity: 0.32
1636	11.21	60	16.47	0.645	7.26	9.29	5.78	-3.5	
1644	11.2	60	16.44	0.636	7.36	9.29	12.2	-2.2	
1649	11.2	60	16.42	0.632	7.38	9.36	8.5	12.5	
1710	11.19	70	16.36	0.638	7.26	9.34	3.85	25.6	
1713	11.19	70	16.36	0.635	7.27	9.2	3.58	26.7	Salinity: 0.31
1717	11.19	70	16.34	0.626	7.29	6.52	2.9	28.9	
1720	11.19	70	16.33	0.623	7.29	6.33	2.86	29.9	Salinity: 0.30
1723	11.19	70	16.32	0.617	7.3	6.33	2.67	31	
1726	11.19	70	16.33	0.617	7.3	6.18	2.06	31.4	
1729	11.19	70	16.32	0.616	7.3	6.14	1.65	31.7	Salinity: 0.30
1732	11.19	70	16.32	0.618	7.31	6.33	1.54	31.7	Salinity: 0.30

ANALYTICAL PARAMETERS

	ANALYSIS	ANALYSIS METHOD	PRESERVATION METHOD	BOTTLE TYPE/ VOLUME REQUIRED	SAMPLE COLLECTED
[ ]	TCL VOCs + MTBE	524.2	HCl	3 - 40 mL	[ ]

NOTES Depth to water with pump in well 11.21. Sample ID: MW-07A-100510 Samples collected at 1734. Well cover is broken

SIGNATURE: Mike Walsh

CHECKED BY:

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APPENDIX B: ALPHA ANALYTICAL LABORATORY REPORTS

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ANALYTICAL REPORT

Lab Number:	L1010361
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-0010-03
Report Date:	07/21/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010361
Report Date: 07/21/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1010361-01	MW-07A-070810	NEW BEDFORD, MA	07/08/10 10:45
L1010361-02	MW-04A-070810	NEW BEDFORD, MA	07/08/10 14:40
L1010361-03	MW-04A-070810-DUP	NEW BEDFORD, MA	07/08/10 14:40
L1010361-04	MW-005-070810	NEW BEDFORD, MA	07/08/10 16:10
L1010361-05	MW-003-070910	NEW BEDFORD, MA	07/09/10 09:40
L1010361-06	MW-006-070910	NEW BEDFORD, MA	07/09/10 09:40
L1010361-07	MW-001-070910	NEW BEDFORD, MA	07/09/10 12:55
L1010361-08	EB-070910	NEW BEDFORD, MA	07/09/10 13:05
L1010361-09	TB-070910	NEW BEDFORD, MA	07/09/10 13:05

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010361
Project Number:	TO-0010-03	**Report Date:**	07/21/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Volatile Organics by 8260

The WG423125-2 LCS/LCSD recoveries, associated with L1010361-01 through -08 are below the acceptance criteria for Bromomethane (67%) and Dichlorodifluoromethane (62%). The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds. In addition, the WG423125-2 LCS/LCSD RPD is above the acceptance criteria for Bromomethane (26%).

The WG423125-4 MS recoveries, performed on L1010361-05, were above the acceptance criteria for Trichlorofluoromethane (134%), Bromoform (131%),1,1-Dichloroethene (131%), Acetone (154%), Tetrahydrofuran (143%) and below the acceptance criteria for Bromomethane (64%).

The WG423125-5 MSD recoveries, performed on L1010361-05, were above the acceptance criteria for

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010361
Project Number:	TO-0010-03	**Report Date:**	07/21/10

Case Narrative (continued)

Carbon tetrachloride (131%), Trichlorofluoromethane (131%),Bromodichloromethane (131%), Acetone (162%) and below the acceptance criteria for Bromomethane (67%).

Total Metals

WG422679-5: The difference between the QC sample result and the serial dilution result exceeded the 10% acceptance limit for Copper.

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: 07/21/10

ORGANICS

VOLATILES

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-01	Date Collected:	07/08/10 10:45
Client ID:	MW-07A-070810	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 16:47		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-01 Date Collected: 07/08/10 10:45

Client ID: MW-07A-070810 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-01 Date Collected: 07/08/10 10:45

Client ID: MW-07A-070810 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	112		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-02	Date Collected:	07/08/10 14:40
Client ID:	MW-04A-070810	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 17:20		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-02 Date Collected: 07/08/10 14:40

Client ID: MW-04A-070810 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-02 Date Collected: 07/08/10 14:40

Client ID: MW-04A-070810 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	113		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-03	Date Collected:	07/08/10 14:40
Client ID:	MW-04A-070810-DUP	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 14:06		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-03 Date Collected: 07/08/10 14:40

Client ID: MW-04A-070810-DUP Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-03 Date Collected: 07/08/10 14:40

Client ID: MW-04A-070810-DUP Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	120		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-04	Date Collected:	07/08/10 16:10
Client ID:	MW-005-070810	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 14:39		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-04 Date Collected: 07/08/10 16:10

Client ID: MW-005-070810 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-04 Date Collected: 07/08/10 16:10

Client ID: MW-005-070810 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	110		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-05	Date Collected:	07/09/10 09:40
Client ID:	MW-003-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 15:11		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-05 Date Collected: 07/09/10 09:40

Client ID: MW-003-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-05 Date Collected: 07/09/10 09:40

Client ID: MW-003-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	116		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-06	Date Collected:	07/09/10 09:40
Client ID:	MW-006-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 15:43		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-06 Date Collected: 07/09/10 09:40

Client ID: MW-006-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-06 Date Collected: 07/09/10 09:40

Client ID: MW-006-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	118		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-07	Date Collected:	07/09/10 12:55
Client ID:	MW-001-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 16:15		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-07 Date Collected: 07/09/10 12:55

Client ID: MW-001-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-07 Date Collected: 07/09/10 12:55

Client ID: MW-001-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	121		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-08	Date Collected:	07/09/10 13:05
Client ID:	EB-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 13:02		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-08 Date Collected: 07/09/10 13:05

Client ID: EB-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	87		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-08 Date Collected: 07/09/10 13:05

Client ID: EB-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	111		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-09	Date Collected:	07/09/10 13:05
Client ID:	TB-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	07/15/10 13:34		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-09 Date Collected: 07/09/10 13:05

Client ID: TB-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-09 Date Collected: 07/09/10 13:05

Client ID: TB-070910 Date Received: 07/09/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	116		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 07/15/10 08:44
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-09 Batch: WG423125-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 07/15/10 08:44
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-09 Batch: WG423125-3					
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	10	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	5.0	--
n-Propylbenzene	ND		ug/l	2.0	--

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 07/15/10 08:44
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-09 Batch: WG423125-3					
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	111		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09 Batch: WG423125-1 WG423125-2								
Methylene chloride	95		87		70-130	9		20
1,1-Dichloroethane	93		84		70-130	10		20
Chloroform	93		83		70-130	11		20
Carbon tetrachloride	103		91		70-130	12		20
1,2-Dichloropropane	90		88		70-130	2		20
Dibromochloromethane	92		93		70-130	1		20
1,1,2-Trichloroethane	83		85		70-130	2		20
Tetrachloroethene	95		86		70-130	10		20
Chlorobenzene	89		84		70-130	6		20
Trichlorofluoromethane	106		92		70-130	14		20
1,2-Dichloroethane	89		87		70-130	2		20
1,1,1-Trichloroethane	95		87		70-130	9		20
Bromodichloromethane	100		93		70-130	7		20
trans-1,3-Dichloropropene	83		82		70-130	1		20
cis-1,3-Dichloropropene	77		74		70-130	4		20
1,1-Dichloropropene	92		81		70-130	13		20
Bromoform	108		108		70-130	0		20
1,1,2,2-Tetrachloroethane	95		91		70-130	4		20
Benzene	93		85		70-130	9		20
Toluene	92		82		70-130	11		20
Ethylbenzene	96		87		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09 Batch: WG423125-1 WG423125-2								
Chloromethane	80		70		70-130	13		20
Bromomethane	87		**67**	Q	70-130	**26**	Q	20
Vinyl chloride	85		77		70-130	10		20
Chloroethane	97		85		70-130	13		20
1,1-Dichloroethene	105		87		70-130	19		20
trans-1,2-Dichloroethene	98		85		70-130	14		20
Trichloroethene	87		80		70-130	8		20
1,2-Dichlorobenzene	91		90		70-130	1		20
1,3-Dichlorobenzene	92		84		70-130	9		20
1,4-Dichlorobenzene	91		87		70-130	4		20
Methyl tert butyl ether	75		79		70-130	5		20
p/m-Xylene	91		83		70-130	9		20
o-Xylene	89		83		70-130	7		20
cis-1,2-Dichloroethene	92		85		70-130	8		20
Dibromomethane	79		81		70-130	3		20
1,2,3-Trichloropropane	94		100		70-130	6		20
Styrene	89		86		70-130	3		20
Dichlorodifluoromethane	70		**62**	Q	70-130	12		20
Acetone	94		104		70-130	10		20
Carbon disulfide	105		90		70-130	15		20
2-Butanone	88		99		70-130	12		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09 Batch: WG423125-1 WG423125-2								
4-Methyl-2-pentanone	84		98		70-130	15		20
2-Hexanone	79		90		70-130	13		20
Bromochloromethane	86		83		70-130	4		20
Tetrahydrofuran	104		96		70-130	8		20
2,2-Dichloropropane	87		78		70-130	11		20
1,2-Dibromoethane	83		91		70-130	9		20
1,3-Dichloropropane	88		87		70-130	1		20
1,1,1,2-Tetrachloroethane	89		84		70-130	6		20
Bromobenzene	92		90		70-130	2		20
n-Butylbenzene	99		85		70-130	15		20
sec-Butylbenzene	96		83		70-130	15		20
tert-Butylbenzene	92		83		70-130	10		20
o-Chlorotoluene	92		86		70-130	7		20
p-Chlorotoluene	98		89		70-130	10		20
1,2-Dibromo-3-chloropropane	84		86		70-130	2		20
Hexachlorobutadiene	97		79		70-130	20		20
Isopropylbenzene	94		83		70-130	12		20
p-Isopropyltoluene	99		86		70-130	14		20
Naphthalene	78		84		70-130	7		20
n-Propylbenzene	96		84		70-130	13		20
1,2,3-Trichlorobenzene	79		86		70-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09 Batch: WG423125-1 WG423125-2								
1,2,4-Trichlorobenzene	83		82		70-130	1		20
1,3,5-Trimethylbenzene	92		84		70-130	9		20
1,2,4-Trimethylbenzene	92		84		70-130	9		20
Ethyl ether	96		95		70-130	1		20
Isopropyl Ether	83		80		70-130	4		20
Ethyl-Tert-Butyl-Ether	76		78		70-130	3		20
Tertiary-Amyl Methyl Ether	77		83		70-130	8		20
1,4-Dioxane	98		113		70-130	14		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		85		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	98		95		70-130
Dibromofluoromethane	96		95		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG423125-4 WG423125-5 QC Sample: L1010361-04 Client ID: MW-005-070810												
Methylene chloride	ND	10	12	118		12	119		70-130	1		20
1,1-Dichloroethane	ND	10	12	116		12	118		70-130	2		20
Chloroform	ND	10	12	118		12	117		70-130	1		20
Carbon tetrachloride	ND	10	12	125		13	**131**	Q	70-130	5		20
1,2-Dichloropropane	ND	10	11	115		12	117		70-130	2		20
Dibromochloromethane	ND	10	12	122		12	124		70-130	2		20
1,1,2-Trichloroethane	ND	10	11	110		11	109		70-130	1		20
Tetrachloroethene	ND	10	11	114		11	112		70-130	2		20
Chlorobenzene	ND	10	11	108		10	105		70-130	3		20
Trichlorofluoromethane	ND	10	13	**134**	Q	13	**131**	Q	70-130	2		20
1,2-Dichloroethane	ND	10	12	117		12	119		70-130	2		20
1,1,1-Trichloroethane	ND	10	12	117		12	120		70-130	3		20
Bromodichloromethane	ND	10	12	124		13	**131**	Q	70-130	5		20
trans-1,3-Dichloropropene	ND	10	10	103		10	102		70-130	1		20
cis-1,3-Dichloropropene	ND	10	9.2	92		9.8	98		70-130	6		20
1,1-Dichloropropene	ND	10	12	115		11	113		70-130	2		20
Bromoform	ND	10	13	**131**	Q	12	124		70-130	5		20
1,1,2,2-Tetrachloroethane	ND	10	11	114		11	108		70-130	5		20
Benzene	ND	10	12	115		12	119		70-130	3		20
Toluene	ND	10	11	113		11	109		70-130	4		20
Ethylbenzene	ND	10	11	113		11	108		70-130	5		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG423125-4 WG423125-5 QC Sample: L1010361-04 Client ID: MW-005-070810												
Chloromethane	ND	10	9.8	98		9.7	97		70-130	1		20
Bromomethane	ND	10	6.4	**64**	Q	6.7	**67**	Q	70-130	5		20
Vinyl chloride	ND	10	11	110		11	111		70-130	1		20
Chloroethane	ND	10	12	125		12	121		70-130	3		20
1,1-Dichloroethene	ND	10	13	**131**	Q	13	128		70-130	2		20
trans-1,2-Dichloroethene	ND	10	12	123		12	124		70-130	1		20
Trichloroethene	ND	10	11	109		11	115		70-130	5		20
1,2-Dichlorobenzene	ND	10	11	110		10	104		70-130	6		20
1,3-Dichlorobenzene	ND	10	11	107		9.9	99		70-130	8		20
1,4-Dichlorobenzene	ND	10	11	108		10	101		70-130	7		20
Methyl tert butyl ether	ND	10	11	107		10	104		70-130	3		20
p/m-Xylene	ND	20	22	111		21	106		70-130	5		20
o-Xylene	ND	20	22	109		21	104		70-130	5		20
cis-1,2-Dichloroethene	ND	10	12	115		12	119		70-130	3		20
Dibromomethane	ND	10	12	117		11	112		70-130	4		20
1,2,3-Trichloropropane	ND	10	12	119		11	113		70-130	5		20
Styrene	ND	20	22	111		21	106		70-130	5		20
Dichlorodifluoromethane	ND	10	9.0	90		9.0	90		70-130	0		20
Acetone	ND	10	15	**154**	Q	16	**162**	Q	70-130	5		20
Carbon disulfide	ND	10	12	119		12	121		70-130	2		20
2-Butanone	ND	10	12	120		12	118		70-130	2		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG423125-4 WG423125-5 QC Sample: L1010361-04 Client ID: MW-005-070810												
4-Methyl-2-pentanone	ND	10	12	118		12	122		70-130	3		20
2-Hexanone	ND	10	11	108		10	104		70-130	4		20
Bromochloromethane	ND	10	11	108		12	116		70-130	7		20
Tetrahydrofuran	ND	10	14	**143**	Q	13	127		70-130	12		20
2,2-Dichloropropane	ND	10	9.4	94		9.8	98		70-130	4		20
1,2-Dibromoethane	ND	10	11	113		10	106		70-130	6		20
1,3-Dichloropropane	ND	10	12	115		11	112		70-130	3		20
1,1,1,2-Tetrachloroethane	ND	10	11	107		11	107		70-130	0		20
Bromobenzene	ND	10	11	112		10	101		70-130	10		20
n-Butylbenzene	ND	10	11	106		9.6	96		70-130	10		20
sec-Butylbenzene	ND	10	11	106		9.7	97		70-130	9		20
tert-Butylbenzene	ND	10	11	109		10	102		70-130	7		20
o-Chlorotoluene	ND	10	9.0	90		8.6	86		70-130	5		20
p-Chlorotoluene	ND	10	11	109		10	103		70-130	6		20
1,2-Dibromo-3-chloropropane	ND	10	10	105		10	102		70-130	3		20
Hexachlorobutadiene	ND	10	9.8	98		9.4	94		70-130	4		20
Isopropylbenzene	ND	10	11	115		11	109		70-130	5		20
p-Isopropyltoluene	ND	10	11	111		10	100		70-130	10		20
Naphthalene	ND	10	9.9	99		9.2	92		70-130	7		20
n-Propylbenzene	ND	10	11	109		10	101		70-130	8		20
1,2,3-Trichlorobenzene	ND	10	9.9	99		9.4	94		70-130	5		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG423125-4 WG423125-5 QC Sample: L1010361-04 Client ID: MW-005-070810												
1,2,4-Trichlorobenzene	ND	10	9.9	99		9.1	91		70-130	8		20
1,3,5-Trimethylbenzene	ND	10	10	105		9.7	97		70-130	8		20
1,2,4-Trimethylbenzene	ND	10	11	108		9.8	98		70-130	10		20
Ethyl ether	ND	10	12	125		12	123		70-130	2		20
Isopropyl Ether	ND	10	10	105		10	105		70-130	0		20
Ethyl-Tert-Butyl-Ether	ND	10	9.9	99		9.8	98		70-130	1		20
Tertiary-Amyl Methyl Ether	ND	10	10	103		10	103		70-130	0		20
1,4-Dioxane	ND	1000	1100	110		1200	116		70-130	5		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		96		70-130
4-Bromofluorobenzene	96		86		70-130
Dibromofluoromethane	105		99		70-130
Toluene-d8	97		95		70-130

PCBS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-01	Date Collected:	07/08/10 10:45
Client ID:	MW-07A-070810	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	07/13/10 13:30
Analytical Date:	07/15/10 18:09		
Analyst:	NS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.213	--	1
Aroclor 1221	ND		ug/l	0.213	--	1
Aroclor 1232	ND		ug/l	0.213	--	1
Aroclor 1242	ND		ug/l	0.213	--	1
Aroclor 1248	ND		ug/l	0.213	--	1
Aroclor 1254	ND		ug/l	0.213	--	1
Aroclor 1260	ND		ug/l	0.213	--	1

Tetrachloro-meta-Xylene	79	30-150
Decachlorobiphenyl	88	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-02	Date Collected:	07/08/10 14:40
Client ID:	MW-04A-070810	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	07/13/10 13:30
Analytical Date:	07/15/10 18:40		
Analyst:	NS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.225	--	1
Aroclor 1221	ND		ug/l	0.225	--	1
Aroclor 1232	ND		ug/l	0.225	--	1
Aroclor 1242	ND		ug/l	0.225	--	1
Aroclor 1248	ND		ug/l	0.225	--	1
Aroclor 1254	ND		ug/l	0.225	--	1
Aroclor 1260	ND		ug/l	0.225	--	1

Tetrachloro-meta-Xylene	75	30-150
Decachlorobiphenyl	83	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-03	Date Collected:	07/08/10 14:40
Client ID:	MW-04A-070810-DUP	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	07/13/10 13:30
Analytical Date:	07/15/10 19:10		
Analyst:	NS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.235	--	1
Aroclor 1221	ND		ug/l	0.235	--	1
Aroclor 1232	ND		ug/l	0.235	--	1
Aroclor 1242	ND		ug/l	0.235	--	1
Aroclor 1248	ND		ug/l	0.235	--	1
Aroclor 1254	ND		ug/l	0.235	--	1
Aroclor 1260	ND		ug/l	0.235	--	1

Tetrachloro-meta-Xylene	87	30-150
Decachlorobiphenyl	93	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-04	Date Collected:	07/08/10 16:10
Client ID:	MW-005-070810	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	07/13/10 13:30
Analytical Date:	07/15/10 19:41		
Analyst:	NS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.215	--	1
Aroclor 1221	ND		ug/l	0.215	--	1
Aroclor 1232	ND		ug/l	0.215	--	1
Aroclor 1242	ND		ug/l	0.215	--	1
Aroclor 1248	ND		ug/l	0.215	--	1
Aroclor 1254	ND		ug/l	0.215	--	1
Aroclor 1260	ND		ug/l	0.215	--	1

Tetrachloro-meta-Xylene	84	30-150
Decachlorobiphenyl	84	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-05	Date Collected:	07/09/10 09:40
Client ID:	MW-003-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	07/13/10 13:30
Analytical Date:	07/15/10 20:11		
Analyst:	NS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.213	--	1
Aroclor 1221	ND		ug/l	0.213	--	1
Aroclor 1232	ND		ug/l	0.213	--	1
Aroclor 1242	ND		ug/l	0.213	--	1
Aroclor 1248	ND		ug/l	0.213	--	1
Aroclor 1254	ND		ug/l	0.213	--	1
Aroclor 1260	ND		ug/l	0.213	--	1

Tetrachloro-meta-Xylene	79	30-150
Decachlorobiphenyl	46	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-06	Date Collected:	07/09/10 09:40
Client ID:	MW-006-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	07/13/10 13:30
Analytical Date:	07/15/10 21:43		
Analyst:	NS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.220	--	1
Aroclor 1221	ND		ug/l	0.220	--	1
Aroclor 1232	ND		ug/l	0.220	--	1
Aroclor 1242	ND		ug/l	0.220	--	1
Aroclor 1248	ND		ug/l	0.220	--	1
Aroclor 1254	ND		ug/l	0.220	--	1
Aroclor 1260	ND		ug/l	0.220	--	1

Tetrachloro-meta-Xylene	82	30-150
Decachlorobiphenyl	82	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-07	Date Collected:	07/09/10 12:55
Client ID:	MW-001-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	07/13/10 13:30
Analytical Date:	07/15/10 22:13		
Analyst:	NS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.213	--	1
Aroclor 1221	ND		ug/l	0.213	--	1
Aroclor 1232	ND		ug/l	0.213	--	1
Aroclor 1242	ND		ug/l	0.213	--	1
Aroclor 1248	ND		ug/l	0.213	--	1
Aroclor 1254	ND		ug/l	0.213	--	1
Aroclor 1260	ND		ug/l	0.213	--	1

Tetrachloro-meta-Xylene	81	30-150
Decachlorobiphenyl	91	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

SAMPLE RESULTS

Lab ID:	L1010361-08	Date Collected:	07/09/10 13:05
Client ID:	EB-070910	Date Received:	07/09/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	07/13/10 13:30
Analytical Date:	07/15/10 22:43		
Analyst:	NS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.213	--	1
Aroclor 1221	ND		ug/l	0.213	--	1
Aroclor 1232	ND		ug/l	0.213	--	1
Aroclor 1242	ND		ug/l	0.213	--	1
Aroclor 1248	ND		ug/l	0.213	--	1
Aroclor 1254	ND		ug/l	0.213	--	1
Aroclor 1260	ND		ug/l	0.213	--	1

Tetrachloro-meta-Xylene	67	30-150
Decachlorobiphenyl	66	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 07/15/10 16:38
Analyst: NS

Extraction Method: EPA 3510C
Extraction Date: 07/13/10 13:30

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Mansfield Lab for sample(s): 01-08 Batch: WG422486-1					
Aroclor 1016	ND		ug/l	0.200	--
Aroclor 1221	ND		ug/l	0.200	--
Aroclor 1232	ND		ug/l	0.200	--
Aroclor 1242	ND		ug/l	0.200	--
Aroclor 1248	ND		ug/l	0.200	--
Aroclor 1254	ND		ug/l	0.200	--
Aroclor 1260	ND		ug/l	0.200	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	86		30-150
Decachlorobiphenyl	87		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

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): 01-08 QC Batch ID: WG422486-4 WG422486-5 QC Sample: L1010361-05 Client ID: MW-003-070910												
Aroclor 1016	ND	10.5	8.74	83		8.88	84		40-140	1		50
Aroclor 1260	ND	10.5	7.84	74		7.86	74		40-140	0		50

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Decachlorobiphenyl	45		62		30-150
Tetrachloro-meta-Xylene	84		81		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Mansfield Lab Associated sample(s): 01-08 Batch: WG422486-2 WG422486-3								
Aroclor 1016	81		83		40-140	2		50
Aroclor 1260	72		76		40-140	5		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Tetrachloro-meta-Xylene	82		81		30-150
Decachlorobiphenyl	76		86		30-150

METALS

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010361
Project Number: TO-0010-03
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-01
Client ID: MW-07A-070810
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 07/08/10 10:45
Date Received: 07/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	0.0006		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 11:48	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 11:48	EPA 3020A	1,6020A	LR
Copper, Total	0.006		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:48	EPA 3020A	1,6020A	LR
Lead, Total	0.001		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:48	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010361
Project Number: TO-0010-03
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-02
Client ID: MW-04A-070810
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 07/08/10 14:40
Date Received: 07/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 11:49	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 11:49	EPA 3020A	1,6020A	LR
Copper, Total	0.004		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:49	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:49	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010361
Project Number: TO-0010-03
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-03
Client ID: MW-04A-070810-DUP
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 07/08/10 14:40
Date Received: 07/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 11:50	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 11:50	EPA 3020A	1,6020A	LR
Copper, Total	0.004		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:50	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:50	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010361
Project Number: TO-0010-03
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-04
Client ID: MW-005-070810
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 07/08/10 16:10
Date Received: 07/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 11:51	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 11:51	EPA 3020A	1,6020A	LR
Copper, Total	0.002		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:51	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:51	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010361
Project Number: TO-0010-03
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-05
Client ID: MW-003-070910
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 07/09/10 09:40
Date Received: 07/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 11:52	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 11:52	EPA 3020A	1,6020A	LR
Copper, Total	0.007		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:52	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:52	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010361
Project Number: TO-0010-03
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-06
Client ID: MW-006-070910
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 07/09/10 09:40
Date Received: 07/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 11:58	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 11:58	EPA 3020A	1,6020A	LR
Copper, Total	0.002		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:58	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:58	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010361
Project Number: TO-0010-03
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-07
Client ID: MW-001-070910
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 07/09/10 12:55
Date Received: 07/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 11:59	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 11:59	EPA 3020A	1,6020A	LR
Copper, Total	0.002		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:59	EPA 3020A	1,6020A	LR
Lead, Total	0.003		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:59	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010361
Project Number: TO-0010-03
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-08
Client ID: EB-070910
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 07/09/10 13:05
Date Received: 07/09/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 12:00	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 12:00	EPA 3020A	1,6020A	LR
Copper, Total	0.118		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 12:00	EPA 3020A	1,6020A	LR
Lead, Total	0.003		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 12:00	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-08 Batch: WG422679-1										
Cadmium, Total	ND		mg/l	0.0005	--	1	07/14/10 08:00	07/15/10 11:46	1,6020A	LR
Chromium, Total	ND		mg/l	0.005	--	1	07/14/10 08:00	07/15/10 11:46	1,6020A	LR
Copper, Total	ND		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:46	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	07/14/10 08:00	07/15/10 11:46	1,6020A	LR

Prep Information

Digestion Method: EPA 3020A

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010361
Report Date: 07/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 Batch: WG422679-2								
Cadmium, Total	101		-		80-120	-		20
Chromium, Total	101		-		80-120	-		20
Copper, Total	104		-		80-120	-		20
Lead, Total	105		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010361
Report Date: 07/21/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG422679-4 QC Sample: L1010361-05 Client ID: MW-003-070910												
Cadmium, Total	ND	0.5	0.4763	95		-	-		75-125	-		20
Chromium, Total	ND	1	1.03	103		-	-		75-125	-		20
Copper, Total	0.007	1	0.967	96		-	-		75-125	-		20
Lead, Total	ND	1	0.906	91		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010361
Report Date: 07/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG422679-3 QC Sample: L1010361-05 Client ID: MW-003-070910						
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.007	0.008	mg/l	19		20
Lead, Total	ND	ND	mg/l	NC		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L1010361
Report Date: 07/21/10

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG422679-5 QC Sample: L1010361-05 Client ID: MW-003-070910						
Cadmium, Total	ND	ND	mg/l	NC		10
Chromium, Total	ND	ND	mg/l	NC		10
Copper, Total	0.007	0.006	mg/l	**19**	Q	10
Lead, Total	ND	ND	mg/l	NC		10

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-01
Client ID: MW-07A-070810
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 07/08/10 10:45
Date Received: 07/09/10
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 Suspended	1.20		mg/l	1.00	NA	1	-	07/13/10 16:00	30,2540D	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-02
Client ID: MW-04A-070810
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 07/08/10 14:40
Date Received: 07/09/10
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 Suspended	2.50		mg/l	1.00	NA	1	-	07/13/10 16:00	30,2540D	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-03
Client ID: MW-04A-070810-DUP
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 07/08/10 14:40
Date Received: 07/09/10
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 Suspended	2.50		mg/l	1.00	NA	1	-	07/13/10 16:00	30,2540D	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-04
Client ID: MW-005-070810
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 07/08/10 16:10
Date Received: 07/09/10
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 Suspended	1.90		mg/l	1.00	NA	1	-	07/13/10 16:00	30,2540D	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-05
Client ID: MW-003-070910
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 07/09/10 09:40
Date Received: 07/09/10
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 Suspended	26.2		mg/l	1.00	NA	1	-	07/13/10 16:00	30,2540D	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-06
Client ID: MW-006-070910
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 07/09/10 09:40
Date Received: 07/09/10
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 Suspended	12.3		mg/l	1.00	NA	1	-	07/13/10 16:00	30,2540D	ES

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010361
Report Date: 07/21/10

SAMPLE RESULTS

Lab ID: L1010361-07
Client ID: MW-001-070910
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 07/09/10 12:55
Date Received: 07/09/10
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 Suspended	9.00		mg/l	1.00	NA	1	-	07/13/10 16:00	30,2540D	ES

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010361

Project Number: TO-0010-03 **Report Date:** 07/21/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab for sample(s): 01-07 Batch: WG422456-1										
Solids, Total Suspended	ND		mg/l	1.00	NA	1	-	07/13/10 16:00	30,2540D	ES

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010361
Report Date: 07/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-07 Batch: WG422456-2								
Solids, Total Suspended	92		-		80-120	-		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010361
Report Date: 07/21/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1010361-01A	Plastic 500ml HNO3 preserved	A	<2	6	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-01B	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-PCB-8082(7)
L1010361-01C	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-PCB-8082(7)
L1010361-01D	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-01E	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-01F	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-01G	Plastic 1000ml unpreserved	A	N/A	6	Y	Absent	A2-TSS-2540D(7)
L1010361-02A	Plastic 500ml HNO3 preserved	A	<2	6	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-02B	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-PCB-8082(7)
L1010361-02C	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-PCB-8082(7)
L1010361-02D	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-02E	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-02F	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-02G	Plastic 1000ml unpreserved	A	N/A	6	Y	Absent	A2-TSS-2540D(7)
L1010361-03A	Plastic 500ml HNO3 preserved	A	<2	6	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-03B	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-PCB-8082(7)
L1010361-03C	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-PCB-8082(7)
L1010361-03D	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-03E	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-03F	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010361
Report Date: 07/21/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1010361-03G	Plastic 1000ml unpreserved	A	N/A	6	Y	Absent	A2-TSS-2540D(7)
L1010361-04A	Plastic 500ml HNO3 preserved	A	<2	6	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-04B	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-PCB-8082(7)
L1010361-04C	Amber 1000ml unpreserved	A	7	6	Y	Absent	A2-PCB-8082(7)
L1010361-04D	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-04E	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-04F	Vial HCl preserved	A	N/A	6	Y	Absent	MCP-8260-10(14)
L1010361-04G	Plastic 1000ml unpreserved	A	N/A	6	Y	Absent	A2-TSS-2540D(7)
L1010361-05A	Plastic 500ml HNO3 preserved	C	<2	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-05B	Amber 1000ml unpreserved	C	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-05C	Amber 1000ml unpreserved	C	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-05D	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-05E	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-05F	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-05G	Plastic 1000ml unpreserved	C	N/A	5	Y	Absent	A2-TSS-2540D(7)
L1010361-05H	Plastic 500ml HNO3 preserved	C	<2	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-05I	Plastic 500ml HNO3 preserved	C	<2	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-05J	Amber 1000ml unpreserved	C	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-05K	Amber 1000ml unpreserved	C	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-05L	Amber 1000ml unpreserved	C	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-05M	Amber 1000ml unpreserved	C	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-05N	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-05O	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-05P	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-05Q	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-05R	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-05S	Vial HCl preserved	C	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-06A	Plastic 500ml HNO3 preserved	B	<2	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010361
Report Date: 07/21/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1010361-06B	Amber 1000ml unpreserved	B	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-06C	Amber 1000ml unpreserved	B	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-06D	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-06E	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-06F	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-06G	Plastic 1000ml unpreserved	B	N/A	5	Y	Absent	A2-TSS-2540D(7)
L1010361-07A	Plastic 500ml HNO3 preserved	B	<2	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-07B	Amber 1000ml unpreserved	B	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-07C	Amber 1000ml unpreserved	B	7	5	Y	Absent	A2-PCB-8082(7)
L1010361-07D	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-07E	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-07F	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-07G	Plastic 1000ml unpreserved	B	N/A	5	Y	Absent	A2-TSS-2540D(7)
L1010361-08A	Plastic 500ml HNO3 preserved	B	<2	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1010361-08B	Amber 1000ml unpreserved	B	N/A	5	Y	Absent	A2-PCB-8082(7)
L1010361-08C	Amber 1000ml unpreserved	B	N/A	5	Y	Absent	A2-PCB-8082(7)
L1010361-08D	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-08E	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-08F	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)
L1010361-09D	Vial HCl preserved	B	N/A	5	Y	Absent	MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010361
Project Number:	TO-0010-03	**Report Date:**	07/21/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010361
Project Number:	TO-0010-03	**Report Date:**	07/21/10

Data Qualifiers

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	**Lab Number:**	L1010361
Project Number:	TO-0010-03	**Report Date:**	07/21/10

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.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro 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-0574. ***NELAP Accredited Solid Waste/Soil.***

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))
Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)
Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)
Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)
*Solid Waste/Soil (*Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
Drinking Water
Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)
(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)
353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.
Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)
(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.
Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D
Non-Potable Water
Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)
(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)
245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)
Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)
Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)
Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)
Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)
Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)
Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)
Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NY-DOH.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 $S2^{-}$D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A , 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

Serial_No:07211009:48

CHAIN OF CUSTODY

PAGE 1 OF 4

Date Rec'd in Lab:

ALPHA Job #: L1010361

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

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NEW BEDFORD HARBOR
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVE WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
-1	MW-07A-070810	7/8/10	1045	GW	DSB	X					2
	MW-07A-070810		1045		DSB		X				3
	MW-07A-070810		1045		DSB			X			1
	MW-07A-070810		1045		DSB				X		1
-2	MW-04A-070810		1440	GW	DB	X					2
	MW-04A-070810						X				3
	MW-04A-070810							X			1
	MW-04A-070810								X		1
-3	MW-04A-070810-DUP					X					2
	MW-04A-070810-DUP						X				3

Container Type	A	V	P	P
Preservative	A	B	C	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	7/9/10 1615		7/9/10 1615

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

FORM NO: 01-01 (rev. 18-Jan-2010)

Serial_No:07211009:48

CHAIN OF CUSTODY

PAGE 2 OF 4

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

Date Rec'd in Lab:

ALPHA Job #: L1010361

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NEWBEDFORD HARBOR
Project Location: NEWBEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVE WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
-3	MW-04A-070810-DUP	7/8/10	1440	GW	DB			X			1
	MW-04A-070810-DUP	7/8/10	1440	GW	DB				X		1
-4	MW-005-070810	7/8/10	1610	GW	M.WALSH	X					2
	MW-005-070810	7/8/10	1610	GW	M.WALSH		X				3
	MW-005-070810	7/8/10	1610	GW	M.WALSH			X			1
	MW-005-070810	7/8/10	1610	GW	M.WALSH				X		1
-5	MW-003-070910	7/9/10	0940	GW	MW	X					2
	MW-003-070910	7/9/10	0940	GW	MW		X				3
	MW-003-070910	7/9/10	0940	GW	MW			X			1
	MW-003-070910	7/9/10	0940	GW	MW				X		1

Container Type	A	V	P	P
Preservative	A	B	C	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	7/9/10 1415		7/9/10 1615

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

FORM NO: 01-01 (rev. 18-Jan-2010)

2010 Biannual Groundwater Monitoring
W912WJ-09-D-0001
B-93
Delivery Order-0010-03
April 2011

Serial_No:07211009:48

CHAIN OF CUSTODY

PAGE 3 OF 4

ALPHA ANALYTICAL TIDAL
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 #: L1010361

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr.
E. Falmouth, MA 02536
Phone: 508-540-8086
Fax: 508-540-1001
Email: DWALSH@WHGRP.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State (Fed) Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
5	MW-003-070910-MS	7/9/10	0940	GW	MW	X					2
	MW-003-070910-MS	7/9/10	0940	GW	MW		X				3
	MW-003-070910-MS	7/9/10	0940	GW	MW			X			1
	MW-003-070910-MS	7/9/10	0940	GW	MW				X		1
	MW-003-070910-MSD	7/9/10	0940	GW	MW	X					2
	MW-003-070910-MSD	7/9/10	0940	GW	MW		X				3
	MW-003-070910-MSD	7/9/10	0940	GW	MW			X			1
	MW-003-070910-MSD	7/9/10	0940	GW	MW				X		1
6	MW-006-070910	7/9/10	0940	GW	~~DB~~	X					2
	MW-006-070910	7/9/10	0940	GW	DB		X				3

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

Container Type	A	V	P	P
Preservative	A	B	C	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Nardone	7/9/10 1615	[signature]	7/9/10 1615

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

FORM NO: 01-01 (rev. 18-Jan-2010)

Serial_No:07211009:48

CHAIN OF CUSTODY

PAGE 4 OF 4

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

Date Rec'd in Lab:

ALPHA Job #: L1010361

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr.
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client Info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB	Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
-6	MW-006-070910	7/9/10	0940	GW	DB			X				1
	MW-006-070910	7/9/10	0940	GW	DB				X			1
-7	MW-001-070910	7/9/10	1255	GW	DB	X						2
	MW-001-070910	7/9/10	1255	GW	DB		X					3
	MW-001-070910	7/9/10	1255	GW	DB			X				1
	MW-001-070910	7/9/10	1255	GW	DB				X			1
-8	EB-070910	7/9/10	1305	GW	MW	X					Equipment Blank	2
	EB-070910	7/9/10	1305	GW	MW		X				Equipment Blank	3
	EB-070910	7/9/10	1305	GW	MW			X			Equipment Blk	1
-9	TB-070910	7/9/10	1305	GW	MW		X				Trip Blank	3

SAMPLE HANDLING

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

Container Type	A	V	P	P
Preservative	A	B	C	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Dave Walsh	7/9/10 1615		7/9/10 1615

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

FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE 1 OF 4

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

Date Rec'd in Lab:

ALPHA Job #: L1010361

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NEW BEDFORD HARBOR
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVE WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TCL	Sample Specific Comments	TOTAL # BOTTLES
-1	MW-07A-070810	7/8/10	1045	GW	DSB	X					2
	MW-07A-070810		1045		DSB		X				3
	MW-07A-070810		1045		DSB			X			1
	MW-07A-070810		1045		DSB				X		1
-2	MW-04A-070810		1440	GW	DB	X					2
	MW-04A-070810						X				3
	MW-04A-070810							X			1
	MW-04A-070810								X		1
-3	MW-04A-070810-DUP					X					2
	MW-04A-070810-DUP						X				3
	Container Type					A	V	P	P		
	Preservative					A	B	C	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01 (rev. 18-Jan-2010)

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	7/9/10 1615	[illegible]	7/9/10 1615
P. Dillon	7/12/10 0805	P. Dillon	7/12/10 8135
[illegible]	7/12/10 9115	[illegible]	7/12/10 09:05

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.

CHAIN OF CUSTODY

PAGE 2 OF 4

Date Rec'd in Lab:

ALPHA Job #: L1010361

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

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NEWBEDFORD HARBOR
Project Location: NEWBEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVE WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
-3	MW-04A-070810-DUP	7/8/10	1440	GW	DB			X			1
	MW-04A-070810-DUP	7/8/10	1440	GW	DB				X		1
-4	MW-005-070810	7/8/10	1610	GW	M.WALSH	X					2
	MW-005-070810	7/8/10	1610	GW	M.WALSH		X				3
	MW-005-070810	7/8/10	1610	GW	M.WALSH			X			1
	MW-005-070810	7/8/10	1610	GW	M.WALSH				X		1
-5	MW-003-070910	7/9/10	0940	GW	MW	X					2
	MW-003-070910	7/9/10	0940	GW	MW		X				3
	MW-003-070910	7/9/10	0940	GW	MW			X			1
	MW-003-070910	7/9/10	0940	GW	MW				X		1

Container Type	A	V	P	P
Preservative	A	B	C	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	7/9/10 1415	[signature]	7/9/10 1615
[signature]	7/12/10 0805	R. Gilbert	7/12/10 8:35
R. Gilbert	7/12/10 9:15	[signature]	7/12/10 0915

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FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE 3 OF 4

Date Rec'd in Lab:

ALPHA Job #: L1010361

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

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr.
E. Falmouth, MA 02536
Phone: 508-540-8086
Fax: 508-540-1001
Email: DWALSH@WHGRP.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
-5	MW-003-070910-MS	7/9/10	0940	GW	MW	X					2
	MW-003-070910-MS	7/9/10	0940	GW	MW		X				3
	MW-003-070910-MS	7/9/10	0940	GW	MW			X			1
	MW-003-070910-MS	7/9/10	0940	GW	MW				X		1
	MW-003-070910-MSD	7/9/10	0940	GW	MW	X					2
	MW-003-070910-MSD	7/9/10	0940	GW	MW		X				3
	MW-003-070910-MSD	7/9/10	0940	GW	MW			X			1
	MW-003-070910-MSD	7/9/10	0940	GW	MW				X		1
-6	MW-006-070910	7/9/10	0940	GW	DB	X					2
	MW-006-070910	7/9/10	0940	GW	DB		X				3

	PCB Aroclors	VOCs	Metals	TSS
Container Type	A	V	P	P
Preservative	A	B	C	A

PLEASE ANSWER QUESTIONS ABOVE!

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Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7/9/10 1615	[signature]	7/9/10 1615
[signature]	7/12/10 0805	P. Gilbert	7/12/10 8:35
P. Gilbert	7/12/10 9:15	T. [signature]	7/12/10 0915

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FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE 4 OF 4

Date Rec'd in Lab:

ALPHA Job #: L1010361

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

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr.
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

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☐ Same as Client info PO #:

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	~~PCB Aroclors~~	VOCs	~~Metals~~	~~TSS~~	Sample Specific Comments	TOTAL # BOTTLES
-6	MW-006-070910	7/9/10	0940	GW	DB			X			1
	MW-006-070910	7/9/10	0940	GW	DB				X		1
-7	MW-001-070910	7/9/10	1255	GW	DB	X					2
	MW-001-070910	7/9/10	1255	GW	DB		X				3
	MW-001-070910	7/9/10	1255	GW	DB			X			1
	MW-001-070910	7/9/10	1255	GW	DB				X		1
-8	EB-070910	7/9/10	1305	GW	MW	X				Equipment Blank	2
	EB-070910	7/9/10	1305	GW	MW		X			Equipment Blank	3
	EB-070910	7/9/10	1305	GW	MW			X		Equipment Blank	1
-9	TB-070910	7/9/10	1305	GW	MW		X			Trip Blank	3

Container Type	A	V	P	P
Preservative	A	B	C	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7/9/10 1615	[signature]	7/9/10 1615
[signature]	7/12/10 0805	[signature]	7/12/10 8235
[signature]	7/12/10 9115	[signature]	7/12/10 0915

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

FORM NO: 01-01 (rev. 18-Jan-2010)

ANALYTICAL REPORT

Lab Number:	L1015775
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-0010-03
Report Date:	11/08/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015775
Report Date: 11/08/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1015775-01	MW-006-100510	NEW BEDFORD, MA	10/05/10 09:50
L1015775-02	MW-003-100510	NEW BEDFORD, MA	10/05/10 10:29
L1015775-03	MW-003-100510 DUP	NEW BEDFORD, MA	10/05/10 10:29
L1015775-04	TB-100510	NEW BEDFORD, MA	10/05/10 17:45
L1015775-05	MW-04A-100510	NEW BEDFORD, MA	10/05/10 14:11
L1015775-06	MW-07A-100510	NEW BEDFORD, MA	10/05/10 17:34
L1015775-07	MW-005-100510	NEW BEDFORD, MA	10/05/10 14:05
L1015775-08	EB-100510	NEW BEDFORD, MA	10/05/10 17:45
L1015775-09	MW-001-102010	NEW BEDFORD, MA	10/20/10 13:45
L1015775-10	EB-102010	NEW BEDFORD, MA	10/20/10 17:45
L1015775-11	TB-102010	NEW BEDFORD, MA	10/20/10 13:45

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015775
Project Number:	TO-0010-03	**Report Date:**	11/08/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Volatile Organics by GC/MS

The WG437326-1/-2 LCS/LCSD recoveries, associated with L1015775-01 through 07 are above the acceptance criteria for Acetone (157%)/(134%),1,4-Dioxane (LCS 142%); however, they have been identified as "difficult" analytes and are within the 40-160% acceptance limits. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds.'

The WG437326-4/-5 MS/MSD recoveries, performed on L1015775-01, were outside 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 Trichlorofluoromethane (MS 137%),Dichlorodifluoromethane (144%)/(134%) and a potentially low bias for Bromomethane (MS 63%). The WG437326-4/5 MS/MSD recovery for Tetrahydrofuran is reported as 0%, due to the concentration of this

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015775
Project Number:	TO-0010-03	**Report Date:**	11/08/10

Case Narrative (continued)

compound falling below the reported detection limit. In addition, the associated WG437326-5 MS/MSD RPD is above the acceptance criteria for Bromomethane (21%).

The WG437874-2 LCSD recoveries, associated with L1015775-08, are below the acceptance criteria for Dichlorodifluoromethane (68%); however, they are within the overall acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

The WG439128-1 LCS recoveries, associated with L1015775-09,10,11, are outside the individual acceptance criteria for several compounds, but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially high bias for 1,1-Dichloroethene (133%), Ethyl ether (138%) and a potentially low bias for Dichlorodifluoromethane (60%).

The WG439128-2 LCSD recoveries, associated with L1015775-09,10,11, are below the acceptance criteria for Dichlorodifluoromethane (58%); but within the overall method allowances.

The WG439128-2 LCS/LCSD RPD(s), associated with L1015775-09,10,11, are above the acceptance criteria for 1,4-Dioxane (21%); however, the individual LCS/LCSD recoveries are within method 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: 11/08/10

ORGANICS

VOLATILES

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-01	Date Collected:	10/05/10 09:50
Client ID:	MW-006-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/13/10 13:06		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-01 Date Collected: 10/05/10 09:50
Client ID: MW-006-100510 Date Received: 10/06/10
Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	5.6		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-01 Date Collected: 10/05/10 09:50

Client ID: MW-006-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	106		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-02	Date Collected:	10/05/10 10:29
Client ID:	MW-003-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/13/10 13:38		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-02 Date Collected: 10/05/10 10:29
Client ID: MW-003-100510 Date Received: 10/06/10
Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-02 Date Collected: 10/05/10 10:29

Client ID: MW-003-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	115		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-03	Date Collected:	10/05/10 10:29
Client ID:	MW-003-100510 DUP	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/13/10 14:09		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-03 Date Collected: 10/05/10 10:29

Client ID: MW-003-100510 DUP Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	5.7		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-03 Date Collected: 10/05/10 10:29

Client ID: MW-003-100510 DUP Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	113		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-04	Date Collected:	10/05/10 17:45
Client ID:	TB-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/13/10 12:34		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-04 Date Collected: 10/05/10 17:45

Client ID: TB-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-04 Date Collected: 10/05/10 17:45

Client ID: TB-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	106		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-05	Date Collected:	10/05/10 14:11
Client ID:	MW-04A-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/13/10 14:41		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-05 Date Collected: 10/05/10 14:11

Client ID: MW-04A-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-05 Date Collected: 10/05/10 14:11

Client ID: MW-04A-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	115		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-06	Date Collected:	10/05/10 17:34
Client ID:	MW-07A-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/13/10 15:13		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-06 Date Collected: 10/05/10 17:34
Client ID: MW-07A-100510 Date Received: 10/06/10
Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	31		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-06 Date Collected: 10/05/10 17:34

Client ID: MW-07A-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	113		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-07	Date Collected:	10/05/10 14:05
Client ID:	MW-005-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/13/10 15:45		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-07 Date Collected: 10/05/10 14:05

Client ID: MW-005-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-07	Date Collected:	10/05/10 14:05
Client ID:	MW-005-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	120		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-08	Date Collected:	10/05/10 17:45
Client ID:	EB-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/15/10 08:28		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-08 Date Collected: 10/05/10 17:45
Client ID: EB-100510 Date Received: 10/06/10
Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-08 Date Collected: 10/05/10 17:45

Client ID: EB-100510 Date Received: 10/06/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	115		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-09	Date Collected:	10/20/10 13:45
Client ID:	MW-001-102010	Date Received:	10/20/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/22/10 13:42		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-09 Date Collected: 10/20/10 13:45
Client ID: MW-001-102010 Date Received: 10/20/10
Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	7.4		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-09 Date Collected: 10/20/10 13:45

Client ID: MW-001-102010 Date Received: 10/20/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	86		70-130
4-Bromofluorobenzene	87		70-130
Dibromofluoromethane	126		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-10	Date Collected:	10/20/10 17:45
Client ID:	EB-102010	Date Received:	10/20/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/22/10 13:09		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-10 Date Collected: 10/20/10 17:45
Client ID: EB-102010 Date Received: 10/20/10
Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-10 Date Collected: 10/20/10 17:45

Client ID: EB-102010 Date Received: 10/20/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	88		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	124		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-11	Date Collected:	10/20/10 13:45
Client ID:	TB-102010	Date Received:	10/20/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	97,8260B		
Analytical Date:	10/22/10 12:37		
Analyst:	MM		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-11 Date Collected: 10/20/10 13:45

Client ID: TB-102010 Date Received: 10/20/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-11 Date Collected: 10/20/10 13:45

Client ID: TB-102010 Date Received: 10/20/10

Sample Location: NEW BEDFORD, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	127		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/13/10 12:03
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07 Batch: WG437326-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/13/10 12:03
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07 Batch: WG437326-3					
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	10	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/13/10 12:03
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07 Batch: WG437326-3					
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	103		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/15/10 07:56
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG437874-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/15/10 07:56
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG437874-3					
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	10	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/15/10 07:56
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG437874-3					
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	112		70-130

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/22/10 10:27
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09-11 Batch: WG439128-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/22/10 10:27
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09-11 Batch: WG439128-3					
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	10	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 10/22/10 10:27
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 09-11 Batch: WG439128-3					
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	83		70-130
4-Bromofluorobenzene	84		70-130
Dibromofluoromethane	122		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 Batch: WG437326-1 WG437326-2								
Methylene chloride	106		100		70-130	6		20
1,1-Dichloroethane	100		99		70-130	1		20
Chloroform	94		96		70-130	2		20
Carbon tetrachloride	89		95		70-130	7		20
1,2-Dichloropropane	107		103		70-130	4		20
Dibromochloromethane	102		101		70-130	1		20
1,1,2-Trichloroethane	110		107		70-130	3		20
Tetrachloroethene	108		106		70-130	2		20
Chlorobenzene	99		96		70-130	3		20
Trichlorofluoromethane	109		105		70-130	4		20
1,2-Dichloroethane	102		100		70-130	2		20
1,1,1-Trichloroethane	91		94		70-130	3		20
Bromodichloromethane	92		90		70-130	2		20
trans-1,3-Dichloropropene	112		105		70-130	6		20
cis-1,3-Dichloropropene	102		100		70-130	2		20
1,1-Dichloropropene	96		98		70-130	2		20
Bromoform	102		101		70-130	1		20
1,1,2,2-Tetrachloroethane	113		108		70-130	5		20
Benzene	102		102		70-130	0		20
Toluene	101		99		70-130	2		20
Ethylbenzene	104		100		70-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 Batch: WG437326-1 WG437326-2								
Chloromethane	110		105		70-130	5		20
Bromomethane	106		101		70-130	5		20
Vinyl chloride	94		96		70-130	2		20
Chloroethane	98		95		70-130	3		20
1,1-Dichloroethene	99		102		70-130	3		20
trans-1,2-Dichloroethene	101		96		70-130	5		20
Trichloroethene	94		95		70-130	1		20
1,2-Dichlorobenzene	103		102		70-130	1		20
1,3-Dichlorobenzene	102		101		70-130	1		20
1,4-Dichlorobenzene	105		102		70-130	3		20
Methyl tert butyl ether	96		86		70-130	11		20
p/m-Xylene	107		104		70-130	3		20
o-Xylene	103		101		70-130	2		20
cis-1,2-Dichloroethene	101		99		70-130	2		20
Dibromomethane	112		111		70-130	1		20
1,2,3-Trichloropropane	102		101		70-130	1		20
Styrene	99		96		70-130	3		20
Dichlorodifluoromethane	120		115		70-130	4		20
Acetone	**157**	Q	**134**	Q	70-130	16		20
Carbon disulfide	84		87		70-130	4		20
2-Butanone	121		110		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 Batch: WG437326-1 WG437326-2								
4-Methyl-2-pentanone	110		104		70-130	6		20
2-Hexanone	107		97		70-130	10		20
Bromochloromethane	107		104		70-130	3		20
Tetrahydrofuran	103		95		70-130	8		20
2,2-Dichloropropane	94		93		70-130	1		20
1,2-Dibromoethane	105		99		70-130	6		20
1,3-Dichloropropane	109		103		70-130	6		20
1,1,1,2-Tetrachloroethane	99		98		70-130	1		20
Bromobenzene	103		102		70-130	1		20
n-Butylbenzene	116		112		70-130	4		20
sec-Butylbenzene	105		104		70-130	1		20
tert-Butylbenzene	102		102		70-130	0		20
o-Chlorotoluene	100		99		70-130	1		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	106		108		70-130	2		20
Hexachlorobutadiene	116		112		70-130	4		20
Isopropylbenzene	100		97		70-130	3		20
p-Isopropyltoluene	114		110		70-130	4		20
Naphthalene	99		94		70-130	5		20
n-Propylbenzene	103		104		70-130	1		20
1,2,3-Trichlorobenzene	109		104		70-130	5		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 Batch: WG437326-1 WG437326-2								
1,2,4-Trichlorobenzene	110		101		70-130	9		20
1,3,5-Trimethylbenzene	105		102		70-130	3		20
1,2,4-Trimethylbenzene	108		106		70-130	2		20
Ethyl ether	106		96		70-130	10		20
Isopropyl Ether	93		89		70-130	4		20
Ethyl-Tert-Butyl-Ether	97		85		70-130	13		20
Tertiary-Amyl Methyl Ether	111		100		70-130	10		20
1,4-Dioxane	**142**	Q	121		70-130	16		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	103		101		70-130
Toluene-d8	104		105		70-130
4-Bromofluorobenzene	94		99		70-130
Dibromofluoromethane	102		102		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG437874-1 WG437874-2								
Methylene chloride	98		96		70-130	2		20
1,1-Dichloroethane	94		92		70-130	2		20
Chloroform	98		97		70-130	1		20
Carbon tetrachloride	104		100		70-130	4		20
1,2-Dichloropropane	91		92		70-130	1		20
Dibromochloromethane	94		89		70-130	5		20
1,1,2-Trichloroethane	91		90		70-130	1		20
Tetrachloroethene	102		100		70-130	2		20
Chlorobenzene	94		89		70-130	5		20
Trichlorofluoromethane	113		112		70-130	1		20
1,2-Dichloroethane	97		98		70-130	1		20
1,1,1-Trichloroethane	102		100		70-130	2		20
Bromodichloromethane	99		99		70-130	0		20
trans-1,3-Dichloropropene	91		92		70-130	1		20
cis-1,3-Dichloropropene	89		90		70-130	1		20
1,1-Dichloropropene	101		98		70-130	3		20
Bromoform	94		94		70-130	0		20
1,1,2,2-Tetrachloroethane	90		94		70-130	4		20
Benzene	97		95		70-130	2		20
Toluene	96		90		70-130	6		20
Ethylbenzene	100		96		70-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG437874-1 WG437874-2								
Chloromethane	76		72		70-130	5		20
Bromomethane	120		101		70-130	17		20
Vinyl chloride	96		97		70-130	1		20
Chloroethane	96		86		70-130	11		20
1,1-Dichloroethene	114		112		70-130	2		20
trans-1,2-Dichloroethene	97		93		70-130	4		20
Trichloroethene	100		99		70-130	1		20
1,2-Dichlorobenzene	101		97		70-130	4		20
1,3-Dichlorobenzene	102		95		70-130	7		20
1,4-Dichlorobenzene	102		98		70-130	4		20
Methyl tert butyl ether	83		91		70-130	9		20
p/m-Xylene	103		98		70-130	5		20
o-Xylene	104		100		70-130	4		20
cis-1,2-Dichloroethene	99		96		70-130	3		20
Dibromomethane	88		102		70-130	15		20
1,2,3-Trichloropropane	93		94		70-130	1		20
Styrene	100		96		70-130	4		20
Dichlorodifluoromethane	71		**68**	Q	70-130	4		20
Acetone	108		113		70-130	5		20
Carbon disulfide	97		91		70-130	6		20
2-Butanone	91		91		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG437874-1 WG437874-2								
4-Methyl-2-pentanone	83		90		70-130	8		20
2-Hexanone	77		89		70-130	14		20
Bromochloromethane	97		101		70-130	4		20
Tetrahydrofuran	80		88		70-130	10		20
2,2-Dichloropropane	105		100		70-130	5		20
1,2-Dibromoethane	89		93		70-130	4		20
1,3-Dichloropropane	88		91		70-130	3		20
1,1,1,2-Tetrachloroethane	99		96		70-130	3		20
Bromobenzene	99		94		70-130	5		20
n-Butylbenzene	114		104		70-130	9		20
sec-Butylbenzene	107		102		70-130	5		20
tert-Butylbenzene	105		100		70-130	5		20
o-Chlorotoluene	100		95		70-130	5		20
p-Chlorotoluene	103		98		70-130	5		20
1,2-Dibromo-3-chloropropane	92		100		70-130	8		20
Hexachlorobutadiene	112		102		70-130	9		20
Isopropylbenzene	103		101		70-130	2		20
p-Isopropyltoluene	106		100		70-130	6		20
Naphthalene	84		90		70-130	7		20
n-Propylbenzene	105		101		70-130	4		20
1,2,3-Trichlorobenzene	88		91		70-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG437874-1 WG437874-2								
1,2,4-Trichlorobenzene	91		95		70-130	4		20
1,3,5-Trimethylbenzene	104		98		70-130	6		20
1,2,4-Trimethylbenzene	104		100		70-130	4		20
Ethyl ether	108		109		70-130	1		20
Isopropyl Ether	86		86		70-130	0		20
Ethyl-Tert-Butyl-Ether	88		91		70-130	3		20
Tertiary-Amyl Methyl Ether	90		97		70-130	7		20
1,4-Dioxane	111		121		70-130	9		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		100		70-130
Toluene-d8	97		95		70-130
4-Bromofluorobenzene	103		103		70-130
Dibromofluoromethane	102		101		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09-11 Batch: WG439128-1 WG439128-2								
Methylene chloride	98		96		70-130	2		20
1,1-Dichloroethane	91		89		70-130	2		20
Chloroform	92		91		70-130	1		20
Carbon tetrachloride	100		96		70-130	4		20
1,2-Dichloropropane	87		82		70-130	6		20
Dibromochloromethane	90		90		70-130	0		20
1,1,2-Trichloroethane	82		79		70-130	4		20
Tetrachloroethene	93		95		70-130	2		20
Chlorobenzene	87		90		70-130	3		20
Trichlorofluoromethane	122		117		70-130	4		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	101		98		70-130	3		20
Bromodichloromethane	96		93		70-130	3		20
trans-1,3-Dichloropropene	85		85		70-130	0		20
cis-1,3-Dichloropropene	88		86		70-130	2		20
1,1-Dichloropropene	89		88		70-130	1		20
Bromoform	95		96		70-130	1		20
1,1,2,2-Tetrachloroethane	87		93		70-130	7		20
Benzene	90		89		70-130	1		20
Toluene	84		86		70-130	2		20
Ethylbenzene	91		91		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09-11 Batch: WG439128-1 WG439128-2								
Chloromethane	93		86		70-130	8		20
Bromomethane	120		105		70-130	13		20
Vinyl chloride	113		108		70-130	5		20
Chloroethane	122		120		70-130	2		20
1,1-Dichloroethene	**133**	Q	129		70-130	3		20
trans-1,2-Dichloroethene	89		89		70-130	0		20
Trichloroethene	94		91		70-130	3		20
1,2-Dichlorobenzene	88		96		70-130	9		20
1,3-Dichlorobenzene	89		96		70-130	8		20
1,4-Dichlorobenzene	86		93		70-130	8		20
Methyl tert butyl ether	89		84		70-130	6		20
p/m-Xylene	94		96		70-130	2		20
o-Xylene	96		96		70-130	0		20
cis-1,2-Dichloroethene	98		96		70-130	2		20
Dibromomethane	92		89		70-130	3		20
1,2,3-Trichloropropane	82		91		70-130	10		20
Styrene	96		97		70-130	1		20
Dichlorodifluoromethane	**60**	Q	**58**	Q	70-130	3		20
Acetone	120		103		70-130	15		20
Carbon disulfide	100		101		70-130	1		20
2-Butanone	98		98		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09-11 Batch: WG439128-1 WG439128-2								
4-Methyl-2-pentanone	95		93		70-130	2		20
2-Hexanone	81		83		70-130	2		20
Bromochloromethane	100		101		70-130	1		20
Tetrahydrofuran	87		89		70-130	2		20
2,2-Dichloropropane	98		95		70-130	3		20
1,2-Dibromoethane	86		89		70-130	3		20
1,3-Dichloropropane	88		86		70-130	2		20
1,1,1,2-Tetrachloroethane	99		101		70-130	2		20
Bromobenzene	90		96		70-130	6		20
n-Butylbenzene	85		92		70-130	8		20
sec-Butylbenzene	83		90		70-130	8		20
tert-Butylbenzene	85		92		70-130	8		20
o-Chlorotoluene	83		90		70-130	8		20
p-Chlorotoluene	83		91		70-130	9		20
1,2-Dibromo-3-chloropropane	81		88		70-130	8		20
Hexachlorobutadiene	93		97		70-130	4		20
Isopropylbenzene	92		94		70-130	2		20
p-Isopropyltoluene	87		95		70-130	9		20
Naphthalene	82		86		70-130	5		20
n-Propylbenzene	83		91		70-130	9		20
1,2,3-Trichlorobenzene	95		102		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 09-11 Batch: WG439128-1 WG439128-2								
1,2,4-Trichlorobenzene	92		100		70-130	8		20
1,3,5-Trimethylbenzene	102		110		70-130	8		20
1,2,4-Trimethylbenzene	89		95		70-130	7		20
Ethyl ether	**138**	Q	130		70-130	6		20
Isopropyl Ether	80		78		70-130	3		20
Ethyl-Tert-Butyl-Ether	90		86		70-130	5		20
Tertiary-Amyl Methyl Ether	98		93		70-130	5		20
1,4-Dioxane	130		105		70-130	**21**	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		92		70-130
Toluene-d8	89		89		70-130
4-Bromofluorobenzene	84		87		70-130
Dibromofluoromethane	107		98		70-130

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG437326-4 WG437326-5 QC Sample: L1015775-01 Client ID: MW-006-100510												
Methylene chloride	ND	10	11	110		11	108		70-130	0		20
1,1-Dichloroethane	ND	10	12	116		11	111		70-130	9		20
Chloroform	ND	10	11	114		11	106		70-130	0		20
Carbon tetrachloride	ND	10	12	120		11	114		70-130	9		20
1,2-Dichloropropane	ND	10	11	113		11	109		70-130	0		20
Dibromochloromethane	ND	10	11	110		11	112		70-130	0		20
1,1,2-Trichloroethane	ND	10	11	107		12	116		70-130	9		20
Tetrachloroethene	ND	10	12	119		11	114		70-130	9		20
Chlorobenzene	ND	10	10	103		10	104		70-130	0		20
Trichlorofluoromethane	ND	10	14	**137**	Q	12	125		70-130	15		20
1,2-Dichloroethane	ND	10	11	112		11	109		70-130	0		20
1,1,1-Trichloroethane	ND	10	11	114		11	108		70-130	0		20
Bromodichloromethane	ND	10	11	107		10	104		70-130	10		20
trans-1,3-Dichloropropene	ND	10	11	112		11	114		70-130	0		20
cis-1,3-Dichloropropene	ND	10	10	102		10	102		70-130	0		20
1,1-Dichloropropene	ND	10	12	116		11	110		70-130	9		20
Bromoform	ND	10	11	107		11	108		70-130	0		20
1,1,2,2-Tetrachloroethane	ND	10	11	109		11	110		70-130	0		20
Benzene	ND	10	12	117		11	112		70-130	9		20
Toluene	ND	10	11	111		11	109		70-130	0		20
Ethylbenzene	ND	10	11	114		11	112		70-130	0		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG437326-4 WG437326-5 QC Sample: L1015775-01 Client ID: MW-006-100510												
Chloromethane	ND	10	12	116		11	110		70-130	9		20
Bromomethane	ND	10	6.3	**63**	Q	7.8	78		70-130	**21**	Q	20
Vinyl chloride	ND	10	12	119		12	115		70-130	0		20
Chloroethane	ND	10	12	117		10	105		70-130	18		20
1,1-Dichloroethene	ND	10	12	122		11	114		70-130	9		20
trans-1,2-Dichloroethene	ND	10	11	113		11	110		70-130	0		20
Trichloroethene	ND	10	10	105		10	105		70-130	0		20
1,2-Dichlorobenzene	ND	10	10	101		9.8	98		70-130	2		20
1,3-Dichlorobenzene	ND	10	10	104		9.9	99		70-130	1		20
1,4-Dichlorobenzene	ND	10	10	102		9.9	99		70-130	1		20
Methyl tert butyl ether	ND	10	8.9	89		8.6	86		70-130	3		20
p/m-Xylene	ND	20	23	116		23	114		70-130	0		20
o-Xylene	ND	20	22	113		22	108		70-130	0		20
cis-1,2-Dichloroethene	ND	10	12	119		11	111		70-130	9		20
Dibromomethane	ND	10	12	117		12	122		70-130	0		20
1,2,3-Trichloropropane	ND	10	10	101		9.8	98		70-130	2		20
Styrene	ND	20	22	108		21	105		70-130	5		20
Dichlorodifluoromethane	ND	10	14	**144**	Q	13	**134**	Q	70-130	7		20
Acetone	5.6	10	15	97		16	102		70-130	6		20
Carbon disulfide	ND	10	11	110		10	103		70-130	10		20
2-Butanone	ND	10	9.5	95		11	108		70-130	15		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG437326-4 WG437326-5 QC Sample: L1015775-01 Client ID: MW-006-100510												
4-Methyl-2-pentanone	ND	10	8.5	85		7.8	78		70-130	9		20
2-Hexanone	ND	10	8.9	90		9.5	95		70-130	7		20
Bromochloromethane	ND	10	11	113		11	108		70-130	0		20
Tetrahydrofuran	ND	10	ND	**0**	Q	ND	**0**	Q	70-130	NC		20
2,2-Dichloropropane	ND	10	10	102		9.6	96		70-130	4		20
1,2-Dibromoethane	ND	10	10	105		11	106		70-130	10		20
1,3-Dichloropropane	ND	10	11	108		11	107		70-130	0		20
1,1,1,2-Tetrachloroethane	ND	10	11	107		11	111		70-130	0		20
Bromobenzene	ND	10	10	106		9.9	99		70-130	1		20
n-Butylbenzene	ND	10	9.0	90		8.6	86		70-130	5		20
sec-Butylbenzene	ND	10	11	109		10	103		70-130	10		20
tert-Butylbenzene	ND	10	11	107		10	102		70-130	10		20
o-Chlorotoluene	ND	10	10	106		10	100		70-130	0		20
p-Chlorotoluene	ND	10	10	104		9.9	99		70-130	1		20
1,2-Dibromo-3-chloropropane	ND	10	12	121		10	106		70-130	18		20
Hexachlorobutadiene	ND	10	10	104		10	103		70-130	0		20
Isopropylbenzene	ND	10	11	108		11	107		70-130	0		20
p-Isopropyltoluene	ND	10	11	112		11	107		70-130	0		20
Naphthalene	ND	10	7.7	77		7.8	78		70-130	1		20
n-Propylbenzene	ND	10	11	111		10	105		70-130	10		20
1,2,3-Trichlorobenzene	ND	10	8.6	86		9.0	90		70-130	5		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG437326-4 WG437326-5 QC Sample: L1015775-01 Client ID: MW-006-100510												
1,2,4-Trichlorobenzene	ND	10	8.5	86		8.8	88		70-130	3		20
1,3,5-Trimethylbenzene	ND	10	10	102		9.7	97		70-130	3		20
1,2,4-Trimethylbenzene	ND	10	11	111		10	103		70-130	10		20
Ethyl ether	ND	10	9.9	99		9.7	97		70-130	2		20
Isopropyl Ether	ND	10	9.2	92		9.2	92		70-130	0		20
Ethyl-Tert-Butyl-Ether	ND	10	8.7	87		8.8	88		70-130	1		20
Tertiary-Amyl Methyl Ether	ND	10	10	102		10	102		70-130	0		20
1,4-Dioxane	ND	1000	1100	111		1100	113		70-130	0		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		104		70-130
4-Bromofluorobenzene	93		93		70-130
Dibromofluoromethane	104		108		70-130
Toluene-d8	103		104		70-130

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-01	Date Collected:	10/05/10 09:50
Client ID:	MW-006-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/12/10 10:43
Analytical Date:	11/04/10 13:42		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.023	--	1
Aroclor 1221	ND		ug/l	0.023	--	1
Aroclor 1232	ND		ug/l	0.023	--	1
Aroclor 1242	ND		ug/l	0.023	--	1
Aroclor 1248	ND		ug/l	0.023	--	1
Aroclor 1254	ND		ug/l	0.023	--	1
Aroclor 1260	ND		ug/l	0.023	--	1
Aroclor 1262	ND		ug/l	0.023	--	1
Aroclor 1268	ND		ug/l	0.023	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	91		30-150
Decachlorobiphenyl	87		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-02	Date Collected:	10/05/10 10:29
Client ID:	MW-003-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/12/10 10:43
Analytical Date:	11/04/10 14:13		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.023	--	1
Aroclor 1221	ND		ug/l	0.023	--	1
Aroclor 1232	ND		ug/l	0.023	--	1
Aroclor 1248	ND		ug/l	0.023	--	1
Aroclor 1254	ND		ug/l	0.023	--	1
Aroclor 1260	ND		ug/l	0.023	--	1
Aroclor 1262	ND		ug/l	0.023	--	1
Aroclor 1268	ND		ug/l	0.023	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	94		30-150
Decachlorobiphenyl	45		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-02	Date Collected:	10/05/10 10:29
Client ID:	MW-003-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/12/10 10:43
Analytical Date:	11/04/10 14:13		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1242	0.038		ug/l	0.023	--	1

Tetrachloro-meta-Xylene	94	30-150
Decachlorobiphenyl	45	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-03	Date Collected:	10/05/10 10:29
Client ID:	MW-003-100510 DUP	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/12/10 10:43
Analytical Date:	11/04/10 14:43		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.022	--	1
Aroclor 1221	ND		ug/l	0.022	--	1
Aroclor 1232	ND		ug/l	0.022	--	1
Aroclor 1242	ND		ug/l	0.022	--	1
Aroclor 1248	ND		ug/l	0.022	--	1
Aroclor 1254	ND		ug/l	0.022	--	1
Aroclor 1260	ND		ug/l	0.022	--	1
Aroclor 1262	ND		ug/l	0.022	--	1
Aroclor 1268	ND		ug/l	0.022	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	94		30-150
Decachlorobiphenyl	44		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-05	Date Collected:	10/05/10 14:11
Client ID:	MW-04A-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/12/10 10:43
Analytical Date:	11/04/10 15:14		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.021	--	1
Aroclor 1221	ND		ug/l	0.021	--	1
Aroclor 1232	ND		ug/l	0.021	--	1
Aroclor 1242	ND		ug/l	0.021	--	1
Aroclor 1248	ND		ug/l	0.021	--	1
Aroclor 1254	ND		ug/l	0.021	--	1
Aroclor 1260	ND		ug/l	0.021	--	1
Aroclor 1262	ND		ug/l	0.021	--	1
Aroclor 1268	ND		ug/l	0.021	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	100		30-150
Decachlorobiphenyl	99		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-06	Date Collected:	10/05/10 17:34
Client ID:	MW-07A-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/12/10 10:43
Analytical Date:	11/04/10 15:44		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.021	--	1
Aroclor 1221	ND		ug/l	0.021	--	1
Aroclor 1232	ND		ug/l	0.021	--	1
Aroclor 1242	ND		ug/l	0.021	--	1
Aroclor 1248	ND		ug/l	0.021	--	1
Aroclor 1254	ND		ug/l	0.021	--	1
Aroclor 1260	ND		ug/l	0.021	--	1
Aroclor 1262	ND		ug/l	0.021	--	1
Aroclor 1268	ND		ug/l	0.021	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	82		30-150
Decachlorobiphenyl	87		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-07	Date Collected:	10/05/10 14:05
Client ID:	MW-005-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/12/10 10:43
Analytical Date:	11/04/10 16:15		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.022	--	1
Aroclor 1221	ND		ug/l	0.022	--	1
Aroclor 1232	ND		ug/l	0.022	--	1
Aroclor 1242	ND		ug/l	0.022	--	1
Aroclor 1248	ND		ug/l	0.022	--	1
Aroclor 1254	ND		ug/l	0.022	--	1
Aroclor 1260	ND		ug/l	0.022	--	1
Aroclor 1262	ND		ug/l	0.022	--	1
Aroclor 1268	ND		ug/l	0.022	--	1

Tetrachloro-meta-Xylene	93	30-150
Decachlorobiphenyl	88	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-08	Date Collected:	10/05/10 17:45
Client ID:	EB-100510	Date Received:	10/06/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/12/10 10:43
Analytical Date:	11/04/10 16:45		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.023	--	1
Aroclor 1221	ND		ug/l	0.023	--	1
Aroclor 1232	ND		ug/l	0.023	--	1
Aroclor 1242	ND		ug/l	0.023	--	1
Aroclor 1248	ND		ug/l	0.023	--	1
Aroclor 1254	ND		ug/l	0.023	--	1
Aroclor 1260	ND		ug/l	0.023	--	1
Aroclor 1262	ND		ug/l	0.023	--	1
Aroclor 1268	ND		ug/l	0.023	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	96		30-150
Decachlorobiphenyl	90		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-09	Date Collected:	10/20/10 13:45
Client ID:	MW-001-102010	Date Received:	10/20/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/26/10 08:49
Analytical Date:	11/04/10 17:46		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.021	--	1
Aroclor 1221	ND		ug/l	0.021	--	1
Aroclor 1232	ND		ug/l	0.021	--	1
Aroclor 1242	ND		ug/l	0.021	--	1
Aroclor 1248	ND		ug/l	0.021	--	1
Aroclor 1254	ND		ug/l	0.021	--	1
Aroclor 1260	ND		ug/l	0.021	--	1
Aroclor 1262	ND		ug/l	0.021	--	1
Aroclor 1268	ND		ug/l	0.021	--	1

Tetrachloro-meta-Xylene	85	30-150
Decachlorobiphenyl	99	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

SAMPLE RESULTS

Lab ID:	L1015775-10	Date Collected:	10/20/10 17:45
Client ID:	EB-102010	Date Received:	10/20/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	10/26/10 08:49
Analytical Date:	11/04/10 18:17		
Analyst:	JS		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Mansfield Lab						
Aroclor 1016	ND		ug/l	0.021	--	1
Aroclor 1221	ND		ug/l	0.021	--	1
Aroclor 1232	ND		ug/l	0.021	--	1
Aroclor 1242	ND		ug/l	0.021	--	1
Aroclor 1248	ND		ug/l	0.021	--	1
Aroclor 1254	ND		ug/l	0.021	--	1
Aroclor 1260	ND		ug/l	0.021	--	1
Aroclor 1262	ND		ug/l	0.021	--	1
Aroclor 1268	ND		ug/l	0.021	--	1

Tetrachloro-meta-Xylene	89	30-150
Decachlorobiphenyl	101	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/04/10 13:12
Analyst: JS

Extraction Method: EPA 3510C
Extraction Date: 10/12/10 10:43

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Mansfield Lab for sample(s): 01-03,05-08 Batch: WG436869-1					
Aroclor 1016	ND		ug/l	0.020	--
Aroclor 1221	ND		ug/l	0.020	--
Aroclor 1232	ND		ug/l	0.020	--
Aroclor 1242	ND		ug/l	0.020	--
Aroclor 1248	ND		ug/l	0.020	--
Aroclor 1254	ND		ug/l	0.020	--
Aroclor 1260	ND		ug/l	0.020	--
Aroclor 1262	ND		ug/l	0.020	--
Aroclor 1268	ND		ug/l	0.020	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	101		30-150
Decachlorobiphenyl	103		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 11/04/10 17:16
Analyst: JS

Extraction Method: EPA 3510C
Extraction Date: 10/26/10 08:49

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Mansfield Lab for sample(s): 09-10 Batch: WG439376-1					
Aroclor 1016	ND		ug/l	0.020	--
Aroclor 1221	ND		ug/l	0.020	--
Aroclor 1232	ND		ug/l	0.020	--
Aroclor 1242	ND		ug/l	0.020	--
Aroclor 1248	ND		ug/l	0.020	--
Aroclor 1254	ND		ug/l	0.020	--
Aroclor 1260	ND		ug/l	0.020	--
Aroclor 1262	ND		ug/l	0.020	--
Aroclor 1268	ND		ug/l	0.020	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Tetrachloro-meta-Xylene	87		30-150
Decachlorobiphenyl	94		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

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): 01-03,05-08 QC Batch ID: WG436869-4 WG436869-5 QC Sample: L1015775-01 Client ID: MW-006-100510												
Aroclor 1016	ND	11.1	11.2	101		11.9	106		40-140	6		50
Aroclor 1260	ND	11.1	9.21	83		10.4	93		40-140	12		50

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Decachlorobiphenyl	86		94		30-150
Tetrachloro-meta-Xylene	93		97		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Mansfield Lab Associated sample(s): 01-03,05-08 Batch: WG436869-2 WG436869-3								
Aroclor 1016	108		106		40-140	2		50
Aroclor 1260	93		93		40-140	0		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Tetrachloro-meta-Xylene	100		98		30-150
Decachlorobiphenyl	96		105		30-150

Polychlorinated Biphenyls by GC - Mansfield Lab Associated sample(s): 09-10 Batch: WG439376-2 WG439376-3								
Aroclor 1016	99		100		40-140	0		50
Aroclor 1260	84		86		40-140	2		50

Tetrachloro-meta-Xylene	94		91		30-150
Decachlorobiphenyl	93		95		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-01
Client ID: MW-006-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 10/05/10 09:50
Date Received: 10/06/10
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 Suspended	7.80		mg/l	1.00	NA	1	-	10/12/10 07:00	30,2540D	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-02
Client ID: MW-003-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 10/05/10 10:29
Date Received: 10/06/10
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 Suspended	31.4		mg/l	1.00	NA	1	-	10/12/10 07:00	30,2540D	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-03
Client ID: MW-003-100510 DUP
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 10/05/10 10:29
Date Received: 10/06/10
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 Suspended	32.3		mg/l	1.00	NA	1	-	10/12/10 07:00	30,2540D	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-05
Client ID: MW-04A-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 10/05/10 14:11
Date Received: 10/06/10
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 Suspended	ND		mg/l	1.00	NA	1	-	10/12/10 07:00	30,2540D	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-06
Client ID: MW-07A-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 10/05/10 17:34
Date Received: 10/06/10
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 Suspended	1.00		mg/l	1.00	NA	1	-	10/12/10 07:00	30,2540D	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-07
Client ID: MW-005-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 10/05/10 14:05
Date Received: 10/06/10
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 Suspended	2.20		mg/l	1.00	NA	1	-	10/12/10 07:00	30,2540D	NR

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015775
Report Date: 11/08/10

SAMPLE RESULTS

Lab ID: L1015775-09
Client ID: MW-001-102010
Sample Location: NEW BEDFORD, MA
Matrix: Water

Date Collected: 10/20/10 13:45
Date Received: 10/20/10
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 Suspended	1.20		mg/l	1.00	NA	1	-	10/25/10 16:00	30,2540D	ES

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015775

Project Number: TO-0010-03 **Report Date:** 11/08/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab for sample(s): 01-03,05-07 Batch: WG436833-1										
Solids, Total Suspended	ND		mg/l	1.00	NA	1	-	10/12/10 07:00	30,2540D	NR
General Chemistry - Mansfield Lab for sample(s): 09 Batch: WG439116-1										
Solids, Total Suspended	ND		mg/l	1.00	NA	1	-	10/25/10 16:00	30,2540D	ES

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015775
Report Date: 11/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-03,05-07 Batch: WG436833-2								
Solids, Total Suspended	103		-		80-120	-		20
General Chemistry - Mansfield Lab Associated sample(s): 09 Batch: WG439116-2								
Solids, Total Suspended	100		-		80-120	-		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015775
Report Date: 11/08/10

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(*)
L1015775-01B	Amber 1000ml unpreserved	A	7	5	NA	Absent	A2-PCB-8082(7)
L1015775-01C	Amber 1000ml unpreserved	A	7	5	NA	Absent	A2-PCB-8082(7)
L1015775-01D	Vial HCl preserved	A	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-01E	Vial HCl preserved	A	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-01F	Vial HCl preserved	A	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-01G	Plastic 1000ml unpreserved	A	7	5	NA	Absent	A2-TSS-2540D(7)
L1015775-01H	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-PCB-8082(7)
L1015775-01I	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-PCB-8082(7)
L1015775-01J	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-PCB-8082(7)
L1015775-01K	Amber 1000ml unpreserved	A	7	5	Y	Absent	A2-PCB-8082(7)
L1015775-01L	Vial HCl preserved	A	N/A	5	Y	Absent	MCP-8260-10(14)
L1015775-01M	Vial HCl preserved	A	N/A	5	Y	Absent	MCP-8260-10(14)
L1015775-01N	Vial HCl preserved	A	N/A	5	Y	Absent	MCP-8260-10(14)
L1015775-01O	Vial HCl preserved	A	N/A	5	Y	Absent	MCP-8260-10(14)
L1015775-01P	Vial HCl preserved	A	N/A	5	Y	Absent	MCP-8260-10(14)
L1015775-01Q	Vial HCl preserved	A	N/A	5	Y	Absent	MCP-8260-10(14)
L1015775-02B	Amber 1000ml unpreserved	B	7	4	NA	Absent	A2-PCB-8082(7)
L1015775-02C	Amber 1000ml unpreserved	B	7	4	NA	Absent	A2-PCB-8082(7)
L1015775-02D	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-02E	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-02F	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-02G	Plastic 1000ml unpreserved	B	7	4	NA	Absent	A2-TSS-2540D(7)
L1015775-03B	Amber 1000ml unpreserved	B	7	4	NA	Absent	A2-PCB-8082(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015775
Report Date: 11/08/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1015775-03C	Amber 1000ml unpreserved	B	7	4	NA	Absent	A2-PCB-8082(7)
L1015775-03D	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-03E	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-03F	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-03G	Plastic 1000ml unpreserved	B	7	4	NA	Absent	A2-TSS-2540D(7)
L1015775-04D	Vial HCl preserved	A	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-04E	Vial HCl preserved	A	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-04F	Vial HCl preserved	A	N/A	5	NA	Absent	-
L1015775-05B	Amber 1000ml unpreserved	C	7	3	NA	Absent	A2-PCB-8082(7)
L1015775-05C	Amber 1000ml unpreserved	C	7	3	NA	Absent	A2-PCB-8082(7)
L1015775-05D	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-05E	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-05F	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-05G	Plastic 1000ml unpreserved	C	7	3	NA	Absent	A2-TSS-2540D(7)
L1015775-06B	Amber 1000ml unpreserved	C	7	3	NA	Absent	A2-PCB-8082(7)
L1015775-06C	Amber 1000ml unpreserved	C	7	3	NA	Absent	A2-PCB-8082(7)
L1015775-06D	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-06E	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-06F	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-06G	Plastic 1000ml unpreserved	C	7	3	NA	Absent	A2-TSS-2540D(7)
L1015775-07B	Amber 1000ml unpreserved	C	N/A	3	NA	Absent	A2-PCB-8082(7)
L1015775-07C	Amber 1000ml unpreserved	C	N/A	3	NA	Absent	A2-PCB-8082(7)
L1015775-07D	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-07E	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-07F	Vial HCl preserved	C	N/A	3	NA	Absent	MCP-8260-10(14)
L1015775-07G	Plastic 1000ml unpreserved	C	7	3	NA	Absent	A2-TSS-2540D(7)
L1015775-08B	Amber 1000ml unpreserved	B	7	4	NA	Absent	A2-PCB-8082(7)
L1015775-08C	Amber 1000ml unpreserved	B	7	4	NA	Absent	A2-PCB-8082(7)
L1015775-08D	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-08E	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-08F	Vial HCl preserved	B	N/A	4	NA	Absent	MCP-8260-10(14)
L1015775-09B	Amber 1000ml unpreserved	D	7	5	NA	Absent	A2-PCB-8082(7)
L1015775-09C	Amber 1000ml unpreserved	D	7	5	NA	Absent	A2-PCB-8082(7)
L1015775-09D	Vial HCl preserved	D	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-09E	Vial HCl preserved	D	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-09F	Vial HCl preserved	D	N/A	5	NA	Absent	MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015775
Report Date: 11/08/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1015775-09G	Plastic 1000ml unpreserved	D	7	5	NA	Absent	A2-TSS-2540D(7)
L1015775-10B	Amber 1000ml unpreserved	D	7	5	NA	Absent	A2-PCB-8082(7)
L1015775-10C	Amber 1000ml unpreserved	D	7	5	NA	Absent	A2-PCB-8082(7)
L1015775-10D	Vial HCl preserved	D	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-10E	Vial HCl preserved	D	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-10F	Vial HCl preserved	D	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-11D	Vial HCl preserved	D	N/A	5	NA	Absent	MCP-8260-10(14)
L1015775-11E	Vial HCl preserved	D	N/A	5	NA	Absent	MCP-8260-10(14)

Container Comments

L1015775-09G	ENTIRE SAMPLE USED

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015775
Project Number:	TO-0010-03	**Report Date:**	11/08/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015775
Project Number:	TO-0010-03	**Report Date:**	11/08/10

Data Qualifiers

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	**Lab Number:**	L1015775
Project Number:	TO-0010-03	**Report Date:**	11/08/10

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.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro 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-0574. ***NELAP Accredited Solid Waste/Soil.***

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))
Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)
Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.
Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)
Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)
*Solid Waste/Soil (*Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
Drinking Water
Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)
(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)
353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.
Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)
(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.
Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D
Non-Potable Water
Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)
(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)
245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)
Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)
Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)
Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)
Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. ***NELAP Accredited.***
Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)
Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)
Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. ***NELAP Accredited.***
Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)
Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. ***NELAP Accredited via NY-DOH.***
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. ***NELAP Accredited.***
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 $S2^{-}$D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A , 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

CHAIN OF CUSTODY

PAGE 1 OF

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

Date Rec'd in Lab:

ALPHA Job #: L1015775

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.Com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS: PCB Aroclors | VOCs | Metals | TSS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
-1	MW-006-100510	10/5/10	9:50	GW	DB	X				Salinity 0.25 ppt	2
	MW-006-100510	↓	↓	↓	↓		X				3
	MW-006-100510							X			1
	MW-006-100510								X		1
	MW-006-100510-MS	10/5/10	9:50	GW	DB	X					2
	MW-006-100510-MS	↓	↓	↓	↓		X				3
	MW-006-100510-MS							X			1
	MW-006-100510-MSD	10/5/10	9:50	GW	DB	X					2
	MW-006-100510-MSD	↓	↓	↓	↓		X				3
	MW-006-100510-MSD							X			1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type	A	V	P	P
Preservative	A	B	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	10/6/10 1245	P. Gillett	10/6/10 12:45
P. Gillett	10/6/10 1615		10/6/10 1611

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

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

Serial No:11081017:27

CHAIN OF CUSTODY

PAGE 2 OF ____

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

Date Rec'd in Lab:

ALPHA Job #: L1015775

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Analysis	VOCs	Metals	TSS	Sample Specific Comments	Total # Bottles
-2	MW-003-100510	10/5/10	10:29	GW	MW	X				Salinity = 2.87ppt	2
	MW-003-100510						X				3
	MW-003-100510							X			1
	MW-003-100510								X		1
-3	MW-003-100510-DUP					X					2
	MW-003-100510-DUP						X				3
	MW-003-100510-DUP							X			1
	MW-003-100510-DUP		↓						X		1
-4	TB-100510		17:45				X			Air bubble found in 1 trip blank from lab	2
5	MW-04A-100510	↓	14:11	↓	↓	X				Salinity - 1.31ppt	2

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

Container Type	A	V	P	P	
Preservative	A	B	A	A	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

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

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/6/10 1745	P. Gillett	10/6/10 12:45
P. Gillett	10/6/10 16:15	[signature]	10/6/10 1615

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-0010-03
April 2011
B-201
2010 Biannual Groundwater Monitoring
W912WJ-09-D-0001

Serial_No:11081017:27

CHAIN OF CUSTODY

PAGE 3 OF ____

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

Date Rec'd in Lab:

ALPHA Job #: L1015775

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB	Aroclors	VOCs	Metals	TSS	Sample Specific Comments	Total # Bottles
5	MW-04A-100510	10/5/10	14:11	GW	MW		X				Salinity - 1.31 ppt	3
	MW-04A-100510							X				1
	MW-04A-100510								X			1
6	MW-07A-100510		17:34			X					Salinity - 0.30 ppt	2
	MW-07A-100510						X					3
	MW-07A-100510							X				1
	MW-07A-100510								X			1
7	MW-00S-100510		14:05		DB	X					Salinity - 1.05 ppt	2
	MW-00S-100510						X					3
	MW-00S-100510							X				1

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

Container Type	A	V	P	P
Preservative	A	B	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

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

Relinquished By:	Date/Time	Received By:	Date/Time
	10/6/10 1245		10/6/10 12:45
P. Gallant	10/6/10 16:15		10/6/10 1615

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.

2010 Biannual Groundwater Monitoring
W912WJ-09-D-0001
B-202
Delivery Order-0010-03
April 2011

CHAIN OF CUSTODY

PAGE 4 OF ____

ALPHA ANALYTICAL

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

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

Date Rec'd in Lab:

ALPHA Job #: L1015775

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr.
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
7	MW-005-100510	10/5/10	14:05	GW	DB				X	Salinity - 1.05	1
8	EB-100510	↓	17:45	↓	↓	X					2
↓	EB-100510	↓	17:45	↓	↓		X				3
↓	EB-100510	↓	17:45	↓	↓			X			1

Container Type	A	V	P	P
Preservative	A	B	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	10/6/10 1245	P. Gilbert	10/6/10 12:45
P. Gilbert	10/6/10 1615	[signature]	10/6/10 1615

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

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

Serial_No:11081017:27

CHAIN OF CUSTODY

PAGE 1 OF

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

Date Rec'd in Lab:

ALPHA Job #: L1015775

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
-1	MW-006-100510	10/5/10	9:50	GW	DB	X				Salinity 0.25 ppt	2
	MW-006-100510	↓	↓	↓	↓		X				3
	MW-006-100510							X			1
	MW-006-100510								X		1
	MW-006-100510-MS	10/5/10	9:50	GW	DB	X					2
	MW-006-100510-MS	↓	↓	↓	↓		X				3
	MW-006-100510-MS							X			1
	MW-006-100510-MSD	10/5/10	9:50	GW	DB	X					2
	MW-006-100510-MSD	↓	↓	↓	↓		X				3
	MW-006-100510-MSD							X			1

Container Type	A	V	P	P
Preservative	A	B	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

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

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	10/6/10 1245	P. Gillett	10/6/10 12:45
P. Gillett	10/6/10 1615		10/6/10 1611
	10/6/10 1500	P. Gillett	10/8/10 17:00
P. Gillett	10/8/10 18:30		

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.

Serial No:11081017:27

CHAIN OF CUSTODY

PAGE 2 OF ____

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

Date Rec'd in Lab:

ALPHA Job #: L1015775

Client Information
Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information
Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time
☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: Time:

Report Information - Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☐ Same as Client info PO #:

Regulatory Requirements/Report Limits
State / Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS
☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	Total # Bottles
-2	MW-003-100510	10/5/10	10:29	GW	MW	X				Salinity = 2.87 ppt	2
	MW-003-100510						X				3
	MW-003-100510							X			1
	MW-003-100510								X		1
-3	MW-003-100510-DUP					X					2
	MW-003-100510-DUP						X				3
	MW-003-100510-DUP							X			1
	MW-003-100510-DUP		↓						X		1
-4	TB-100510		17:45				X			*Air bubble found in 1 trip blank from lab	2
5	MW-04A-100510	↓	14:11	↓	↓	X				Salinity - 1.31 ppt	2

Container Type	A	V	P	P
Preservative	A	B	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	10/6/10 1745	P. Dillon	10/6/10 12:45
P. Dillon	10/6/10 16:15		10/6/10 1611
P. Dillon	10/8/10 1500	P. Dillon	10/8/10 17:00
P. Dillon	10/8/10 18:30		

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

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

2010 Biannual Groundwater Monitoring W912WJ-09-D-0001 B-205 Delivery Order-0010-03 April 2011

CHAIN OF CUSTODY

PAGE 3 OF ____

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

Date Rec'd in Lab:

ALPHA Job #: L1015775

Client Information
Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information
Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time
☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: Time:

Report Information - Data Deliverables
☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information
☐ Same as Client info PO #:

Regulatory Requirements/Report Limits
State/Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS
☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB	Aroclors	VOCs	Metals	TSS	Sample Specific Comments	Total # Bottles
5	MW-04A-100510	10/5/10	14:11	GW	MW		X				Salinity - 1.31 ppt	3
	MW-04A-100510							X				1
	MW-04A-100510								X			1
6	MW-07A-100510		17:34			X					Salinity - 0.30ppt	2
	MW-07A-100510						X					3
	MW-07A-100510							X				1
	MW-07A-100510								X			1
7	MW-00S-100510		14:05		DB	X					Salinity - 1.05ppt	2
	MW-00S-100510						X					3
	MW-00S-100510							X				1

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

Container Type	A	V	P	P
Preservative	A	B	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	10/6/10 1245	P. Gallant	10/6/10 12:45
P. Gallant	10/6/10 16:15		10/6/10 1615
	10/8/10 1500	P. Gallant	10/8/10 17:00
P. Gallant	10/8/10 18:30		

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

FORM NO: 01-01 (rev. 14-OCT-97)

CHAIN OF CUSTODY

PAGE 4 OF ____

ALPHA Job #: L1015775

Date Rec'd in Lab:

ALPHA
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.
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
7	MW-005-100510	10/5/10	14:05	GW	DB				X	Salinity - 1.05	1
8	EB-100510	↓	17:45	↓	↓	X					2
	EB-100510	↓	17:45	↓	↓		X				3
	EB-100510	↓	17:45	↓	↓			X			1

Container Type	A	V	P	P
Preservative	A	B	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	10/6/10 1245	P. Gilbert	10/6/10 12:45
P. Gilbert	10/6/10 16:15	[signature]	10/6/10 1615
[signature]	10/8/10 1500	P. Gilbert	10/8/10 17:00
P. Gilbert	10/8/10 18:30		

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

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

L1015775

CHAIN OF CUSTODY

PAGE 1 OF 1

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

Date Rec'd in Lab:

ALPHA Job #: L1016494

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

L1015775

ANALYSIS: VOC's | Metals | PCB Aroclors | TSS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's	Metals	PCB Aroclors	TSS	Sample Specific Comments	TOTAL # BOTTLES
L1016494 1	MW-001-102010	10/20/10	1345	GW	MW	X					3
9	MW-001-102010		1345				X				1
	MW-001-102010		1345					X			2
	MW-001-102010		1345						X		1
10-2	EB-102010					X					3
	EB-102010						X				1
	EB-102010							X			1
11-3	TB-102010					X					2

Container Type	V	P	A	P
Preservative	B	C	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	10/20/10 1650		10/20/10 1650

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

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

Serial_No:11081017:27

Delivery Order-0010-03
April 2011
B-208
2010 Biannual Groundwater Monitoring
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1015773
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-0010-03
Report Date:	11/10/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015773
Report Date: 11/10/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1015773-01	MW-006-100510	NEW BEDFORD, MA	10/05/10 09:50
L1015773-02	MW-003-100510	NEW BEDFORD, MA	10/05/10 10:29
L1015773-03	MW-003-100510 DUP	NEW BEDFORD, MA	10/05/10 10:29
L1015773-04	MW-04A-100510	NEW BEDFORD, MA	10/05/10 14:11
L1015773-05	MW-07A-100510	NEW BEDFORD, MA	10/05/10 17:34
L1015773-06	MW-005-100510	NEW BEDFORD, MA	10/05/10 14:05
L1015773-07	EB-100510	NEW BEDFORD, MA	10/05/10 17:45
L1015773-08	MW-001-102010	NEW BEDFORD, MA	10/20/10 13:45
L1015773-09	EB-102010	NEW BEDFORD, MA	10/20/10 13:45

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015773
Project Number:	TO-0010-03	**Report Date:**	11/10/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

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: 11/10/10

METALS

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-01
Client ID: MW-006-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/05/10 09:50
Date Received: 10/06/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	10/19/10 09:37	10/21/10 14:29	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:29	EPA 3020A	1,6020A	LR
Copper, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:29	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:29	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-02
Client ID: MW-003-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/05/10 10:29
Date Received: 10/06/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	10/19/10 09:37	10/21/10 14:20	EPA 3020A	1,6020A	LR
Chromium, Total	0.002		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:20	EPA 3020A	1,6020A	LR
Copper, Total	0.014		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:20	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:20	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-03
Client ID: MW-003-100510 DUP
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/05/10 10:29
Date Received: 10/06/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	10/19/10 09:37	10/21/10 14:21	EPA 3020A	1,6020A	LR
Chromium, Total	0.002		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:21	EPA 3020A	1,6020A	LR
Copper, Total	0.014		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:21	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:21	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-04
Client ID: MW-04A-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/05/10 14:11
Date Received: 10/06/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	10/19/10 09:37	10/21/10 14:22	EPA 3020A	1,6020A	LR
Chromium, Total	0.001		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:22	EPA 3020A	1,6020A	LR
Copper, Total	0.005		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:22	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:22	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-05
Client ID: MW-07A-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/05/10 17:34
Date Received: 10/06/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	10/19/10 09:37	10/21/10 14:23	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:23	EPA 3020A	1,6020A	LR
Copper, Total	0.002		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:23	EPA 3020A	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:23	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-06
Client ID: MW-005-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/05/10 14:05
Date Received: 10/06/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	10/19/10 09:37	10/21/10 14:24	EPA 3020A	1,6020A	LR
Chromium, Total	0.001		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:24	EPA 3020A	1,6020A	LR
Copper, Total	0.003		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:24	EPA 3020A	1,6020A	LR
Lead, Total	0.001		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:24	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-07
Client ID: EB-100510
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/05/10 17:45
Date Received: 10/06/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	10/19/10 09:37	10/21/10 14:25	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:25	EPA 3020A	1,6020A	LR
Copper, Total	0.109		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:25	EPA 3020A	1,6020A	LR
Lead, Total	0.001		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:25	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-08
Client ID: MW-001-102010
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/20/10 13:45
Date Received: 10/20/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	0.0005		mg/l	0.0005	--	1	11/05/10 10:50	11/09/10 13:56	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:56	EPA 3020A	1,6020A	LR
Copper, Total	0.002		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:56	EPA 3020A	1,6020A	LR
Lead, Total	0.001		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:56	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015773
Project Number: TO-0010-03
Report Date: 11/10/10

SAMPLE RESULTS

Lab ID: L1015773-09
Client ID: EB-102010
Sample Location: NEW BEDFORD, MA
Matrix: Water
Date Collected: 10/20/10 13:45
Date Received: 10/20/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	ND		mg/l	0.0005	--	1	11/05/10 10:50	11/09/10 13:49	EPA 3020A	1,6020A	LR
Chromium, Total	ND		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:49	EPA 3020A	1,6020A	LR
Copper, Total	0.119		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:49	EPA 3020A	1,6020A	LR
Lead, Total	0.003		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:49	EPA 3020A	1,6020A	LR

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015773

Project Number: TO-0010-03 **Report Date:** 11/10/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-07 Batch: WG437916-1										
Cadmium, Total	ND		mg/l	0.0005	--	1	10/19/10 09:37	10/21/10 14:11	1,6020A	LR
Chromium, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:11	1,6020A	LR
Copper, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:11	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	10/19/10 09:37	10/21/10 14:11	1,6020A	LR

Prep Information

Digestion Method: EPA 3020A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-09 Batch: WG441449-1										
Cadmium, Total	ND		mg/l	0.0005	--	1	11/05/10 10:50	11/09/10 13:40	1,6020A	LR
Chromium, Total	ND		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:40	1,6020A	LR
Copper, Total	ND		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:40	1,6020A	LR
Lead, Total	ND		mg/l	0.001	--	1	11/05/10 10:50	11/09/10 13:40	1,6020A	LR

Prep Information

Digestion Method: EPA 3020A

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015773
Report Date: 11/10/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-07 Batch: WG437916-2 SRM Lot Number: S1SPIKE								
Cadmium, Total	102		-		80-120	-		20
Chromium, Total	103		-		80-120	-		20
Copper, Total	105		-		80-120	-		20
Lead, Total	102		-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-09 Batch: WG441449-2 SRM Lot Number: S1SPIKE								
Cadmium, Total	99		-		80-120	-		20
Chromium, Total	102		-		80-120	-		20
Copper, Total	101		-		80-120	-		20
Lead, Total	102		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015773
Report Date: 11/10/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-07 100510	QC Batch ID: WG437916-5					WG437916-6	QC Sample: L1015773-01		Client ID: MW-006-			
Cadmium, Total	ND	0.5	0.5107	102		0.5113	102		75-125	0		20
Chromium, Total	ND	1	1.02	102		1.02	102		75-125	0		20
Copper, Total	ND	1	1.02	102		1.00	100		75-125	2		20
Lead, Total	ND	1	1.02	102		1.04	104		75-125	2		20
Total Metals - Mansfield Lab Associated sample(s): 01-09 102010	QC Batch ID: WG441449-4					WG441449-5	QC Sample: L1015773-08		Client ID: MW-001-			
Cadmium, Total	0.0005	0.5	0.4914	98		0.4936	99		75-125	0		20
Chromium, Total	ND	1	1.00	100		1.01	101		75-125	1		20
Copper, Total	0.002	1	0.974	97		0.976	97		75-125	0		20
Lead, Total	0.001	1	0.997	100		0.995	99		75-125	0		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015773
Report Date: 11/10/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG437916-3 QC Sample: L1015773-01 Client ID: MW-006-100510						
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG441449-3 QC Sample: L1015773-08 Client ID: MW-001-102010						
Cadmium, Total	0.0005	0.0005	mg/l	3		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.002	0.002	mg/l	3		20
Lead, Total	0.001	ND	mg/l	NC		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L1015773
Report Date: 11/10/10

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG437916-4 QC Sample: L1015773-01 Client ID: MW-006-100510						
Cadmium, Total	ND	ND	mg/l	NC		10
Chromium, Total	ND	ND	mg/l	NC		10
Copper, Total	ND	ND	mg/l	NC		10
Lead, Total	ND	ND	mg/l	NC		10
Total Metals - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG441449-6 QC Sample: L1015773-08 Client ID: MW-001-102010						
Cadmium, Total	0.0005	ND	mg/l	NC		10
Chromium, Total	ND	ND	mg/l	NC		10
Copper, Total	0.002	ND	mg/l	NC		10
Lead, Total	0.001	ND	mg/l	NC		10

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015773
Report Date: 11/10/10

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(*)
L1015773-01A	Plastic 500ml HNO3 preserved	A	N/A	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-01B	Plastic 500ml HNO3 preserved	A	N/A	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-01C	Plastic 500ml HNO3 preserved	A	N/A	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-02A	Plastic 500ml HNO3 preserved	B	N/A	4	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-03A	Plastic 500ml HNO3 preserved	B	N/A	4	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-04A	Plastic 500ml HNO3 preserved	C	N/A	3	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-05A	Plastic 500ml HNO3 preserved	C	N/A	3	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-06A	Plastic 500ml HNO3 preserved	C	N/A	3	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-07A	Plastic 500ml HNO3 preserved	B	N/A	4	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015773
Report Date: 11/10/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1015773-08A	Plastic 500ml HNO3 preserved	D	N/A	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)
L1015773-09A	Plastic 500ml HNO3 preserved	D	N/A	5	Y	Absent	A2-PB-6020T(180),A2-CR-6020T(180),A2-CD-6020T(180),A2-PREP-3020(180),A2-CU-6020T(180)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015773
Project Number:	TO-0010-03	**Report Date:**	11/10/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015773
Project Number:	TO-0010-03	**Report Date:**	11/10/10

Data Qualifiers

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	**Lab Number:**	L1015773
Project Number:	TO-0010-03	**Report Date:**	11/10/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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 July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial_No:11101016:31

CHAIN OF CUSTODY

PAGE 1 OF _____

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

Date Rec'd in Lab: | ALPHA Job #: L1015773

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
	MW-006-100510	10/5/10	9:50	GW	DB	X				Salinity 0.25 ppt	2
	MW-006-100510	↓	↓	↓	↓		X				3
-1	MW-006-100510							X			1
	MW-006-100510								X		1
	MW-006-100510-MS	10/5/10	9:50	GW	DB	X					2
	MW-006-100510-MS	↓	↓	↓	↓		X				3
-1	MW-006-100510-MS							X			1
	MW-006-100510-MSD	10/5/10	9:50	GW	DB	X					2
	MW-006-100510-MSD	↓	↓	↓	↓		X				3
-1	MW-006-100510-MSD							X			1

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

Container Type	A	V	P	P
Preservative	A	B	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Michael Walsh	10/6/10 1245	P. Gillett	10/6/10 12:45
P. Gillett	10/6/10 1615		10/6/10 16 11

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

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

Serial_No:11101016:31

CHAIN OF CUSTODY

PAGE 2 OF ____

Date Rec'd in Lab:

ALPHA Job #: L1015773

ALPHA ANALYTICAL

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

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

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr.
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
	MW-003-100510	10/5/10	10:29	GW	MW	X				Salinity - 2.87 ppt	2
	MW-003-100510	↓	↓	↓	↓		X			↓	3
-2	MW-003-100510	↓	↓	↓	↓			X		↓	1
	MW-003-100510	↓	↓	↓	↓				X	↓	1
	MW-003-100510-DUP	↓	↓	↓	↓	X				↓	2
	MW-003-100510-DUP	↓	↓	↓	↓		X			↓	3
-3	MW-003-100510-DUP	↓	↓	↓	↓			X		↓	1
	MW-003-100510-DUP	↓	↓	↓	↓				X	↓	1
	TB-100510	↓	17:45	↓	↓		X			-Air bubble found in 1 trip blank from lab	2
	MW-04A-100510	↓	14:11	↓	↓	X				Salinity - 1.31 ppt	2

	PCB Aroclors	VOCs	Metals	TSS
Container Type	A	V	P	P
Preservative	A	B	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/6/10 1245	P. Gilbert	10/6/10 12:45
P. Gilbert	10/6/10 16:15	[signature]	10/6/10 1615

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

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

Serial_No:11101016:31

CHAIN OF CUSTODY

PAGE 3 OF ____

ALPHA ANALYTICAL

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

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

Date Rec'd in Lab: ____ ALPHA Job #: L1015773

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwelsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Welsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
	MW-04A-100510	10/5/10	14:11	GW	MW		X			Salinity - 1.31 ppt	3
-4	MW-04A-100510							X			1
	MW-04A-100510								X		1
	MW-07A-100510		17:34			X				Salinity - 0.30ppt	2
	MW-07A-100510						X				3
-5	MW-07A-100510							X			1
	MW-07A-100510								X		1
	MW-00S-100510		14:05		DB	X				Salinity - 1.05ppt	2
	MW-00S-100510						X				3
-6	MW-00S-100510							X			1

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

Container Type	A	V	P	P
Preservative	A	B	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/6/10 1245	[signature]	10/6/10 12:45
[signature]	10/6/10 16:15	[signature]	10/6/10 1615

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.

2010 Biannual Groundwater Monitoring W912WJ-09-D-0001 B-236 Delivery Order-0010-03 April 2011

Serial_No:11101016:31

CHAIN OF CUSTODY PAGE 4 OF ____

ALPHA TECHNICAL

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 #: L1015773

Client Information
Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information
Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

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

Report Information - Data Deliverables
☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information
☐ Same as Client info PO #:

Regulatory Requirements/Report Limits
State /Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB	Aroclors	VOCs	Metals	TSS	Sample Specific Comments	TOTAL # BOTTLES
	MW-00S-100510	10/5/10	14:05	GW	DB				X		Salinity - 1.05	1
	EB-100510	↓	17:45	↓	↓	X						2
	EB-100510		17:45				X					3
	EB-100510		17:45					X				1

Container Type	A	V	P	P
Preservative	A	B	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
Mickey Walsh	10/6/10 1245	P. Gillett	10/6/10 12145
P. Gillett	10/6/10 1615		10/6/10 1615

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

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

Serial_No:11101016:31

L1015773

CHAIN OF CUSTODY

PAGE 1 OF 1

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

Date Rec'd in Lab:

ALPHA Job #: L1016494 WC

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: Dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC's	Metals	PCB/Pesticides	TSS	Sample Specific Comments	TOTAL # BOTTLES
84016494 WC 1	MW-001-102010	10/20/10	1345	GW	MW	X					3
	MW-001-102010		1345				X				1
	MW-001-102010		1345					X			2
↓	MW-001-102010		1345						X		1
-9 WC 2	EB-102010					X					3
↓	EB-102010						X				1
	EB-102010							X			1
WC 3	TB-102010					X					2

Container Type	V	P	A	P
Preservative	B	C	H	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Walsh	10/20/10 1650		10/20/10 1650

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

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

APPENDIX C: NEW ENVIRONMENTAL HORIZONS, INC. DATA VALIDATION REPORTS

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Data Validation Report
EPA Region I Tier I+-type
VOCs by 8260B, PCB Aroclors by 8082, & Metals by 6020A

Client/Company:	Woods Hole Group, Inc. (WHG)
Site/Project Name:	New Bedford Harbor Superfund Site – OU1
Laboratory:	Alpha Analytical – Mansfield & Westborough, MA
Lab Project Number(s):	L1010361
Date(s) of Collection:	July 8, 2010 & July 9, 2010
Number / Type Samples & Analyses for Validation:	7 groundwaters, 1 equipment blank (EB) and 1 trip blank (TB) for a project-specific list of Volatile Organic Compounds (VOC) by EPA SW-846 Method 8260B 7 groundwaters and 1 EB for Polychlorinated Biphenyl Compounds (PCB Aroclors) by EPA SW-846 Method 8082 and a project-specific list of Metals (cadmium, chromium, copper, & lead) by EPA SW-846 Method 6020A
Senior Data Reviewers:	Nancy C. Rothman, PhD, New Environmental Horizons, Inc. Susan D. Chapnick, New Environmental Horizons, Inc.
Date Completed:	August 26, 2010 *Revised: February 11, 2011 based on updated EB information*

This EPA Region I Tier I+ validation for VOCs, PCB Aroclors, and Metals 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. 1.0, prepared by Woods Hole Group, Inc., October 2009 (NBH OU1 QAPP Addendum 2009); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part II – Volatile /Semivolatile Data Validation Functional Guidelines*, *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004, and *Part IV – Inorganic Data Validation Functional Guidelines*, November 2008; 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.

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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 Checklists completed during this validation to document the Tier I+-type reviews. The Checklists are an integral part of the DV Report as they contain 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
MW-07A-070809	L1010361-01	7/08/10	Groundwater	VOCs, PCBs, Metals	Field Sample
MW-04A-070810	L1010361-02	7/08/10	Groundwater	VOCs, PCBs, Metals	Field Sample
MW-04A-070810-DUP	L1010361-03	7/08/10	Groundwater	VOCs, PCBs, Metals	FD of MW-04A-070810
MW-005-070810	L1010361-04	7/08/10	Groundwater	VOCs, PCBs, Metals	Field Sample [used for VOC MS/MSD]
MW-003-070910	L1010361-05	7/09/10	Groundwater	VOCs, PCBs, Metals	Field Sample [used for PCB MS/MSD and Metals MS/MD]
MW-006-070910	L1010361-06	7/09/10	Groundwater	VOCs, PCBs, Metals	Field Sample
MW-001-070910	L1010361-07	7/09/10	Groundwater	VOCs, PCBs, Metals	Field Sample
EB-070910	L1010361-08	7/09/10	Aqueous	VOCs, PCBs, Metals	EB
TB-070910	L1010361-09	7/09/10	Aqueous	VOCs	TB

* Analysis for Total Suspended Solids (TSS) was also performed; however, validation of this parameter was not required.

Analytical method references:

VOCs: *Volatile Organic Compounds by Gas Chromatography / Mass Spectrometry (GC/MS)* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8260B, Rev. 2, December 1996.

PCBs: *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.

Metals: *Inductively Coupled Plasma – Mass Spectrometry* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 6020A, Rev. 1, February 2007.

II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of VOCs, PCB Aroclors, and Metals sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2009 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*
- 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 VOCs, PCB Aroclors, and Metals, all results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2009 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 2009 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+ validations are presented in the attached Data Review Checklists.

Accuracy

No contamination was observed in the associated Method Blanks or Trip Blank. Acetone was detected in the Equipment Blank (EB-070910); however, the associated samples were all non-detect for acetone; therefore, no action was required. Copper and lead were also detected in the EB. Subsequent analysis of the lab-provided water (identified as "VOC-free water") used to generate the EB showed that it was contaminated with these two metals at levels similar to those measured in the EB, as follows:

Metal	EB-070910 mg/L	Lab-Provided Water used to generate EB* mg/L
Copper	0.118	0.119
Lead	0.003	0.006

* See the lab communication attached to the revised Metals Data Validation Checklist for further information

Based on the evidence that the copper and lead contamination observed in the EB is likely due to the water used to generate the EB and not due to sample collection or handling procedural contamination, professional judgment was used to qualify associated copper and lead results as estimated (J) rather than negated, due to equipment blank action, as listed in Table 2. These estimated results have an indeterminate bias.

The LCS/LCSD for VOCs reported low recoveries for bromomethane and dichlorodifluoromethane. Therefore, the results for these two compounds in all samples were estimated (UJ) with possible low bias, unless other QC issues affected the results, as shown in Table 2.

MS/MSD analysis for VOCs was performed on sample MW-005-070810. Bromomethane recovered low compared to criteria in the MS/MSD resulting in estimation (UJ) of the unspiked sample result, as shown in Table 2. There were several additional compounds that recovered high in the MS/MSD; however, since the unspiked sample was non-detect for these compounds, no additional action was required.

MS/MSD for PCB Aroclors and MS for Metals was performed on sample MW-003-070910. LCS/LCSD and MS or MSD recoveries demonstrated acceptable accuracy in the groundwater matrix for PCB Aroclors and Metals.

No results were rejected due to accuracy criteria; therefore, DV qualified results are considered usable for project decisions with the understanding of the potential uncertainty (bias), as noted in Table 2.

Precision

The field duplicate samples for this groundwater set were: MW-04A-070810 and MW-04A-070810-DUP. LCS/LCSD, MS/MSD, sample/MD, and FD relative percent differences (RPD) demonstrated acceptable precision in the groundwater matrix for PCB Aroclors and Metals. MS/MSD and FD precision for VOCs were also acceptable. LCS/LCSD precision for VOCs was acceptable for all compounds except bromomethane; therefore, all bromomethane results were estimated (UJ) with indeterminate bias due to the observed imprecision, as noted in Table 2. Note, however, as the MS/MSD and FD precision were acceptable for VOCs, indicating acceptable precision in the groundwater matrix, the imprecision in the LCS/LCSD should not impact data usability.

Sensitivity & Reporting

Sensitivity in terms of sample-specific reporting limits (RLs), as compared to Project Action Limits (PALs) defined in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010 as the MCP GW-3 standards was met for all VOCs, PCB Aroclors, and Metals. Note that the QAPP also has NWQC as PALs; however, recent communication with the Corps indicated that the groundwater sample results would be compared to the MCP GW-3 standards for these data.

The field duplicate sample ID is inconsistent with the project identification scheme where "-REP" rather than "-DUP" indicates a field duplicate sample. No action was taken other than to note this discrepancy.

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Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
All samples except: MW-005-070810	Bromomethane	UJ	I	Low LCS recovery + LCS/LCSD imprecision
MW-005-070810	Bromomethane	UJ	I	Low LCS recovery + LCS/LCSD imprecision + Low MS recovery
All nine samples	Dichlorodifluoromethane	UJ	L	Low LCS recovery
MW-07A-070810, MW-04A-070810, MW-04A-070810-DUP, MW-005-070810, MW-003-070919, MW-006-070910, & MW-001-070910	Copper	J	I	Equipment Blank Action
MW-07A-070810 & MW-001-070910	Lead	J	I	Equipment 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*

Abbreviations used in Table 2:

LCS = Laboratory Control Sample
LCSD = Laboratory Control Sample Duplicate
MS = Matrix Spike

New Bedford Harbor
OU1 Monitoring 2010
Metals Tier I+ Data Validation Checklist

Lab: Alpha Analytical, Mansfield, MA
Date Sampled: 7/08/09 & 7/09/10
Analysis: Metals by EPA SW-846 Method 6020A

Lab Project # L1010361
No. Samples: 1FD + 1EB
Matrix: Groundwater

QC Met Criteria?		HT & Preserve pH <2	RL QAPP PQLs?	Tune* met 6020 criteria?	Calibration* ICV/CCV 90-110%R	CRI* RL Check 80-120%R	EB MB < RL	LCS 80-120% R	ICSA/AB 80-120% R	MS 75-125% R	MD RPD ≤ 20%	FD RPD ≤ 30%	IS* 70-120% R	Serial Dilution ± 10% D
Yes		√	√				√ MB	√	√	√	√	√		√
No				Tier I+: assumed OK	Tier I+: assumed OK	Tier I+: assumed OK	EB action: J 9 results						Tier I+: assumed OK	

Groundwaters and EB for a Project-specific list of four Metals: Cadmium, Chromium, Copper, and Lead

**These QC elements are not reviewed as part of Tier I+ validation. They are only reviewed during Tier II level validation. For the Tier I+ level validation, these QC results are assumed to be acceptable unless otherwise noted in the laboratory narrative.*

Chain-of-Custody (COC): Documentation acceptable.

Preservation: *Samples received preserved at pH < 2 @ 5°C & 6°C on 7/9/10. Acceptable.*

Holding Time (HT): *Prepared 7/14/10 and analyzed 7/15/10. Acceptable HT.*

MS/MD & Serial Dilution site sample used for QC: *MW-003-070910. Accuracy (% recovery of MS and %D for Serial Dilution) and precision (RPD for sample/MD) met QAPP acceptance criteria.*

FD pair samples: *MW-04A-070810 and MW-04A-070810-DUP. Acceptable FD precision (see next page for RPD calculations). Note that this FD sample ID is inconsistent with past FD IDs for this project, which are appended as "-REP" rather than "-DUP". No action taken other than to note this discrepancy.*

EB sample: EB-070910. *Copper detected at 0.118 mg/L; Lead detected at 0.003 mg/L. See EB actions page 2.*

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NHB OU-1 QAPP Addendum 2009 & EPA Region 1 present in the data package? ***Yes.***

2. Were all result forms for all samples listed on the chain-of-custody present in data package? ***Yes***.

Date: *8/25/10 Revised 2/11/11*

Data Reviewer: *Susan D. Chapnick*

New Bedford Harbor
OU1 Monitoring 2010
Metals Tier I+ Data Validation Checklist

Lab: Alpha Analytical Lab Project #: L1010361

Data Quality / Usability Issues:

Preparation: EPA Method 3020A used for all 4 Metals.

Analysis: All analyses by ICP-MS EPA SW-846 method 6020A compliant with 2009 QAPP.

Blank Action: EB detected for copper & lead. ***ACTION: Estimate (J) all 7 GW copper results & lead results in samples MW-07A-070810 & MW-001-070910 due to EB blank actions (GW results ≤ EB level).*** *No action required for other lead results because lead was non-detected in remaining samples. Professional judgment used to estimate rather than negate these affected results due to evidence that the contamination observed in the EB was due to the laboratory water used to generate the EB and not due to any sample collection or handling contamination. See attached corrective action letter from Alpha Analytical with "VOC-free" water analytical results for Metals (page 4).*

Sensitivity: All RLs met QAPP 2009 sensitivity (RL) requirements (Worksheet #15) based on being lower than the PALs defined as the MCP GW-3 standards (note the current QAPP PALs also list the NWQC as PALs; however, based on recent communication with the Corps, the MCP GW-3 standards are the correct PALs for groundwater for this project).

Database EDD: Corrected "Lab_QC_Code" to "REP" for the FD samples.

FD: See below. Acceptable FD precision. No action.

Lab Narrative: no further issues.

FD Precision:

Analyte		Sample MW-04A-070810 (mg/L)	Qual	FD: MW-04A-070810-DUP (mg/L)	Qual	Precision RPD* %	Action	Comment
Cd		0.0005	U	0.0005	U	NC	none	
Cr		0.005	U	0.005	U	NC	none	
Cu		0.004		0.004		0	none	
Pb		0.001	U	0.001	U	NC	none	

Date: *8/25/10 Revised 2/11/11*

New Bedford Harbor
OU1 Monitoring 2010
Metals Tier I+ Data Validation Checklist

QC & DV Action Criteria for OU-1 Metals [based on OU-1 QAPP 2010 & EPA Region I DV guidance]:

Pres./HT:	HT exceedance: J detects; Non-detects: R or UJ based on professional judgment. pH >2 use professional judgment to J detects; UJ non-detects.
Blanks:	Method Blanks and instrument blanks: Metals < RL unless all sample results are > 10 blank level. Detected results < matrix-matched blank level report as "U" (non-detected at level found). Equipment Blank: EB > RL for any metals; qualify associated detected results < 5x EB levela as "EB" - potential high bias based on EB contamination.
Tune:	Mass calibration (amu) > QC limit: J/UJ. Mass resolution/peak width (amu) > QC limit: J/UJ. %RSD > QC limit: J/UJ. See EPA SW-846 Method 6020A for Tune criteria. Tune not performed: R all associated data.
ICV/CCV:	Recoveries < 90%: J / UJ; recoveries > 110%: J detects; if severe exceedance <75%: R non-detects; > 160%: R detects.
CRI:	Only required if low-level standard equivalent to the RL is not included in the initial calibration curve. Results < 2xCRI: <80%: J / UJ; >120%: J detects.
LCS:	%Recoveries < 80%: J / UJ. %Recoveries > 120%: J detects. %Recoveries < 50%, may R non-detects & J detects but use professional judgment to accept results if MS is in-control indicating acceptable accuracy in sample matrix.
ICSA/AB:	Recoveries > 120% or < 80%: J / UJ unless extremely low for ICSAB at <50%: R non-detects / J detects.
MS/MSD:	%Recoveries < 75%: J / UJ. %Recoveries > 125%: J detects. %Recoveries < 30%, may R non-detects & J detects but use professional judgment if sample concentration > 2x spike level.
MSD/MD:	Results > 5xRL: RPD >20%: J / UJ associated results in batch - to be determined using professional judgment. Results < 5xRL: difference > ±RL, J / UJ associated results in batch - to be determined using professional judgment.
FD:	Results > 5xRL: RPD > 30%: J / UJ FD results only. Results < 5xRL: difference > ±2xRL,, J/UJ FD results only.
IS:	
Serial Dil:	Results > 50xMDL: % Difference > 10%: J detects. EPA guidance UJ non-detects; however, use professional judgment on whether it is a suppression or enhancement to qualify associated non-detects.

Qualifiers: U = analyte is non-detect at the sample-specific Reporting Limit (RL) (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.

References: Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 1.0, prepared by Woods Hole Group, Inc., September 2009 (NBH OU1 QAPP Addendum 2009); Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996, including Part IV – Inorganic Data Validation Functional Guidelines, November 2008.

Date: *8/25/10 Revised 2/11/11*

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February 09, 2011

As requested by David Walsh from the Woods Hole Group, Alpha Analytical initiated the analysis of the laboratory's VOC-free water source. This request was initiated due to the concentrations of Lead and Copper detected in the equipment blank and samples included in Alpha job # L1010361. On February 8, 2011 the VOC-free water was analyzed via method 6020a and the results are as follows: Lead was detected at 0.006 mg/L and Copper was detected at 0.119 mg/L.

Cindy McQueen
Project Manager/Technical Representative

Date: *8/25/10 Revised 2/11/11*

Data Validation Report
EPA Region I Tier I+-type & Tier II-type
VOCs by 8260B, PCB Aroclors by 8082, & Metals by 6020A

Client/Company:	Woods Hole Group, Inc. (WHG)
Site/Project Name:	New Bedford Harbor Superfund Site – OU1
Laboratory:	Alpha Analytical – Mansfield & Westborough, MA
Lab Project Number(s):	L1015773 & L1015775
Date(s) of Collection:	October 5, 2010 & October 20, 2010
Number / Type Samples & Analyses for Validation:	7 groundwaters, 2 equipment blanks (EB), and 2 trip blanks (TB) for a project-specific list of Volatile Organic Compounds (VOC) by EPA SW-846 Method 8260B 7 groundwaters and 2 EBs for Polychlorinated Biphenyl Compounds (PCB Aroclors) by EPA SW-846 Method 8082 and a project-specific list of Metals (cadmium, chromium, copper, & lead) by EPA SW-846 Method 6020A
Senior Data Reviewers:	Nancy C. Rothman, PhD, New Environmental Horizons, Inc. Susan D. Chapnick, New Environmental Horizons, Inc.
Date Completed:	December 14, 2010 *Revised: February 11, 2011 based on updated EB information*

This EPA Region I Tier I+-type validation for VOCs and PCB Aroclors and EPA Region I Tier II-type validation of Metals 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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); Region I, *EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses*, December 1996, including *Part II – Volatile /Semivolatile Data Validation Functional Guidelines*, *Part III – Pesticide/PCB Data Validation Functional Guidelines*, Draft February 2004, and *Part IV – Inorganic Data Validation Functional Guidelines*, November 2008; 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.

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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 Checklists completed during this validation to document the Tier I+-type reviews. The Checklists are an integral part of the DV Report as they contain 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
MW-006-100510	L1015773-01	10/5/10	Groundwater	Metals	Field Sample [used for Metals MS/MSD]
MW-003-100510	L1015773-02	10/5/10	Groundwater	Metals	Field Sample
MW-003-100510-DUP	L1015773-03	10/5/10	Groundwater	Metals	FD of MW-003-100510
MW-04A-100510	L1015773-04	10/5/10	Groundwater	Metals	Field Sample
MW-07A-100510	L1015773-05	10/5/10	Groundwater	Metals	Field Sample
MW-005-100510	L1015773-06	10/5/10	Groundwater	Metals	Field Sample
EB-100510	L1015773-07	10/5/10	Aqueous	Metals	EB
MW-001-102010	L1015773-08	10/20/10	Groundwater	Metals	Field Sample [used for Metals MS/MSD]
EB-102010	L1015773-09	10/20/10	Aqueous	Metals	EB
MW-006-100510	L1015775-01	10/5/10	Groundwater	VOCs & PCBs	Field Sample [used of VOC & PCB MS/MSD]
MW-003-100510	L1015775-02	10/5/10	Groundwater	VOCs & PCBs	Field Sample
MW-003-100510-DUP	L1015775-03	10/5/10	Groundwater	VOCs & PCBs	FD of MW-003-100510
TB-100510	L1015775-04	10/5/10	Groundwater	VOCs & PCBs	Field Sample

Table 1. Sample Descriptions and Analytical Parameters Validated - *continued*

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters*	Sample Type
MW-04A-100510	L1015775-05	10/5/10	Groundwater	VOCs & PCBs	Field Sample
MW-07A-100510	L1015775-06	10/5/10	Groundwater	VOCs & PCBs	Field Sample
MW-005-100510	L1015775-07	10/5/10	Groundwater	VOCs & PCBs	Field Sample
EB-100510	L1015775-08	10/5/10	Aqueous	VOCs & PCBs	EB
MW-001-102010	L1015775-09	10/20/10	Groundwater	VOCs & PCBs	Field Sample
EB-102010	L1015775-10	10/20/10	Aqueous	VOCs & PCBs	EB
TB-102010	L1015775-11	10/20/10	Aqueous	VOCs	TB

* Analysis for Total Suspended Solids (TSS) was also performed; however, validation of this parameter was not required.

Analytical method references:

VOCs: *Volatile Organic Compounds by Gas Chromatography / Mass Spectrometry (GC/MS)* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 8260B, Rev. 2, December 1996.

PCBs: *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.

Metals: *Inductively Coupled Plasma – Mass Spectrometry* in EPA's Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW-846, Third Edition, Method 6020A, Rev. 1, February 2007.

II. Data Validation Report Summary

This Data Validation Report represents a Tier I+ validation of VOCs and PCB Aroclors and a Tier II-type validation of Metals sample results and summary QC (method and matrix), which were used to evaluate accuracy, precision, and sensitivity compared to the NBH OU1 QAPP Addendum 2010 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*
- 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 VOCs and PCB Aroclors and the Tier II-type validation of Metals, all results were considered usable for project decisions except for tetrahydrofuran in sample MW-006-100510 due to severe QC exceedances. Other data are usable based on a comparison of the validated results to the NBH OU1 QAPP Addendum 2010 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 2010 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 validation are presented in the attached Data Validation (DV) Checklists.

Sample Receipt / Log-In

The Chain-of-Custody (COC) was acceptable with one discrepancy. The COC indicates that the preservative for Metals collected 10/20/10 is "C", whereas it should be "A" for acid-preserved. As the sample was received acid-preserved, no action was taken other than to note this discrepancy. Though the COC lists samples and containers for all analyses collected, the laboratory split out the Metals samples into a separate SDG from the Organic and TSS analyses due to the reporting requirement differences as Metals required a full-deliverable (including raw data) for the Tier II-type data validation review. Therefore, the Metals are included in SDG L1015773 and the Organic and TSS analyses are included in SDG L1015775.

Accuracy

No contamination was observed in the associated Method Blanks, Trip Blanks, or Equipment Blanks (EB), with the exception of two Metals. Copper and lead were detected in both EBs. Subsequent analysis of the lab-provided water (identified as “VOC-free water”) used to generate the EB showed that it was contaminated with these two metals at levels similar to those measured in the EBs, as follows:

Metal	EB-100510 mg/L	EB-102010 mg/L	Lab-Provided Water used to generate EB* mg/L
Copper	0.109	0.119	0.119
Lead	0.001	0.003	0.006

* See the lab communication attached to the revised Metals Data Validation Checklist for further information

Based on the evidence that the copper and lead contamination observed in the EBs is likely due to the water used to generate the EBs and not due to sample collection or handling procedural contamination, professional judgment was used to qualify associated copper and lead results as estimated (J) rather than negated, due to equipment blank action, as listed in Table 2. These estimated results have an indeterminate bias.

Three LCS/LCSD pairs were analyzed for VOCs. Dichlorodifluoromethane was estimated (UJ) in three samples due to low LCS/LCSD recoveries and acetone was estimated (J) in three samples due to high LCS/LCSD recoveries. Several additional compounds were not recovered within criteria in the LCS/LCSD results; however, no additional actions were required (see the DV Checklist for details). Table 2 indicates the results qualified and potential bias due to LCS/LCSD exceedances.

MS/MSD analysis for VOCs was performed on sample MW-006-100510. Tetrahydrofuran was not recovered in either the MS or MSD; therefore the non-detect for tetrahydrofuran was rejected (R) since this may be a false negative, as shown in Table 2. The rejected result is not usable for project decisions. Several additional compounds were not recovered within criteria in the MS/MSD results; however, no additional actions were required (see the DV Checklist for details).

Precision

The field duplicate samples for this groundwater set were: MW-003-0100510 and MW-003-100510-DUP. LCS/LCSD, MS/MSD, sample/MD, and FD relative percent differences (RPD) demonstrated acceptable precision in the groundwater matrix for VOCs, PCB Aroclors, and Metals indicating acceptable precision and representativeness of these groundwater samples to the site locations.

Sensitivity & Reporting

Sensitivity in terms of sample-specific reporting limits (RLs), as compared to Project Action Limits (PALs) defined in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010 as the MCP GW-3 standards was met for all VOCs, PCB Aroclors, and Metals. Note that the QAPP also has NWQC as PALs; however, recent communication with the Corps indicated that the groundwater sample results would be compared to the MCP GW-3 standards for these data.

The field duplicate sample ID is inconsistent with the project identification scheme where "-REP" rather than "-DUP" indicates a field duplicate sample. No action was taken other than to note this discrepancy.

Table 2. Summary of Data Validation Actions

Field Sample ID	Analyte	Qualifier	Bias	Validation Comments
MW-006-100510	Tetrahydrofuran	R		Unusable: < 10% MS/MSD recoveries
MW-001-102010, EB-102010, & TB-102010	Dichlorodifluoromethane	UJ	L	Low LCS/LCSD recoveries
MW-006-100510, MW-003-100510-DUP, & MW-07A-100510	Acetone	J	H	High LCS/LCSD recoveries
MW-001-102010, MW-003-100510, MW-003-100510-DUP, MW-005-100510, MW-04A-100510, & MW-07A-100510	Copper	J	I	Equipment Blank Action
MW-001-102010 & MW-005-100510	Lead	J	I	Equipment 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

Abbreviations used in Table 2:

LCS = Laboratory Control Sample
LCSD = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Lab: Alpha Analytical, Mansfield, MA
Date Sampled: 10/05/10 & 10/20/10
Analysis: Metals by EPA SW-846 Method 6020A

Lab Project # L1015773
No. Samples: 6 + 1FD + 2EBs
Matrix: Groundwater

QC Met Criteria?		HT & Preserve pH <2	RL QAPP PQLs?	Tune met 6020 criteria?	Calibration ICV/CCV 90-110%R	CRI RL Check 80-120%R	EB MB < RL	LCS 80-120% R	ICSA/AB 80-120% R	MS 75-125% R	MD RPD ≤ 20%	FD RPD ≤ 30%	IS 70-120% R	Serial Dilution ± 10% D
Yes		√	√	√	√	√	√ MB	√	√	√	√	√	√	√
No							EB action: J 8 results							

Groundwaters and EBs for a Project-specific list of four Metals: Cadmium, Chromium, Copper, and Lead for Tier II-type DV.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with NHB OU-1 QAPP Addendum 2010 & EPA Region 1 present in the data package? ***Yes.*** *Summary QC and raw data provided for Metals to perform Tier II-type DV review.*

2. Were all result forms for all samples listed on the chain-of-custody present in data package? ***Yes***.

Chain-of-Custody (COC): Documentation acceptable with one discrepancy. COC indicates preservative for Metals collected 10/20/10 as "C"; should be "A" for acid-preserved. As the sample was received acid-preserved, no action taken other than to note this discrepancy. Note that lab split out the Metals samples into a separate SDG from the Organic analyses due to the reporting requirement differences since Metals required a full-deliverable (including raw data) for Tier II-type data validation review.

***Preservation*:** Samples received in acid-preserved bottles @ 3°C to 5°C on 10/06/10 and 10/20/10. Acceptable.

Holding Time (HT): Samples collected 10/05/10 prepared on 10/19/10 and analyzed 10/21/10. Acceptable HT.
Sample collected on 10/20/10 prepared on 11/05/10 and analyzed on 11/09/10. Acceptable HT.

Preparation: EPA Method 3020A used for all 4 Metals.

Analysis: All analyses by ICP-MS EPA SW-846 method 6020A compliant with 2010 QAPP.

Lab: Alpha Analytical, Mansfield, MA Lab Project # L1015773

Data Validation Summary Review Details - continued:

Method Blank (MB) and Instrument Blanks: All metals < RLs. Acceptable.

Equipment Blank: EB-100510: Copper detected at 0.109 mg/L; Lead detected at 0.001 mg/L. Associated with six samples collected on 10/05/10.
EB-102010: Copper detected at 0.119 mg/L; Lead at 0.003 mg/L. Associated with one sample collected on 10/20/10.
Blank Action: EBs detected for copper & lead.
ACTIONS: Estimate (J) copper & lead results in sample MW-001-102010 due to EB blank action (sample result ≤ EB-102010 level); Estimate (J) copper in MW-003-100510, MW-003-100510-DUP, MW-005-100510, MW-04A-100510, & MW-07A-100510 and lead in MW-005-100510 due to EB blank actions (sample results ≤ EB-100510 level). No action required for other copper or lead results because lead was non-detected in remaining samples. Professional judgment used to estimate rather than negate these affected results due to evidence that the contamination observed in the EBs was due to the laboratory water used to generate the EBs and not due to any sample collection or handling contamination. See attached corrective action letter from Alpha Analytical with "VOC-free" water analytical results for Metals (page 4).

Calibration (Tune, initial calibration, ICV/CCV), Laboratory Control Sample (LCS), & Interference Checks (ICSA/ICSAB): All recoveries acceptable. Acceptable method accuracy.
Note: lab does not analyze the low-level CRI standard; instead, they include a low-level standard in the calibration curve that is at or below the RL. This is acceptable protocol for method sensitivity.

MS/MSD/MD & Serial Dilution: site samples used for QC = MW-001-102010 associated with this one sample only & MW-006-100510 associated with the six samples collected on 10/05/10.
Accuracy (based on % recovery of MS and %D for Serial Dilution results) and Precision (based on RPD for MS/MSD and sample/MD) met QAPP acceptance criteria.

Internal Standard (IS): All IS results acceptable for all samples & QC.

FD pair samples : MW-003-100510 & MW-003-100510-DUP. Chromium and copper detected at the same level in both FD samples (RPD = 0%) All other results non-detect. See next page for FD precision calculations. FD precision acceptable. Note that this FD sample ID is inconsistent with past FD IDs for this project, which are appended as "-REP" rather than "-DUP". No action taken other than to note this discrepancy.

Sensitivity: All RLs met QAPP 2010 sensitivity (RL) requirements (Worksheet #15) based on being ≤ the PALs defined as the MCP GW-3 standards (note the current QAPP PALs also list the NWQC as PALs; however, based on recent communication with the Corps, the MCP GW-3 standards are the correct PALs for groundwater for this project).

Database EDD : No issues - only added DV information to appropriate fields.

Lab Narrative : no further issues.

Lab: Alpha Analytical, Mansfield, MA Lab Project # L1015773

FD Precision:

Analyte		Sample MW-003-100510 (mg/L)	Qual	FD: MW-003-100510-DUP (mg/L)	Qual	Precision RPD* %	Action	Comment
Cd		0.0005	U	0.0005	U	NC	none	
Cr		0.002		0.002		0	none	
Cu		0.014		0.014		0	none	
Pb		0.001	U	0.001	U	NC	none	

QC & DV Action Criteria for OU-1 Metals [based on OU-1 QAPP 2010 & EPA Region I DV guidance]:

Pres./HT:	HT exceedance: J detects; Non-detects: R or UJ based on professional judgment. pH >2 use professional judgment to J detects; UJ non-detects.
Blanks:	Method Blanks and instrument blanks: Metals < RL unless all sample results are > 10 blank level. Detected results < matrix-matched blank level report as "U" (non-detected at level found). Equipment Blank: EB > RL for any metals; qualify associated detected results < 5x EB levela as "EB" - potential high bias based on EB contamination.
Tune:	Mass calibration (amu) > QC limit: J/UJ. Mass resolution/peak width (amu) > QC limit: J/UJ. %RSD > QC limit: J/UJ. See EPA SW-846 Method 6020A for Tune criteria. Tune not performed: R all associated data.
ICV/CCV:	Recoveries < 90%: J / UJ; recoveries > 110%: J detects; if severe exceedance <75%: R non-detects; > 160%: R detects.
CRI:	Only required if low-level standard equivalent to the RL is not included in the initial calibration curve. Results < 2xCRI: <80%: J / UJ; >120%: J detects.
LCS:	%Recoveries < 80%: J / UJ. %Recoveries > 120%: J detects. %Recoveries < 50%, may R non-detects & J detects but use professional judgment to accept results if MS is in-control indicating acceptable accuracy in sample matrix.
ICSA/AB:	Recoveries > 120% or < 80%: J / UJ unless extremely low for ICSAB at <50%: R non-detects / J detects.
MS/MSD:	%Recoveries < 75%: J / UJ. %Recoveries > 125%: J detects. %Recoveries < 30%, may R non-detects & J detects but use professional judgment if sample concentration > 2x spike level.
MSD/MD:	Results > 5xRL: RPD >20%: J / UJ associated results in batch - to be determined using professional judgment. Results < 5xRL: difference > ±RL, J / UJ associated results in batch - to be determined using professional judgment.
FD:	Results > 5xRL: RPD > 30%: J / UJ FD results only. Results < 5xRL: difference > ±2xRL,, J/UJ FD results only.
IS:	
Serial Dil:	Results > 50xMDL: % Difference > 10%: J detects. EPA guidance UJ non-detects; however, use professional judgment on whether it is a suppression or enhancement to qualify associated non-detects.

Qualifiers: U = analyte is non-detect at the sample-specific Reporting Limit (RL) (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.

References: Environmental Monitoring, Sampling, and Analysis Quality Assurance Project Plan Addendum, New Bedford Harbor Superfund Site, Operable Unit 1 (OU1), New Bedford, MA, Rev. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996, including Part IV – Inorganic Data Validation Functional Guidelines, November 2008.

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February 09, 2011

As requested by David Walsh from the Woods Hole Group, Alpha Analytical initiated the analysis of the laboratory's VOC-free water source. This request was initiated due to the concentrations of Lead and Copper detected in the equipment blank and samples included in Alpha job # L1010361. On February 8, 2011 the VOC-free water was analyzed via method 6020a and the results are as follows: Lead was detected at 0.006 mg/L and Copper was detected at 0.119 mg/L.

Cindy McQueen
Project Manager/Technical Representative

APPENDIX D: USACE NAE QA REVIEW MEMORANDUM

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CENAE-EP-GG 14 April 2011

MEMORANDUM FOR USACE Engineering Technical Lead Peter Hugh, US EPA Region I RPM, Elaine Stanley and Dave Walsh, WHG ATTN: Peter Hugh, Elaine Stanley and Dave Walsh

SUBJECT: Chemical Quality Assurance Report, 2010 QA Data Validation Report, New Bedford Harbor Superfund Site, 2010 Biannual Groundwater Monitoring Sawyer Street Pilot Study Confined Disposal Facility Monitoring Report, Prepared by Woods Hole Group, Inc., Revision February 15, 2011, New Bedford, MA. Evaluation of data quality issues from the 2010 Sawyer Street Groundwater Monitoring sampling events.

1. Copy furnished to the Peter Hugh, Elaine Stanley and Peter Hugh.

In regard to the EPA concerns about data quality issues on the metals contamination in the equipment blank and the data comparisons between the Alpha primary lab and ESS the QA lab, the USACE project chemist performed a thorough evaluation of both the QA and primary laboratory GW data. Enclosed please find the data validation report (DVR), QA-split data comparisons tables between Alpha and ESS labs and ESS Laboratory Work Order # 1007113 (SDG) data package.

The main issue with the QA data validation report was that the ESS QA-lab had contamination in the method blank of aroclor 1260 at 0.13 ug/l and it was also reported as a detect in QA-split sample MW-005-070810 at 0.48 B ug/l (B- also detected in the method blank). It is highly suspected that this is a false positive in the sample, as it was reported in the method blank at greater than 2x's the low-level reporting limit of 0.05 ug/l. The ESS lab manager and analyst agree that this is most like a false positive due to laboratory contamination. The primary lab, Alpha Analytical reported this MW-005-070810 as a ND which is what I believe to be the correct data. However, their RL was 0.215 on sample MW-005-070810, as they did not perform the low-level RL of 0.05 ug/l. We have not had a history of aroclor 1260 detects at the Sawyer St CDF facility or at MW-005. ESS has to extract 2-liters of sample and also concentrate the final extract down to 1 ml in order to achieve our very low NBH RL/LOQ requirement of 0.050 ug/l. I suspect that this contamination was from the ESS labs glassware, as it also showed up in the method blank. Aroclor 1260 is also not one of the major aroclor from the Aerovox Facility which used primarily aroclors 1242 and 1254. Also aroclor 1260 has limited solubility in ground water and is not likely an actual detection in this case at the ESS lab. This makes it even less likely to be an actual detection in the Sawyer Street MW-005 well. I will work with ESS to assure that there are no laboratory contamination issues for the 2011 sampling events from laboratory glassware the USACE will assure that all glassware will be appropriately solvent cleaned and baked in a high temperature oven/glassware furnace .

The VOC, metals and TSS data compared well between the Primary Alpha Analytical Lab and the ESS QA lab. Please refer to the Data comparisons provided in this data validation report.

As far as the metals contamination in the equipment blank for the metals Cu and Pb from both the EB-0700910 and EB-102010 GW Monitoring events, this metal contamination is definitely due to the Alpha Analytical Laboratory source of supplied Deionized Water that was used for EB's for both metals and VOC by Method 8260B. The WHG data validator performed the appropriate data validation procedures and also applied the appropriate data qualifiers to the lead and copper based on my review. I have talked to Dave Walsh and both labs regarding these issues and our corrective action will be to either purchase DI-water from a certified vendor or lab, or to have the lab analyze their DI-water source for trace level metals (Cd, Cu, Cr and Pb) and VOCs in order to certify there DI-water is contamination free prior to using it for our 2011 sampling events.

My overall assessment of these data quality issues are that although they appear to be minor in nature, both labs experienced some contamination issues that caused concern at the Sawyer Street facility CDF. Dave Walsh and I will work closely with the labs to avoid these contamination issues for the FY2011 GW Monitoring sampling events for this season. The overall evaluation of the data usability for the Sawyer Street 2010 Biannual Report is that the data is usable for its intended purpose. However, the 2011 GW sampling events will be closely monitored in the field and at the lab in order to avoid any data quality issues or trends for these future events.

Please let me know if you have any questions or concerns.

Thanks,

Mark R. Koenig
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DATA COMPARISON TABLES (VALIDATED RESULTS)
PROJECT: NEW BEDFORD HARBOR SUPERFUND SITE, SAWYER ST GW MONITORING
July 8, 2010 QA SAMPLING EVENT

	ALPHA	ESS
Laboratory Sample ID:	L1010361-04	1007113-01
Field Sample ID:	**MW-005-070810**	**MW-005-070810**
Date Sampled:	7/8/10	7/8/10
Date Received:	7/9/10	7/9/10
Date Extracted:	7/15/10	7/13/10
Date Analyzed:	7/15/10	7/13/10
Extraction Method:	5030B	5030B
Analysis Method:	8260B	8260B
Matrix:	**Groundwater**	**Groundwater**
Concentration Units:	ug/L	ug/L
Dilution Factor:	1.0	1.0
	MW-005-070810	

Target Analytes	STL-VT LRL	**Primary Lab** Results **Alpha**	AMRO LRL	**QA Lab** Results **ESS**	USACE Comparison Code	**%RPD**	USACE Discrep.
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	0.5 U	0.5 U	0	NC	
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,1-Dichloropropene	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
1,2,3-Trichlorobenzene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
1,2,3-Trichloropropane	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
1,2,4-Trichlorobenzene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
1,2,4-Trimethylbenzene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
1,2-Dibromo-3-chloropropane	2.0 U	2.0 U	5.0 U	5.0 U	0	NC	
1,2-Dibromoethane	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,3,5-Trimethylbenzene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,3-Dichloropropane	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	**0.2 J**	0	NC	
1-Chlorohexane	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
1,4-Dioxane	250 U	250 U	250 U	250 U	0	NC	
2,2-Dichloropropane	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
2-Butanone	5.0 U	5.0 U	25.0 U	25.0 U	0	NC	
2-Hexanone	5.0 U	5.0 U	10.0 U	10.0 U	0	NC	
4-Chlorotoluene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
4-Isopropyltoluene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
4-Methyl-2-pentanone	5.0 U	5.0 U	25.0 U	25.0 U	0	NC	
Acetone	5.0 U	5.0 U	25.0 U	25.0 U	0	NC	
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
Bromobenzene	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
Bromochloromethane	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
Bromodichloromethane	1.0 U	1.0 U	0.6 U	0.6 U	0	NC	
Bromoform	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
Bromomethane	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
Carbon disulfide	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
Chloroethane	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
Chloroform	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
Chloromethane	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.4 U	0.4 U	0	NC	
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
Dibromomethane	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
Dichlorodifluoromethane	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
Ethyl ether	2.0 U	2.0 U	NA	NA	0	NC	
Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
Ethyl-Tert-Butyl-Ether	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
Hexachlorobutadiene	0.6 U	0.6 U	0.6 U	0.6 U	0	NC	
Isopropyl Ether	2.0 U	2.0 U	NA	NA	0	NC	
Isopropylbenzene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
Methyl tert butyl ether	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
Methylene chloride	2.0 U	2.0 U	4.0 U	4.0 U	0	NC	
Naphthalene	5.0 U	5.0 U	1.0 U	1.0 U	0	NC	
n-Butylbenzene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
n-Propylbenzene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	
o-Chlorotoluene	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
o-Xylene	1.0 U	1.0 U	1.0 U	1.0 U	0	NC	
p/m-Xylene	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
p-Chlorotoluene	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
p-Isopropyltoluene	2.0 U	2.0 U	2.0 U	2.0 U	0	NC	
sec-Butylbenzene	2.0 U	2.0 U	1.0 U	1.0 U	0	NC	

DATA COMPARISON TABLES VALIDATED RESULTS

PROJECT: NEW BEDFORD HARBOR SUPERFUND SITE, SAWYER ST GW MONITORING

July 8, 2010 QA SAMPLING EVENT

	ALPHA	ESS
Laboratory Sample ID:	L1010361-04	1007113-01
Field Sample ID:	**MW-005-070810**	**MW-005-070810**
Date Sampled:	7/8/10	7/8/10
Date Received:	7/9/10	7/9/10
Date Extracted:	7/15/10	7/13/10
Date Analyzed:	7/15/10	7/13/10
Extraction Method:	3510C	3510C
Analysis Method:	8082-Aroclors	8082-Aroclors
Matrix:	**Groundwater**	**Groundwater**
Concentration Units:	ug/L	ug/L
Dilution Factor:	1.0	1.0

TARGET ANALYTE	PRIMARY LAB RL		ALPHA PRIMARY LAB RESULTS		QA LAB RL		ESS QA LAB RESULTS		COMPARISON CODE	*%RPD*
Aroclor-1016	0.215	U	0.215	U	0.05	U	0.05	U	0	0
Aroclor-1221	0.215	U	0.215	U	0.05	U	0.05	U	0	0
Aroclor-1232	0.215	U	0.215	U	0.05	U	0.05	U	0	0
Aroclor-1242	0.215	U	0.215	U	0.05	U	0.05	U	0	0
Arolcor-1248	0.215	U	0.215	U	0.05	U	0.05	U	0	0
Arolcor-1254	0.215	U	0.215	U	0.05	U	0.05	U	0	0
Arolcor-1260	0.215	U	0.215	U	0.05	U	0.05	U	0	0

SURROGATE RECOVERIES (%)	QA column 1	QA column 2		CONTRACTOR column 1	CONTRACTOR column 2
Tetrachloro-m-xylene (30-150%)	84	NR	Tetrachloro-m-xylene (30-150%)	76.0	86
Decachlorobiphenyl (30-150%)	84	NR	Decachlorobiphenyl (40-135%)	110	102

SEE APPENDIX A FOR KEY TO COMMENTS

U= Indicates compound was analyzed for but not detected above the reporting limit.

J= Indicates an estimated value. This flag is used when the result is less than the reporting limit, but > 1/2 MDL.

D= Surrogate diluted out.

NA= Not applicable

NR= Not reported

*= Surrogate recoveries outside acceptance limits

COMPARISON OF QA & CONTRACTOR VALIDATED RESULTS
PROJECT: NEW BEDFORD HARBOR SUPERFUND SITE, SAWYER ST GW MONITORING
July 8, 2010 QA SAMPLING EVENT

	ALPHA	**ESS**
Laboratory Sample ID:	L1010361-04	1007113-01
Field Sample ID:	**MW-005-070810**	**MW-005-070810**
Date Sampled:	7/8/10	7/8/10
Date Received:	7/9/10	7/9/10
Date Digested:	7/14/10	7/14/10
Date Analyzed:	7/15/10	7/26/10
Analysis Method:	6020A	Cd by 7131A, Pb by 7421, Cr and Cu by 6010B
Matrix:	**Groundwater**	**Groundwater**
Concentration Units:	ug/L	ug/L
Dilution Factor:	1.0	1.0

Target Analyte	ALPHA PRIMARY LAB RL	**ALPHA PRIMARY LAB RESULTS**	ESS QA LAB RL	**ESS QA LAB RESULTS**	COMPARISON CODE Criteria 20%	QA split RPD's
Cadmium	0.5 U	0.5 U	0.12 U	**0.05 J**	NC	
Chromium	5.0 U	5.0 U	10 U	10 U	NC	
Copper	1.0 U	**2.0 J**	10 U	**3.0 U**	NC	
Lead	1.0 U	1.0 U	2.5 U	2.5 U	NC	

SEE APPENDIX A FOR KEY TO COMMENTS
NR=NOT REPORTED
U= Not Detected at the Reporting Limit
B= Less than the Contract Required Detection Limit (CRDL),
but greater than the Instrument Detction Limit (IDL).
J= Analyte detected below quantitation limit.
NC= Not Calculated

COMPARISON OF QA & CONTRACTOR VALIDATED RESULTS

PROJECT: NEW BEDFORD HARBOR SUPERFUND SITE, SAWYER ST GW MONITORING

July 8, 2010 QA SAMPLING EVENT

	ALPHA	**ESS**
Laboratory Sample ID:	L1010361-04	1007113-01
Field Sample ID:	**MW-005-070810**	**MW-005-070810**
Date Sampled:	7/8/10	7/8/10
Date Received:	7/9/10	7/9/10
Date Analyzed:	7/13/10	7/14/10
Analysis Method:	2540D	2540D
Matrix:	**Groundwater**	**Groundwater**
Concentration Units:	mg/L	mg/L
Dilution Factor:	1.0	1.0

Inorganic Target Analyte	Analysis Method	ALPHA Primary Lab RL	**ALPHA PRIMARY lAB RESULTS**		ESS QA LAB RL	**ESS QA LAB RESULTS**		USACE COMPARISON CODE	*RPD*
Total Suspended Solids (TSS)	2540D	1.0	U	**2.50**	5	5	U	0	***NC***

SEE APPENDIX A FOR KEY TO COMPARISON CODES

NR= NOT REPORTED

NC= NOT CALCULATED

U= Not detected at or above the Reporting Limit

J= Estimated value, below the Reporting Limit

LRL= Laboratory Reporting Limit

Data Validation Level	Matrix	Preservation	Temperature Sample Receipt	Laboratory	SDG Number
Tier I+ Seed 2A Level II Data Package	Aqueous GW Monitoring	Various (As appropriate by Method)	One (1) sample cooler was received by ESS Laboratory on 07-9-10 at 2.6 °C	ESS Laboratory Division of Thielsch Engineering, Inc. 185 Frances Ave. Cranston, RI 02910-2211 Ph: 401-461-7181 POC: Liz Ouk	SDG# or Lab W.O. No. 1007113
Site: New Bedford Harbor Superfund Site 2010 Sawyer St GW Monitoring QA-Split Sampling- 7-9-10					

Field Identification of Samples Evaluated:

Field ID	Sample Location	Lab Sample Number	Sample Date
MW-0005-070810	NBH Sawyer St	1007113-01	07-09-10
Trip Blank-070810	ESS Lab TB	1007113-02	07-09-10

Note: *One QA split sample was collected for the Biannual Groundwater Monitoring at the Sawyer Street Pilot Study Confined Disposal Facility at the New Bedford harbor Superfund Site located in New Bedford, MA. The following suite of analysis parameters were performed by ESS Laboratory, Cranston, RI. The appropriate sample handling, shipping, COCs, COC seals, certified pre-clean sample containers and preservatives were used. All of the appropriate coolers, sample containers were provided by the primary laboratory, Alpha Analytical, Westboro, MA.*

Data Validation Chemist:

Mark R. Koenig
Senior Project Chemist
USACE, New England District
696 Virginia Road
Concord, MA 01742-2751
Ph: 978-318-8312
Fax: 978-318-8664

Analytical Parameters collected 07-09-10:

VOCs by Method 5030B/8260B
PCBs by Method 3510C/8082-Aroclors
Metals by 3005A/3020A/6010B (Cr and Cu)/ 7131A (Cd) / 7421 (Pb)
TSS (Total Suspended Solids) by ASTM Method 2540D

Note: No field duplicates were collected. One QA Split sample was collected.

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inventory	QUAL	BIAS
COC	1)Unbroken custody (accept or if broken R) 2) Temp≤6° (Soil-J detects, R -nondetects 3) Preserved per method (amber bottles, temperature. J, UJ, or R (function of HT and compound).	Cooler temperature < 6°C at 2.6 degrees C. Sample preservation was adequate. The samples were transported to the laboratory in 1 cooler with ice packs but were not frozen upon receipt. Sample custody was transferred from Field Team Leader to ESS Laboratory. The Chain of Custody was intact. The laboratory sample receipt and login checklist indicates that sample integrity was maintained during transport. No qualifications were required.	X	-	
Holding Times (All analyses)	1) 7 Days water, 14 days soil to extraction; (40 days after extraction) 2) J –detects, UJ or R – nondetects (function of time) 3) 180-days for metals, Hg 28-days	1. All samples were extracted within 7 days from sample collection and analyzed within 40 days form sample extraction. Metals were digested and analyzed within the 180 holding times. No qualifications were required.	X	-	
% Solids Check (SOLIDS)	30%<Solids: if no sample weight adjustment made 1) <10% R entire sample 2) 10%.> and <30%; J-detects, NDs -R	Not applicable	-	-	
Results > Cal Range or <Cal Range	1) >Upper Cal Range J-detects - ensure instrument blank performed 2) <MRL but >MDL – J – detects (estimated)	1. No reported results were outside of the linear calibration range. No qualifications were required.	X	-	
Equipment Blank (EB)	< 5x (<10x common) contaminants for aqueous samples	1. Equipment Blank was not submitted with the QA-split sample.	-	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inventory	QUAL	BIAS
Surrogates	Surrogate Recoveries (All methods) **8260B**- sample MW-005-070810 1,2-Dichloroethane-d4 @ 85% (70-120) 4-Bromofluorobenzene @ 92% (75-120) Dibromofluoromethane @ 90% (85-115) Toluene-d8 @ 99% (85-120) **8082-** sample MW-005-070810 TCMX @ 76% (30-150) DCB @ 110% (40-135)	**8260B**- sample and QC samples All the surrogate recoveries for sample MW-005-070810, Trip Blank TB-070810, MB-CG01304 and LCS-CG01304 were within the acceptance limits, except for a slight low recovery of dibromofluoromethane surrogate in the MS @ 82%. No qualification was made due to this slight MS surrogate outage. **8082-** sample and QC samples All the surrogate recoveries for sample MW-005-070810, Trip Blank TB-070810, MB-CG01304 and LCS-CG01304 were within the acceptance limits. No qualifiers required.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inventory	QUAL	BIAS
Laboratory Method Blanks (MB)	1) < 5x contaminants – U 2) analytes <lab RL (contract lab)	1 All of the Method Blanks for all of the analytical methods associated with sample MW-005-070910 were free of contamination above the RLs or LOQs, except for the aroclor 1260 which was detected at 0.13 ug/l in the MB CG01423. Aroclor 1260 was also detected in the sample at 0.48 ug/l and was qualified with a J-value at 0.48 UJ ug/l as an elevated estimate J-value ND because of the MB contamination and because 1260 is not considered a major NBH target analyte of concern (Aerovox used 1242 and 1254). 2 Metals: Copper was reported in the method blank MB CG01423 at 3.0 J ug/l and it was reported at 3.0 J ug/l in sample MW-005-070810. The copper (Cu) result was qualified as a ND at 3.0 U ug/l because it was less than 5x the method blank contamination level in the sample (per EPA Region I, DV Guidelines).	X	-	
Laboratory Control Sample (LCS) Percent Recovery	1) LCS ESS laboratory acceptance limits (WHG UFP-QAPP) 2) DOD QSM Table D-12 (aqueous) 10% and <LCL% J detects, UJ -NDs >UCL% J detects <10% R NDs, J-detects	1. All of the LCS QC samples for all the analytical analyses were within the acceptance limits. No qualifications were required due to LCS outages.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inventory	QUAL	BIAS
LCS/LCSD Relative Percent Difference (RPD)	RPD<30% laboratory SOP	All of the LCS/LCSD performed were within the laboratory acceptance limits for accuracy and precision. No LCSD was performed on TSS by Method 2540D, so precision could not be evaluated.	X	Refer to Table 2	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD) Percent Recovery	1) MS/MSD ESS Lab acceptance limits (WHG UFP-QAPP limits). 2) DOD QSM Table D-12 (aqueous) D-13 (s) QAPP limits (if MS > 4X native levels) Qualification of MS sample: <10% J detects, R NDs >10% and <LCL J detects, UJ -NDs >UCL J detects	1. **Metals-** No MS/MSD or MS reported. No evaluation of matrix effects or % recoveries on sample MW-005-070810 could be made. 2. **8082 PCBs by aroclors:** MS/MSD on sample MW-005-070810 all within the accuracy and precision acceptance limits. No qualifications required. 3. **8260B VOCs**: The complete VOC target analyte MS/MSD spike list of compounds were all within the acceptance limits for accuracy and precision, except for high recovery of chlorobenzene in the MS at 226% recovery (80-120%). Chlorobenzene was not detected in sample MW-005-070910, so no qualifications were required. 4. **TSS by Method 2540D:** No MS/MSD was performed on TSS. The lab duplicate and the sample were reported as ND @ 5 U mg/l.	-	-	
MS/MSD RPD	RPD ≤ 30% (ESS Lab Limits and WHG UFP-QAPP) J –detects in MS sample UJ-non detects	See above. All analyses were within the acceptance limits for precision.	-	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inventory	QUAL	BIAS
Retention times	Within 3X standard deviation for each analyte from ICAL/CCV –lab window limits. Once per ICAL determined and evaluated with each CCV Exceeds: determine if false positives reported	No samples qualified.	X	-	
Field Duplicate RPD	1) RPD ≤ 50% water Results > X MRL (FD pair only) J-detects (both > X PQL) 2) If one >X MRL, other ND, J-detections, UJ non-detect Other conditions use judgment	1. No field duplicates were collected.	-	-	
Initial Calibration (ICAL) (Linearity)	Correct calibration standards %RSD < 20% use average RF for calibration DOD QSM %RSD> 20% use least squares regression r> 0.995 MMR QAPP	1. Not evaluated as part of the Tier I+ or SEDD 2A DV.	X	-	
2nd Source Initial Calibration Verification (ICV)	%D ≤ 20% DOD QSM, 20% WHG UFP-QAPP once after ICAL Qualification: J detects, R or UJ ND's	1. Not evaluated as part of the Tier I+ or SEDD 2A DV.	X	-	
Continuing Calibration Verification (CCV)	1) 20 %D/drift of expected value (primary column) 2) 20% of expected value (confirmation column) WHG UFP-QAPP Analyzed after every 10 samples and at end of sequence.	1. Not evaluated as part of the Tier I+ or SEDD 2A DV.	X	-	

REVIEW ITEMS	ACCEPTANCE CRITERIA	SAMPLES AFFECTED	Inventory	QUAL	BIAS
Compound Detection Confirmed	1) Detects within proper retention time windows 2) Primary column detects confirmed by secondary column detects for PCB aroclors. 3) RPD <40% between column detections for PCBs by Method 8082 by aroclors. 4) MS/MSD no matrix interferences noted.	1. No QC deviations were observed. 2. Executive Summary of Detections of QA-split sample MW-005-070810: **8260B-** 1,4-Dichlorobenzene @ **0.2 J ug/l** **8082 Aroclors-** Aroclor 1260 **@ 0.48 UJ ug/l** which was qualified as UJ- non-detect estimated due to contamination in the method blank @ 0.13 ug/l. It is suspected that this was contamination from the extraction preparation glassware. ESS lab has to extract 2-liters of sample and concentrate the final extract to 1 ml in order to achieve the NBH RL or LOQ of 0.05 ug/l. This was most likely have contributed to the contamination. It should also be noted that the primary lab, Alpha, RL was 0.215 ug/l which was 4.3 times higher than ESS's RL. **Metals-6010B/7000 series GFAA** Cadmium @ **0.05 J ug/l** (RL/LOQ/MRL @ 0.12 ug/l) Copper @ **3 U ug/l** (RL/LOQ/MRL) @ 10 ug/l)	X	Refer to Table 3	
Quantitation Sensitivity	Check MRL per WHG UFP-QAPP Check if dilutions have raised MRL>WHG UFP-QAPP limits	Acceptable	X	-	
Overall Evaluation of Data	1) Appropriate method 2) Evaluate any analytical problems 3) Evaluate sampling errors – field contamination, sample hold times	<u>Analytical Error Evaluation:</u> 1. All LCS/LCSD %REC's and RPD's were within QC limits. 2. MS and MSD were all within acceptance limits for accuracy and precision, expect were noted above. 3. Method Blank was free of contaminations, except for aroclor 1260. 4. All the analytical method surrogate spikes recovered within the acceptance limits, except 1 MS surrogate for 8260B. <u>Sampling Error Evaluation:</u> 1. Sampling precision was not evaluated. No applicable field duplicate analyzed with this SDG.	X	-	

*(Tier I+, SEDD 2A Check items) Completeness Check: Inventory Check Sheet_ X__ Sample Quantitation Calculations (TIER II ONLY):
Lab Correspondence: none

CERTIFICATE OF ANALYSIS

Mark Koenig
U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742

RE: NBH Sawyer St (G606422)
ESS Laboratory Work Order Number: 1007113

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Digitally signed by Laurel Stoddard
Date: 2010.07.28 16:41:39 -04'00'

Laurel Stoddard
Laboratory Director

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

ESS Laboratory certifies that the test results meet the requirements of NELAC and A2LA, except where noted within this project narrative.

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

PROJECT NARRATIVE

8082 Polychlorinated Biphenyls (PCB) / Low Level

1007113-01	**Present in Method Blank (B).**
	Aroclor 1260

8260B Volatile Organic Compounds

CG01304-MS1	**Matrix Spike recovery is above upper control limit (M+).**
	4-Isopropyltoluene (136% @ 75-130%)
CG01304-MS1	**Surrogate recovery(ies) below lower control limit (S-).**
	Dibromofluoromethane (82% @ 85-115%)
CG01304-MSD1	**Matrix Spike recovery is above upper control limit (M+).**
	Chlorobenzene (226% @ 80-120%)
CG01304-MSD1	**Relative percent difference for duplicate is outside of criteria (D+).**
	Chlorobenzene (73%)
CG01304-MSD1	**Surrogate recovery(ies) below lower control limit (S-).**
	Dibromofluoromethane (83% @ 85-115%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: MW-005-070810
Date Sampled: 07/08/10 16:10
Percent Solids: N/A
Initial Volume: 1930
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: SEP
Prepared: 7/14/10 18:00

8082 Polychlorinated Biphenyls (PCB) / Low Level

Analyte	Results (MRL)	LOD (MDL)	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423
Aroclor 1221	ND (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423
Aroclor 1232	ND (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423
Aroclor 1242	ND (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423
Aroclor 1248	ND (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423
Aroclor 1254	ND (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423
Aroclor 1260	**B 0.48** (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423
Aroclor 1262	ND (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423
Aroclor 1268	ND (0.05)	0.03 (0.02)	1	07/26/10 22:48	CTG0131	CG01423

	%Recovery	Qualifier	
Surrogate: Decachlorobiphenyl	*110 %*		*40-135*
Surrogate: Decachlorobiphenyl [2C]	*102 %*		*40-135*
Surrogate: Tetrachloro-m-xylene	*76 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*86 %*		*30-150*

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: MW-005-070810
Date Sampled: 07/08/10 16:10
Percent Solids: N/A

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-01
Sample Matrix: Ground Water
Units: ug/L

3005A/3020A/6000/7000 Total Metals

Analyte	Results (MRL)	LOD (MDL)	Method	DF	Analyst	Analyzed	I/V	F/V	Batch
Cadmium	**J 0.05** (0.12)	0.10 (0.03)	7131A	1	SVD	07/16/10 17:48	50	25	CG01201
Chromium	ND (10)	3 (2)	6010B	1	SVD	07/13/10 22:53	50	25	CG01201
Copper	**J 3** (10)	3 (2)	6010B	1	SVD	07/13/10 22:53	50	25	CG01201
Lead	ND (2.5)	1.0 (0.5)	7421	1	SVD	07/16/10 22:17	50	25	CG01201

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: MW-005-070810
Date Sampled: 07/08/10 16:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	LOD (MDL)	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,1,1-Trichloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,1,2,2-Tetrachloroethane	ND (0.5)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
1,1,2-Trichloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,1-Dichloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,1-Dichloroethene	ND (1.0)	0.5 (0.3)	1	07/13/10 13:33	CTG0076	CG01304
1,1-Dichloropropene	ND (2.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,2,3-Trichlorobenzene	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,2,3-Trichloropropane	ND (1.0)	0.5 (0.3)	1	07/13/10 13:33	CTG0076	CG01304
1,2,4-Trichlorobenzene	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,2,4-Trimethylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
1,2-Dibromo-3-Chloropropane	ND (5.0)	1.0 (1.0)	1	07/13/10 13:33	CTG0076	CG01304
1,2-Dibromoethane	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,2-Dichlorobenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
1,2-Dichloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,2-Dichloropropane	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,3,5-Trimethylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
1,3-Dichlorobenzene	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
1,3-Dichloropropane	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
1,4-Dichlorobenzene	**J 0.2** (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
1-Chlorohexane	ND (1.0)	0.5 (0.4)	1	07/13/10 13:33	CTG0076	CG01304
2,2-Dichloropropane	ND (1.0)	0.5 (0.3)	1	07/13/10 13:33	CTG0076	CG01304
2-Butanone	ND (25.0)	10.0 (5.8)	1	07/13/10 13:33	CTG0076	CG01304
2-Chlorotoluene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
2-Hexanone	ND (10.0)	5.0 (1.5)	1	07/13/10 13:33	CTG0076	CG01304
4-Chlorotoluene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
4-Isopropyltoluene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
4-Methyl-2-Pentanone	ND (25.0)	5.0 (1.6)	1	07/13/10 13:33	CTG0076	CG01304
Acetone	ND (25.0)	5.0 (5.0)	1	07/13/10 13:33	CTG0076	CG01304
Benzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Bromobenzene	ND (2.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Bromochloromethane	ND (1.0)	0.5 (0.3)	1	07/13/10 13:33	CTG0076	CG01304
Bromodichloromethane	ND (0.6)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: MW-005-070810
Date Sampled: 07/08/10 16:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	LOD (MDL)	DF	Analyzed	Sequence	Batch
Bromoform	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Bromomethane	ND (2.0)	1.0 (0.4)	1	07/13/10 13:33	CTG0076	CG01304
Carbon Disulfide	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Carbon Tetrachloride	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Chlorobenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Chloroethane	ND (2.0)	1.0 (0.4)	1	07/13/10 13:33	CTG0076	CG01304
Chloroform	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Chloromethane	ND (2.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
cis-1,2-Dichloroethene	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
cis-1,3-Dichloropropene	ND (0.4)	0.2 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Dibromochloromethane	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Dibromomethane	ND (1.0)	0.5 (0.3)	1	07/13/10 13:33	CTG0076	CG01304
Dichlorodifluoromethane	ND (2.0)	1.0 (0.3)	1	07/13/10 13:33	CTG0076	CG01304
Ethylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Hexachlorobutadiene	ND (0.6)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Isopropylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Methyl tert-Butyl Ether	ND (1.0)	0.5 (0.3)	1	07/13/10 13:33	CTG0076	CG01304
Methylene Chloride	ND (4.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Naphthalene	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
n-Butylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
n-Propylbenzene	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
sec-Butylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Styrene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
tert-Butylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Tetrachloroethene	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Toluene	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
trans-1,2-Dichloroethene	ND (1.0)	0.5 (0.3)	1	07/13/10 13:33	CTG0076	CG01304
trans-1,3-Dichloropropene	ND (0.5)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Trichloroethene	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Trichlorofluoromethane	ND (1.0)	0.5 (0.4)	1	07/13/10 13:33	CTG0076	CG01304
Vinyl Chloride	ND (1.0)	0.5 (0.2)	1	07/13/10 13:33	CTG0076	CG01304
Xylene O	ND (1.0)	0.2 (0.1)	1	07/13/10 13:33	CTG0076	CG01304
Xylene P,M	ND (2.0)	0.4 (0.2)	1	07/13/10 13:33	CTG0076	CG01304

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: MW-005-070810
Date Sampled: 07/08/10 16:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-01
Sample Matrix: Ground Water
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	LOD (MDL)		DF	Analyzed	Sequence	Batch
		%Recovery	Qualifier				
Surrogate: 1,2-Dichloroethane-d4		*85 %*		*70-120*			
Surrogate: 4-Bromofluorobenzene		*92 %*		*75-120*			
Surrogate: Dibromofluoromethane		*90 %*		*85-115*			
Surrogate: Toluene-d8		*99 %*		*85-120*			

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: MW-005-070810
Date Sampled: 07/08/10 16:10
Percent Solids: N/A

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-01
Sample Matrix: Ground Water

Classical Chemistry

Analyte	Results (MRL)	LOD (MDL)	Units	Method	DF	Analyst	Analyzed	Batch
Total Suspended Solids	ND (5)	(N/A)	mg/L	2540D	1	EEM	07/14/10 17:55	CG01416

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: TB-070810
Date Sampled: 07/08/10 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	LOD (MDL)	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,1,1-Trichloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,1,2,2-Tetrachloroethane	ND (0.5)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
1,1,2-Trichloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,1-Dichloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,1-Dichloroethene	ND (1.0)	0.5 (0.3)	1	07/13/10 12:28	CTG0076	CG01304
1,1-Dichloropropene	ND (2.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,2,3-Trichlorobenzene	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,2,3-Trichloropropane	ND (1.0)	0.5 (0.3)	1	07/13/10 12:28	CTG0076	CG01304
1,2,4-Trichlorobenzene	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,2,4-Trimethylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
1,2-Dibromo-3-Chloropropane	ND (5.0)	1.0 (1.0)	1	07/13/10 12:28	CTG0076	CG01304
1,2-Dibromoethane	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,2-Dichlorobenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
1,2-Dichloroethane	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,2-Dichloropropane	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,3,5-Trimethylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
1,3-Dichlorobenzene	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
1,3-Dichloropropane	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
1,4-Dichlorobenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
1-Chlorohexane	ND (1.0)	0.5 (0.4)	1	07/13/10 12:28	CTG0076	CG01304
2,2-Dichloropropane	ND (1.0)	0.5 (0.3)	1	07/13/10 12:28	CTG0076	CG01304
2-Butanone	ND (25.0)	10.0 (5.8)	1	07/13/10 12:28	CTG0076	CG01304
2-Chlorotoluene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
2-Hexanone	ND (10.0)	5.0 (1.5)	1	07/13/10 12:28	CTG0076	CG01304
4-Chlorotoluene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
4-Isopropyltoluene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
4-Methyl-2-Pentanone	ND (25.0)	5.0 (1.6)	1	07/13/10 12:28	CTG0076	CG01304
Acetone	ND (25.0)	5.0 (5.0)	1	07/13/10 12:28	CTG0076	CG01304
Benzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Bromobenzene	ND (2.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Bromochloromethane	ND (1.0)	0.5 (0.3)	1	07/13/10 12:28	CTG0076	CG01304
Bromodichloromethane	ND (0.6)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: TB-070810
Date Sampled: 07/08/10 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	LOD (MDL)	DF	Analyzed	Sequence	Batch
Bromoform	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Bromomethane	ND (2.0)	1.0 (0.4)	1	07/13/10 12:28	CTG0076	CG01304
Carbon Disulfide	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Carbon Tetrachloride	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Chlorobenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Chloroethane	ND (2.0)	1.0 (0.4)	1	07/13/10 12:28	CTG0076	CG01304
Chloroform	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Chloromethane	ND (2.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
cis-1,2-Dichloroethene	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
cis-1,3-Dichloropropene	ND (0.4)	0.2 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Dibromochloromethane	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Dibromomethane	ND (1.0)	0.5 (0.3)	1	07/13/10 12:28	CTG0076	CG01304
Dichlorodifluoromethane	ND (2.0)	1.0 (0.3)	1	07/13/10 12:28	CTG0076	CG01304
Ethylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Hexachlorobutadiene	ND (0.6)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Isopropylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Methyl tert-Butyl Ether	ND (1.0)	0.5 (0.3)	1	07/13/10 12:28	CTG0076	CG01304
Methylene Chloride	ND (4.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Naphthalene	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
n-Butylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
n-Propylbenzene	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
sec-Butylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Styrene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
tert-Butylbenzene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Tetrachloroethene	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Toluene	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
trans-1,2-Dichloroethene	ND (1.0)	0.5 (0.3)	1	07/13/10 12:28	CTG0076	CG01304
trans-1,3-Dichloropropene	ND (0.5)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Trichloroethene	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Trichlorofluoromethane	ND (1.0)	0.5 (0.4)	1	07/13/10 12:28	CTG0076	CG01304
Vinyl Chloride	ND (1.0)	0.5 (0.2)	1	07/13/10 12:28	CTG0076	CG01304
Xylene O	ND (1.0)	0.2 (0.1)	1	07/13/10 12:28	CTG0076	CG01304
Xylene P,M	ND (2.0)	0.4 (0.2)	1	07/13/10 12:28	CTG0076	CG01304

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St
Client Sample ID: TB-070810
Date Sampled: 07/08/10 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1007113
ESS Laboratory Sample ID: 1007113-02
Sample Matrix: Aqueous
Units: ug/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	LOD (MDL)		DF	Analyzed	Sequence	Batch
		%Recovery	Qualifier				
Surrogate: 1,2-Dichloroethane-d4		84 %		70-120			
Surrogate: 4-Bromofluorobenzene		91 %		75-120			
Surrogate: Dibromofluoromethane		87 %		85-115			
Surrogate: Toluene-d8		100 %		85-120			

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
3005A/3020A/6000/7000 Total Metals										
Batch CG01201 - 3005A										
Blank										
Cadmium	ND	0.12	ug/L							
Chromium	ND	10	ug/L							
Copper	3	10	ug/L							J
Lead	ND	2.5	ug/L							
LCS										
Chromium	261	10	ug/L	250.0		105	80-120			
Copper	249	10	ug/L	250.0		100	80-120			
LCS										
Cadmium	5.45	1.88	ug/L	5.000		109	80-120			
Lead	10.5	2.5	ug/L	10.00		105	80-120			
LCS Dup										
Chromium	260	10	ug/L	250.0		104	80-120	0.5	20	
Copper	249	10	ug/L	250.0		100	80-120	0.03	20	
LCS Dup										
Cadmium	5.18	1.88	ug/L	5.000		104	80-120	5	20	
Lead	10.5	2.5	ug/L	10.00		105	80-120	0.2	20	
8082 Polychlorinated Biphenyls (PCB) / Low Level										
Batch CG01423 - 3510C										
Blank										
Aroclor 1016	ND	0.05	ug/L							
Aroclor 1221	ND	0.05	ug/L							
Aroclor 1232	ND	0.05	ug/L							
Aroclor 1242	ND	0.05	ug/L							
Aroclor 1248	ND	0.05	ug/L							
Aroclor 1254	ND	0.05	ug/L							
Aroclor 1260	0.13	0.05	ug/L							
Aroclor 1262	ND	0.05	ug/L							
Aroclor 1268	ND	0.05	ug/L							
Surrogate: Decachlorobiphenyl	*0.0267*		ug/L	*0.02500*		*107*	*40-135*			
Surrogate: Decachlorobiphenyl [2C]	*0.0254*		ug/L	*0.02500*		*102*	*40-135*			
Surrogate: Tetrachloro-m-xylene	*0.0199*		ug/L	*0.02500*		*79*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0234*		ug/L	*0.02500*		*94*	*30-150*			
LCS										
Aroclor 1016	0.53	0.05	ug/L	0.5000		107	25-145			
Aroclor 1260	0.49	0.05	ug/L	0.5000		97	30-145			
Surrogate: Decachlorobiphenyl	*0.0271*		ug/L	*0.02500*		*108*	*40-135*			
Surrogate: Decachlorobiphenyl [2C]	*0.0253*		ug/L	*0.02500*		*101*	*40-135*			
Surrogate: Tetrachloro-m-xylene	*0.0205*		ug/L	*0.02500*		*82*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0218*		ug/L	*0.02500*		*87*	*30-150*			
LCS Dup										

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082 Polychlorinated Biphenyls (PCB) / Low Level										
Batch CG01423 - 3510C										
Aroclor 1016	0.57	0.05	ug/L	0.5000		113	25-145	6	30	
Aroclor 1260	0.47	0.05	ug/L	0.5000		94	30-145	4	30	
Surrogate: Decachlorobiphenyl	*0.0268*		ug/L	*0.02500*		*107*	*40-135*			
Surrogate: Decachlorobiphenyl [2C]	*0.0247*		ug/L	*0.02500*		*99*	*40-135*			
Surrogate: Tetrachloro-m-xylene	*0.0189*		ug/L	*0.02500*		*76*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0207*		ug/L	*0.02500*		*83*	*30-150*			
8260B Volatile Organic Compounds										
Batch CG01304 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							
1,1,1-Trichloroethane	ND	1.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L							
1,1,2-Trichloroethane	ND	1.0	ug/L							
1,1-Dichloroethane	ND	1.0	ug/L							
1,1-Dichloroethene	ND	1.0	ug/L							
1,1-Dichloropropene	ND	2.0	ug/L							
1,2,3-Trichlorobenzene	ND	1.0	ug/L							
1,2,3-Trichloropropane	ND	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	1.0	ug/L							
1,2,4-Trimethylbenzene	ND	1.0	ug/L							
1,2-Dibromo-3-Chloropropane	ND	5.0	ug/L							
1,2-Dibromoethane	ND	1.0	ug/L							
1,2-Dichlorobenzene	ND	1.0	ug/L							
1,2-Dichloroethane	ND	1.0	ug/L							
1,2-Dichloropropane	ND	1.0	ug/L							
1,3,5-Trimethylbenzene	ND	1.0	ug/L							
1,3-Dichlorobenzene	ND	1.0	ug/L							
1,3-Dichloropropane	ND	1.0	ug/L							
1,4-Dichlorobenzene	ND	1.0	ug/L							
1-Chlorohexane	ND	1.0	ug/L							
2,2-Dichloropropane	ND	1.0	ug/L							
2-Butanone	ND	25.0	ug/L							
2-Chlorotoluene	ND	1.0	ug/L							
2-Hexanone	ND	10.0	ug/L							
4-Chlorotoluene	ND	1.0	ug/L							
4-Isopropyltoluene	ND	1.0	ug/L							
4-Methyl-2-Pentanone	ND	25.0	ug/L							
Acetone	ND	25.0	ug/L							
Benzene	ND	1.0	ug/L							
Bromobenzene	ND	2.0	ug/L							
Bromochloromethane	ND	1.0	ug/L							
Bromodichloromethane	ND	0.6	ug/L							
Bromoform	ND	1.0	ug/L							

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG01304 - 5030B										
Bromomethane	ND	2.0	ug/L							
Carbon Disulfide	ND	1.0	ug/L							
Carbon Tetrachloride	ND	1.0	ug/L							
Chlorobenzene	ND	1.0	ug/L							
Chloroethane	ND	2.0	ug/L							
Chloroform	ND	1.0	ug/L							
Chloromethane	ND	2.0	ug/L							
cis-1,2-Dichloroethene	ND	1.0	ug/L							
cis-1,3-Dichloropropene	ND	0.4	ug/L							
Dibromochloromethane	ND	1.0	ug/L							
Dibromomethane	ND	1.0	ug/L							
Dichlorodifluoromethane	ND	2.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
Hexachlorobutadiene	ND	0.6	ug/L							
Isopropylbenzene	ND	1.0	ug/L							
Methyl tert-Butyl Ether	ND	1.0	ug/L							
Methylene Chloride	ND	4.0	ug/L							
Naphthalene	ND	1.0	ug/L							
n-Butylbenzene	ND	1.0	ug/L							
n-Propylbenzene	ND	1.0	ug/L							
sec-Butylbenzene	ND	1.0	ug/L							
Styrene	ND	1.0	ug/L							
tert-Butylbenzene	ND	1.0	ug/L							
Tetrachloroethene	ND	1.0	ug/L							
Toluene	ND	1.0	ug/L							
trans-1,2-Dichloroethene	ND	1.0	ug/L							
trans-1,3-Dichloropropene	ND	0.5	ug/L							
Trichloroethene	ND	1.0	ug/L							
Trichlorofluoromethane	ND	1.0	ug/L							
Vinyl Chloride	ND	1.0	ug/L							
Xylene O	ND	1.0	ug/L							
Xylene P,M	ND	2.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*20.8*		ug/L	*25.00*		*83*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*23.3*		ug/L	*25.00*		*93*	*75-120*			
Surrogate: Dibromofluoromethane	*21.9*		ug/L	*25.00*		*87*	*85-115*			
Surrogate: Toluene-d8	*25.2*		ug/L	*25.00*		*101*	*85-120*			
LCS										
1,1,1,2-Tetrachloroethane	10.2		ug/L	10.00		102	80-130			
1,1,1-Trichloroethane	9.5		ug/L	10.00		95	65-130			
1,1,2,2-Tetrachloroethane	9.2		ug/L	10.00		92	65-130			
1,1,2-Trichloroethane	9.8		ug/L	10.00		98	75-125			
1,1-Dichloroethane	9.6		ug/L	10.00		96	70-135			
1,1-Dichloroethene	10.4		ug/L	10.00		104	70-130			
1,1-Dichloropropene	9.2		ug/L	10.00		92	75-130			
1,2,3-Trichlorobenzene	12.3		ug/L	10.00		123	55-140			

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG01304 - 5030B										
1,2,3-Trichloropropane	9.5		ug/L	10.00		95	75-125			
1,2,4-Trichlorobenzene	11.6		ug/L	10.00		116	65-135			
1,2,4-Trimethylbenzene	10.3		ug/L	10.00		103	75-130			
1,2-Dibromo-3-Chloropropane	8.9		ug/L	10.00		89	50-130			
1,2-Dibromoethane	10.0		ug/L	10.00		100	80-120			
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-120			
1,2-Dichloroethane	9.3		ug/L	10.00		93	70-130			
1,2-Dichloropropane	9.9		ug/L	10.00		99	75-125			
1,3,5-Trimethylbenzene	10.7		ug/L	10.00		107	75-130			
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	75-125			
1,3-Dichloropropane	10.1		ug/L	10.00		101	75-125			
1,4-Dichlorobenzene	10.2		ug/L	10.00		102	75-125			
1-Chlorohexane	10.1		ug/L	10.00		101	70-130			
2,2-Dichloropropane	10.1		ug/L	10.00		101	70-135			
2-Butanone	49.4		ug/L	50.00		99	30-150			
2-Chlorotoluene	10.2		ug/L	10.00		102	75-125			
2-Hexanone	51.8		ug/L	50.00		104	55-130			
4-Chlorotoluene	9.8		ug/L	10.00		98	75-130			
4-Isopropyltoluene	10.9		ug/L	10.00		109	75-130			
4-Methyl-2-Pentanone	46.9		ug/L	50.00		94	60-135			
Acetone	54.4		ug/L	50.00		109	40-140			
Benzene	9.8		ug/L	10.00		98	80-120			
Bromobenzene	10.2		ug/L	10.00		102	75-125			
Bromochloromethane	9.6		ug/L	10.00		96	65-130			
Bromodichloromethane	9.6		ug/L	10.00		96	75-120			
Bromoform	10.2		ug/L	10.00		102	70-130			
Bromomethane	9.1		ug/L	10.00		91	30-145			
Carbon Disulfide	10.8		ug/L	10.00		108	35-160			
Carbon Tetrachloride	9.6		ug/L	10.00		96	65-140			
Chlorobenzene	10.2		ug/L	10.00		102	80-120			
Chloroethane	9.5		ug/L	10.00		95	60-135			
Chloroform	9.5		ug/L	10.00		95	65-135			
Chloromethane	8.7		ug/L	10.00		87	40-125			
cis-1,2-Dichloroethene	9.8		ug/L	10.00		98	70-125			
cis-1,3-Dichloropropene	9.2		ug/L	10.00		92	70-130			
Dibromochloromethane	9.6		ug/L	10.00		96	60-135			
Dibromomethane	9.4		ug/L	10.00		94	75-125			
Dichlorodifluoromethane	9.3		ug/L	10.00		93	30-155			
Ethylbenzene	10.1		ug/L	10.00		101	75-125			
Hexachlorobutadiene	11.8		ug/L	10.00		118	50-140			
Isopropylbenzene	9.0		ug/L	10.00		90	75-125			
Methyl tert-Butyl Ether	9.6		ug/L	10.00		96	65-125			
Methylene Chloride	9.8		ug/L	10.00		98	55-140			
Naphthalene	11.2		ug/L	10.00		112	55-140			
n-Butylbenzene	11.7		ug/L	10.00		117	70-135			

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG01304 - 5030B										
n-Propylbenzene	10.3		ug/L	10.00		103	70-130			
sec-Butylbenzene	11.4		ug/L	10.00		114	70-125			
Styrene	9.6		ug/L	10.00		96	65-135			
tert-Butylbenzene	11.1		ug/L	10.00		111	70-130			
Tetrachloroethene	10.1		ug/L	10.00		101	45-150			
Toluene	9.9		ug/L	10.00		99	75-120			
trans-1,2-Dichloroethene	9.0		ug/L	10.00		90	60-140			
trans-1,3-Dichloropropene	8.8		ug/L	10.00		88	55-140			
Trichloroethene	9.7		ug/L	10.00		97	70-125			
Trichlorofluoromethane	8.5		ug/L	10.00		85	60-145			
Vinyl Chloride	9.2		ug/L	10.00		92	50-145			
Xylene O	10.1		ug/L	10.00		101	80-120			
Xylene P,M	20.7		ug/L	20.00		104	75-130			
Surrogate: 1,2-Dichloroethane-d4	*22.1*		ug/L	*25.00*		*89*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*23.5*		ug/L	*25.00*		*94*	*75-120*			
Surrogate: Dibromofluoromethane	*23.2*		ug/L	*25.00*		*93*	*85-115*			
Surrogate: Toluene-d8	*24.2*		ug/L	*25.00*		*97*	*85-120*			
LCS Dup										
1,1,1,2-Tetrachloroethane	9.5		ug/L	10.00		95	80-130	7	30	
1,1,1-Trichloroethane	9.4		ug/L	10.00		94	65-130	2	30	
1,1,2,2-Tetrachloroethane	9.2		ug/L	10.00		92	65-130	0.2	30	
1,1,2-Trichloroethane	9.3		ug/L	10.00		93	75-125	5	30	
1,1-Dichloroethane	9.4		ug/L	10.00		94	70-135	3	30	
1,1-Dichloroethene	10.2		ug/L	10.00		102	70-130	2	30	
1,1-Dichloropropene	9.2		ug/L	10.00		92	75-130	0.7	30	
1,2,3-Trichlorobenzene	11.3		ug/L	10.00		113	55-140	8	30	
1,2,3-Trichloropropane	9.4		ug/L	10.00		94	75-125	1	30	
1,2,4-Trichlorobenzene	10.4		ug/L	10.00		104	65-135	11	30	
1,2,4-Trimethylbenzene	9.4		ug/L	10.00		94	75-130	9	30	
1,2-Dibromo-3-Chloropropane	8.3		ug/L	10.00		83	50-130	7	30	
1,2-Dibromoethane	9.9		ug/L	10.00		99	80-120	1	30	
1,2-Dichlorobenzene	10.0		ug/L	10.00		100	70-120	3	30	
1,2-Dichloroethane	9.4		ug/L	10.00		94	70-130	1	30	
1,2-Dichloropropane	9.6		ug/L	10.00		96	75-125	3	30	
1,3,5-Trimethylbenzene	9.6		ug/L	10.00		96	75-130	11	30	
1,3-Dichlorobenzene	9.6		ug/L	10.00		96	75-125	8	30	
1,3-Dichloropropane	9.8		ug/L	10.00		98	75-125	4	30	
1,4-Dichlorobenzene	9.4		ug/L	10.00		94	75-125	8	30	
1-Chlorohexane	9.5		ug/L	10.00		95	70-130	6	30	
2,2-Dichloropropane	9.5		ug/L	10.00		95	70-135	6	30	
2-Butanone	51.3		ug/L	50.00		103	30-150	4	30	
2-Chlorotoluene	9.7		ug/L	10.00		97	75-125	5	30	
2-Hexanone	52.3		ug/L	50.00		105	55-130	1	30	
4-Chlorotoluene	9.5		ug/L	10.00		95	75-130	3	30	
4-Isopropyltoluene	9.8		ug/L	10.00		98	75-130	11	30	

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG01304 - 5030B										
4-Methyl-2-Pentanone	46.0		ug/L	50.00		92	60-135	2	30	
Acetone	56.9		ug/L	50.00		114	40-140	4	30	
Benzene	9.4		ug/L	10.00		94	80-120	4	30	
Bromobenzene	9.9		ug/L	10.00		99	75-125	2	30	
Bromochloromethane	9.5		ug/L	10.00		95	65-130	0.5	30	
Bromodichloromethane	9.1		ug/L	10.00		91	75-120	4	30	
Bromoform	9.5		ug/L	10.00		95	70-130	7	30	
Bromomethane	8.4		ug/L	10.00		84	30-145	8	30	
Carbon Disulfide	10.3		ug/L	10.00		103	35-160	5	30	
Carbon Tetrachloride	9.5		ug/L	10.00		95	65-140	2	30	
Chlorobenzene	9.6		ug/L	10.00		96	80-120	6	30	
Chloroethane	9.0		ug/L	10.00		90	60-135	6	30	
Chloroform	9.4		ug/L	10.00		94	65-135	0.6	30	
Chloromethane	8.3		ug/L	10.00		83	40-125	5	30	
cis-1,2-Dichloroethene	9.6		ug/L	10.00		96	70-125	2	30	
cis-1,3-Dichloropropene	9.0		ug/L	10.00		90	70-130	3	30	
Dibromochloromethane	9.4		ug/L	10.00		94	60-135	3	30	
Dibromomethane	8.9		ug/L	10.00		89	75-125	5	30	
Dichlorodifluoromethane	8.6		ug/L	10.00		86	30-155	8	30	
Ethylbenzene	9.4		ug/L	10.00		94	75-125	7	30	
Hexachlorobutadiene	10.8		ug/L	10.00		108	50-140	10	30	
Isopropylbenzene	8.3		ug/L	10.00		83	75-125	8	30	
Methyl tert-Butyl Ether	9.4		ug/L	10.00		94	65-125	2	30	
Methylene Chloride	9.6		ug/L	10.00		96	55-140	3	30	
Naphthalene	10.0		ug/L	10.00		100	55-140	11	30	
n-Butylbenzene	10.8		ug/L	10.00		108	70-135	7	30	
n-Propylbenzene	9.5		ug/L	10.00		95	70-130	8	30	
sec-Butylbenzene	10.3		ug/L	10.00		103	70-125	10	30	
Styrene	9.4		ug/L	10.00		94	65-135	2	30	
tert-Butylbenzene	10.1		ug/L	10.00		101	70-130	9	30	
Tetrachloroethene	10.1		ug/L	10.00		101	45-150	0.7	30	
Toluene	9.6		ug/L	10.00		96	75-120	3	30	
trans-1,2-Dichloroethene	8.9		ug/L	10.00		89	60-140	2	30	
trans-1,3-Dichloropropene	8.4		ug/L	10.00		84	55-140	5	30	
Trichloroethene	9.3		ug/L	10.00		93	70-125	4	30	
Trichlorofluoromethane	8.3		ug/L	10.00		83	60-145	3	30	
Vinyl Chloride	8.6		ug/L	10.00		86	50-145	6	30	
Xylene O	9.4		ug/L	10.00		94	80-120	7	30	
Xylene P,M	19.5		ug/L	20.00		98	75-130	6	30	
Surrogate: 1,2-Dichloroethane-d4	*22.4*		ug/L	*25.00*		*90*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*23.0*		ug/L	*25.00*		*92*	*75-120*			
Surrogate: Dibromofluoromethane	*22.8*		ug/L	*25.00*		*91*	*85-115*			
Surrogate: Toluene-d8	*23.8*		ug/L	*25.00*		*95*	*85-120*			
Matrix Spike **Source: 1007113-01**										
1,1,1,2-Tetrachloroethane	9.5		ug/L	10.00	ND	95	80-130			

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG01304 - 5030B										
1,1,1-Trichloroethane	9.2		ug/L	10.00	ND	92	65-130			
1,1,2,2-Tetrachloroethane	9.3		ug/L	10.00	ND	93	65-130			
1,1,2-Trichloroethane	9.4		ug/L	10.00	ND	94	75-125			
1,1-Dichloroethane	9.4		ug/L	10.00	ND	94	70-135			
1,1-Dichloroethene	10.2		ug/L	10.00	ND	102	70-130			
1,1-Dichloropropene	9.5		ug/L	10.00	ND	95	75-130			
1,2,3-Trichlorobenzene	9.5		ug/L	10.00	ND	95	55-140			
1,2,3-Trichloropropane	9.5		ug/L	10.00	ND	95	75-125			
1,2,4-Trichlorobenzene	9.1		ug/L	10.00	ND	91	65-135			
1,2,4-Trimethylbenzene	10.9		ug/L	10.00	ND	109	75-130			
1,2-Dibromo-3-Chloropropane	9.1		ug/L	10.00	ND	91	50-130			
1,2-Dibromoethane	9.5		ug/L	10.00	ND	95	80-120			
1,2-Dichlorobenzene	10.1		ug/L	10.00	ND	101	70-120			
1,2-Dichloroethane	8.4		ug/L	10.00	ND	84	70-130			
1,2-Dichloropropane	10.2		ug/L	10.00	ND	102	75-125			
1,3,5-Trimethylbenzene	11.8		ug/L	10.00	ND	118	75-130			
1,3-Dichlorobenzene	9.7		ug/L	10.00	ND	97	75-125			
1,3-Dichloropropane	10.6		ug/L	10.00	ND	106	75-125			
1,4-Dichlorobenzene	9.6		ug/L	10.00	0.2	94	75-125			
1-Chlorohexane	12.2		ug/L	10.00	ND	122	70-130			
2,2-Dichloropropane	9.5		ug/L	10.00	ND	95	70-135			
2-Butanone	51.6		ug/L	50.00	ND	103	30-150			
2-Chlorotoluene	10.4		ug/L	10.00	ND	104	75-125			
2-Hexanone	54.1		ug/L	50.00	ND	108	55-130			
4-Chlorotoluene	9.9		ug/L	10.00	ND	99	75-130			
4-Isopropyltoluene	13.6		ug/L	10.00	ND	136	75-130			M+
4-Methyl-2-Pentanone	48.8		ug/L	50.00	ND	98	60-135			
Acetone	44.7		ug/L	50.00	1.7	86	40-140			
Benzene	9.7		ug/L	10.00	ND	97	80-120			
Bromobenzene	10.4		ug/L	10.00	ND	104	75-125			
Bromochloromethane	8.9		ug/L	10.00	ND	89	65-130			
Bromodichloromethane	11.0		ug/L	10.00	ND	110	75-120			
Bromoform	9.2		ug/L	10.00	ND	92	70-130			
Bromomethane	5.5		ug/L	10.00	ND	55	30-145			
Carbon Disulfide	10.4		ug/L	10.00	ND	104	35-160			
Carbon Tetrachloride	9.1		ug/L	10.00	ND	91	65-140			
Chlorobenzene	10.6		ug/L	10.00	0.08	105	80-120			
Chloroethane	9.2		ug/L	10.00	ND	92	60-135			
Chloroform	8.9		ug/L	10.00	ND	89	65-135			
Chloromethane	7.8		ug/L	10.00	ND	78	40-125			
cis-1,2-Dichloroethene	9.4		ug/L	10.00	ND	94	70-125			
cis-1,3-Dichloropropene	9.1		ug/L	10.00	ND	91	70-130			
Dibromochloromethane	9.2		ug/L	10.00	ND	92	60-135			
Dibromomethane	8.4		ug/L	10.00	ND	84	75-125			
Dichlorodifluoromethane	8.5		ug/L	10.00	ND	85	30-155			

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG01304 - 5030B										
Ethylbenzene	11.3		ug/L	10.00	ND	113	75-125			
Hexachlorobutadiene	8.0		ug/L	10.00	ND	80	50-140			
Isopropylbenzene	9.5		ug/L	10.00	ND	95	75-125			
Methyl tert-Butyl Ether	9.4		ug/L	10.00	ND	94	65-125			
Methylene Chloride	9.3		ug/L	10.00	ND	93	55-140			
Naphthalene	10.5		ug/L	10.00	ND	105	55-140			
n-Butylbenzene	10.5		ug/L	10.00	ND	105	70-135			
n-Propylbenzene	10.8		ug/L	10.00	ND	108	70-130			
sec-Butylbenzene	10.3		ug/L	10.00	ND	103	70-125			
Styrene	11.0		ug/L	10.00	ND	110	65-135			
tert-Butylbenzene	10.5		ug/L	10.00	ND	105	70-130			
Tetrachloroethene	10.7		ug/L	10.00	ND	107	45-150			
Toluene	9.6		ug/L	10.00	ND	96	75-120			
trans-1,2-Dichloroethene	9.0		ug/L	10.00	ND	90	60-140			
trans-1,3-Dichloropropene	8.1		ug/L	10.00	ND	81	55-140			
Trichloroethene	9.5		ug/L	10.00	ND	95	70-125			
Trichlorofluoromethane	7.9		ug/L	10.00	ND	79	60-145			
Vinyl Chloride	9.0		ug/L	10.00	ND	90	50-145			
Xylene O	10.6		ug/L	10.00	ND	106	80-120			
Xylene P,M	21.9		ug/L	20.00	ND	110	75-130			
Surrogate: 1,2-Dichloroethane-d4	*19.0*		ug/L	*25.00*		*76*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*23.5*		ug/L	*25.00*		*94*	*75-120*			
Surrogate: Dibromofluoromethane	*20.5*		ug/L	*25.00*		*82*	*85-115*			*S-*
Surrogate: Toluene-d8	*25.6*		ug/L	*25.00*		*103*	*85-120*			
Matrix Spike Dup Source: 1007113-01										
1,1,1,2-Tetrachloroethane	9.7		ug/L	10.00	ND	97	80-130	1	30	
1,1,1-Trichloroethane	9.3		ug/L	10.00	ND	93	65-130	1	30	
1,1,2,2-Tetrachloroethane	9.5		ug/L	10.00	ND	95	65-130	2	30	
1,1,2-Trichloroethane	8.4		ug/L	10.00	ND	84	75-125	12	30	
1,1-Dichloroethane	9.5		ug/L	10.00	ND	95	70-135	0.9	30	
1,1-Dichloroethene	10.5		ug/L	10.00	ND	105	70-130	3	30	
1,1-Dichloropropene	9.7		ug/L	10.00	ND	97	75-130	2	30	
1,2,3-Trichlorobenzene	10.0		ug/L	10.00	ND	100	55-140	5	30	
1,2,3-Trichloropropane	9.5		ug/L	10.00	ND	95	75-125	0.2	30	
1,2,4-Trichlorobenzene	9.7		ug/L	10.00	ND	97	65-135	7	30	
1,2,4-Trimethylbenzene	10.7		ug/L	10.00	ND	107	75-130	2	30	
1,2-Dibromo-3-Chloropropane	8.7		ug/L	10.00	ND	87	50-130	5	30	
1,2-Dibromoethane	10.0		ug/L	10.00	ND	100	80-120	5	30	
1,2-Dichlorobenzene	9.9		ug/L	10.00	ND	99	70-120	1	30	
1,2-Dichloroethane	8.5		ug/L	10.00	ND	85	70-130	0.8	30	
1,2-Dichloropropane	9.7		ug/L	10.00	ND	97	75-125	5	30	
1,3,5-Trimethylbenzene	11.0		ug/L	10.00	ND	110	75-130	7	30	
1,3-Dichlorobenzene	9.7		ug/L	10.00	ND	97	75-125	0.1	30	
1,3-Dichloropropane	10.5		ug/L	10.00	ND	105	75-125	0.8	30	
1,4-Dichlorobenzene	9.5		ug/L	10.00	0.2	93	75-125	1	30	

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St

ESS Laboratory Work Order: 1007113

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CG01304 - 5030B										
Xylene P,M	22.1		ug/L	20.00	ND	110	75-130	0.7	30	
Surrogate: 1,2-Dichloroethane-d4	*19.4*		ug/L	*25.00*		*78*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*24.5*		ug/L	*25.00*		*98*	*75-120*			
Surrogate: Dibromofluoromethane	*20.8*		ug/L	*25.00*		*83*	*85-115*			*S-*
Surrogate: Toluene-d8	*25.1*		ug/L	*25.00*		*100*	*85-120*			
Classical Chemistry										
Batch CG01416 - General Preparation										
Blank										
Total Suspended Solids	ND	5	mg/L							
LCS										
Total Suspended Solids	28		mg/L	30.70		91	80-120			
Duplicate **Source: 1007113-01**										
Total Suspended Solids	ND	5	mg/L		ND				20	

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St ESS Laboratory Work Order: 1007113

Notes and Definitions

U	Analyte included in the analysis, but not detected
S-	Surrogate recovery(ies) below lower control limit (S-).
M+	Matrix Spike recovery is above upper control limit (M+).
J	Reported between MDL and MRL; Estimated value.
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
B	Present in Method Blank (B).
ND	Analyte NOT DETECTED above the detection limit (LOD for DoD Reports)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
LOD	Limit of Detection
[CALC]	Calculated Analyte

CERTIFICATE OF ANALYSIS

Client Name: U.S. Army Corps of Engineers
Client Project ID: NBH Sawyer St ESS Laboratory Work Order: 1007113

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/labs/waterlabs-instate.php

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/out_state.pdf

Maine Potable and Non Potable Water: RI0002
http://www.maine.gov/dep/blwq/topic/vessel/lab_list.pdf

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/labcert/labcert.aspx

New Hampshire (NELAP accredited) Potable and Non PotableWater, Solid and Hazardous Waste: 2424
http://www4.egov.nh.gov/des/nhelap/namesearch.asp

New York (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

United States Department of Agriculture Soil Permit: S-54210

Maryland Potable Water: 301
http://www.mde.state.md.us/assets/document/WSP_labs-2009apr20.pdf

South Carolina Volatile Organic Compounds in Potable Water: 78003

New Jersey Potable (VOA) and Non Potable Water (RCRA), Solids and Hazardous Waste: RI002
http://www.nj.gov/dep/oqa/certlabs.htm

Pensylvania Potable and Non Potable Water, Solid and Hazardous Waste: 68-01752
http://files.dep.state.pa.us/RegionalResources/Labs/LabsPortalFiles/2009-0911_accredited_laboratories.pdf

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston, RI 02910-2211
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Page 1 of 1

Turn Time: X Standard Other ____
If faster than 5 days, prior approval by laboratory is required # ____
State where samples were collected from: MA RI CT NH NJ NY ME Other ____
Is this project for any of the following: MA-MCP Navy USACE Other ____

Reporting Limits

ESS LAB PROJECT ID: 1007113

Electronic Deliverable Yes ___ No ___
Format: Excel __ Access __ PDF __ Other ____

Co. Name	DAVID WALSH / WOODS HOLE GROUP
Project #	
Project Name (20 Char. or less)	New Bedford Harbor
Contact Person	Collected for USACE (M. KOENIG)
Address	81 TECHNOLOGY PARK DR.
City	E. PALMOUTH
State	MA
Zip	02536
PO#	
Telephone #	508-540-8080
Fax #	508-540-1001
Email Address	DWALSH@WHGRP.COM

Write Required Analysis

ESS LAB Sample #	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Number of Containers	Type of Containers	PCB Aroclors	VOCs	Metals (Cu Cr Cd Pb)	TSS
1	7/8/10	1610			GW	MW-005-070810	1	2	G	X			
1	7/8/10	1610				MW-005-070810	2	6	V		X		
1	7/8/10	1610				MW-005-070810	4	1	P			X	
1	7/8/10	1610				MW-005-070810	1	1	P				X
2	7/8/10	1610				~~MW-005-070810~~ TB-070810	1	1	V		X		

Container Type: P-Poly G-Glass S-Sterile V-VOA | Matrix: S-Soil SD-Solid D-Sludge WW-Waste Water GW-Ground Water SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filters

Cooler Present: ✓ Yes ___ No
Seals Intact: ___ Yes ___ No NA: ✓
Cooler Temp: 2.0°C Ice
Internal Use Only: [✓] Pickup [ ] Technicians ____

Preservation Code: 1- NP, 2- HCl, 3- H_2SO_4, 4- HNO_3, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- ____

Sampled by: Mike Walsh

Comments: TB-070810 is a TRIP BLANK, PLEASE REPORT / INVOICE TO USACE-NAE M. KOENIG @

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	7/9/10 1030	[signature]	7/9/10 1030	[signature]	7/9/10 1344	[signature]	7/9/10 14:40
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

*By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM VII A

Please fax all changes to Chain of Custody in writing.

1 (White) Lab Copy 2 (Yellow) Client Receipt

10/26/04 A.

FINAL
SEDIMENT TRAP STUDY SUMMARY REPORT
2010 REMEDIAL DREDGING
NEW BEDFORD HARBOR SUPERFUND SITE, OU #1

Contract No. W912WJ-09-D-0001-0010-03



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

April 2011

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FINAL
SEDIMENT TRAP STUDY SUMMARY REPORT
2010 REMEDIAL DREDGING
NEW BEDFORD HARBOR SUPERFUND SITE
OPERATIONAL UNIT #1
NEW BEDFORD, MASSACHUSETTS

Contract No. W912WJ-09-D-0001-0010-03

April 2011

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

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Table of Contents

EXECUTIVE SUMMARY ES-1

1.0 INTRODUCTION 1

1.1 SITE LOCATION AND DESCRIPTION 1

1.2 PROJECT OBJECTIVES AND SCOPE 3

2.0 METHODS 5

2.1 STUDY AREA AND DESIGN 5

2.2 FIELD METHODS 7

2.2.1 Sediment Trap Deployment and Retrieval 7

2.2.2 Surface Sediment Sampling 8

2.3 LABORATORY METHODS 9

2.3.1 Polychlorinated Biphenyl Analyses 9

2.3.2 Grain Size Analyses 10

2.3.3 Total Organic Carbon Analyses 10

2.4 QUALITY ASSURANCE/QUALITY CONTROL 10

2.4.1 Decontamination 10

2.4.2 Field-Based Quality Control Samples 11

2.4.3 Laboratory-Based Quality Control Samples 11

3.0 RESULTS 13

3.1 FIELD SAMPLING SUMMARY 13

3.2 QUANTITATIVE SEDIMENT ANALYSES 17

3.2.1 Mass Accumulation 17

3.2.2 PCB Concentrations 17

3.2.3 Grain Size and Total Organic Carbon (TOC) 19

4.0 DISCUSSION 21

4.1 SEDIMENT DEPOSITION AND PHYSICAL CHARACTERISTICS 21

4.2 POLYCHLORINATED BIPHENYLS 23

4.3 DISCUSSION SUMMARY 25

5.0 REFERENCES 27

APPENDIX A. *IN-SITU* SEDIMENT TRAP DEPLOYMENT AND SURFACE GRAB SAMPLING LOG SHEETS (ON CD) A-1

APPENDIX B. ENVIROSYSTEMS, INC. REPORTS AND ANALYTICAL DATA (ON CD) B-1

APPENDIX C. ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA (ON CD) C-1

APPENDIX D. NEW ENVIRONMENTAL HORIZONS, INC. SATA VALIDATION REPORTS (ON CD) D-1

List of Figures

Figure 1. Basemap of New Bedford Harbor Superfund Site 1
Figure 2. Basemap of 2010 Remediation Dredging Areas 3
Figure 3. 2010 Sediment Trap Stations 6
Figure 4. Recovered Sediment Trap Assembly 8
Figure 5. Process of Collecting and Sampling Co-located Surface Sediment Grabs 9
Figure 6. Sediment Deposition Rate by Deployment Period 22
Figure 7. Total Organic Carbon Concentrations for Traps and Surface Grabs 23
Figure 8. PCB Flux 24
Figure 9. PCB Concentrations in Sediment Trap Samples and Co-located Surface Grab Samples 25

List of Tables

Table 1. Summary of Sediment Trap Deployments 13
Table 2. Summary of *In-Situ* Water Quality Data 15
Table 3. Summary of Sediment Trap Sample Accumulation 17
Table 4. Summary of Sediment Trap Analytical Results 18
Table 5. Summary of Surface Sediment Grab Analytical Results 18
Table 6. Summary of Physical Results for Sediment Trap and Surface Sediment Grab Samples 19
Table 7. Summary of Sediment Deposition Rates and Total PCB Flux 22

EXECUTIVE SUMMARY

Suspended sediment monitoring was performed for eight months during the 2010 dredge season as part of the Environmental Monitoring, Sampling and Analysis for the New Bedford Harbor Superfund Site. Sediment trap samplers were positioned in three locations within the upper harbor with the goal of characterizing the chemical and physical properties of sediments that are actively transported in the estuary. The study area extended from the previously remediated area north of Wood Street (NWS), south to the Coggeshall Street and Interstate-195 bridges, and spanned six active remediation locations.

Two sediment trap samplers were deployed at each of three stations within the study area. The northernmost station, ST-001 was located 100 feet north of the Wood Street Bridge. The centralized station, ST-002/ST-004 was initially located in the center of Dredge Area K but was later moved south of Area K when active dredging began in Area K. The southernmost station, ST-003 was located 300 feet south of the I-195 Bridge in the Lower Harbor, adjacent to a sediment trap maintained by the City of New Bedford. The traps were initially deployed on March, 25, 2010, followed by routine sample collection events (approximately every 7 weeks) on May 5th, July 14th, August 25th, and September 30th. The final recovery of the sediment traps occurred on November 22, 2010. The length of the study period allowed for samples to be collected during active and non-active remediation periods. Sampling during both time periods provides a valuable assessment of the site condition and allows for a better understanding of potential impacts that ongoing remediation activities may have on the estuarine system. Co-located surface sediments were collected each time the sediment traps were recovered and deployed to represent an integrated measurement of newly deposited sediment characteristics and PCB concentration.

Sediment trap samples were processed to determine the total particulate mass accumulated over the deployment period, this information was in turn used to calculate sediment deposition rates at each station. The accumulated sediment was analyzed for PCB congeners (NOAA-18), total organic carbon (TOC), and grain size. All co-located surface sediment samples were analyzed in the same manner. Sediment deposition rates in the traps were highest at ST-003 and lowest at ST-001. Stations at ST-003 and ST-002/ST-004 followed very similar accumulation patterns, even though ST-003 was located over one-half mile south of any dredge-related activity, and ST-002/ST-004 was located just 300 feet south of active remediation. The sediment deposition rates observed in the 2010 season are consistent with the rates observed in 2009. Results from the five deployments during the 2010 season show peaks in deposition rates from May-July and August-September, and a decrease in deposition rate from July-August.

Sediment trap samples were generally comprised of fine-grained sediments (clay and silt), with a minimal coarse-grained content. Surface sediments were poorly sorted and comprised of higher percentages of sand and gravel, when compared to co-located sediment trap samples. Concentrations of TOC were very similar among all stations and sample types.

PCB flux is defined in this study as the daily deposition rate of PCBs contaminated sediments from the water column to the bottom sediments. PCB flux was quantified

using the calculated sediment deposition rate ($g/m^2/day$) and the total PCB concentration of the sediment trap sample. PCB flux at the northernmost (ST-001) and southernmost (ST-003) locations remained relatively constant throughout the dredge season, averaging 10.03 and 7.54 $mg/m^2/day$, respectively. PCB flux was highest at the central trap station (ST-002/ST-004), with a mean rate of 37.68 $mg/m^2/day$. PCB flux at this station was significantly greater than at other stations.

Statistical comparison between the co-located sediment trap and grab samples revealed that PCB concentrations were comparable, with no significant difference in PCB concentration between the two. This suggests that sediments deposited in the trap samplers are representative of the material that has accumulated on the estuary floor.

The analytical data reveals three distinct trends, 1) highest sediment deposition rates at the southern station (ST-003), 2) highest PCB flux at the central station, and 3) uniformity between co-located sediment traps and grabs.

1.0 INTRODUCTION

1.1 SITE LOCATION AND DESCRIPTION

The New Bedford Harbor Superfund 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.

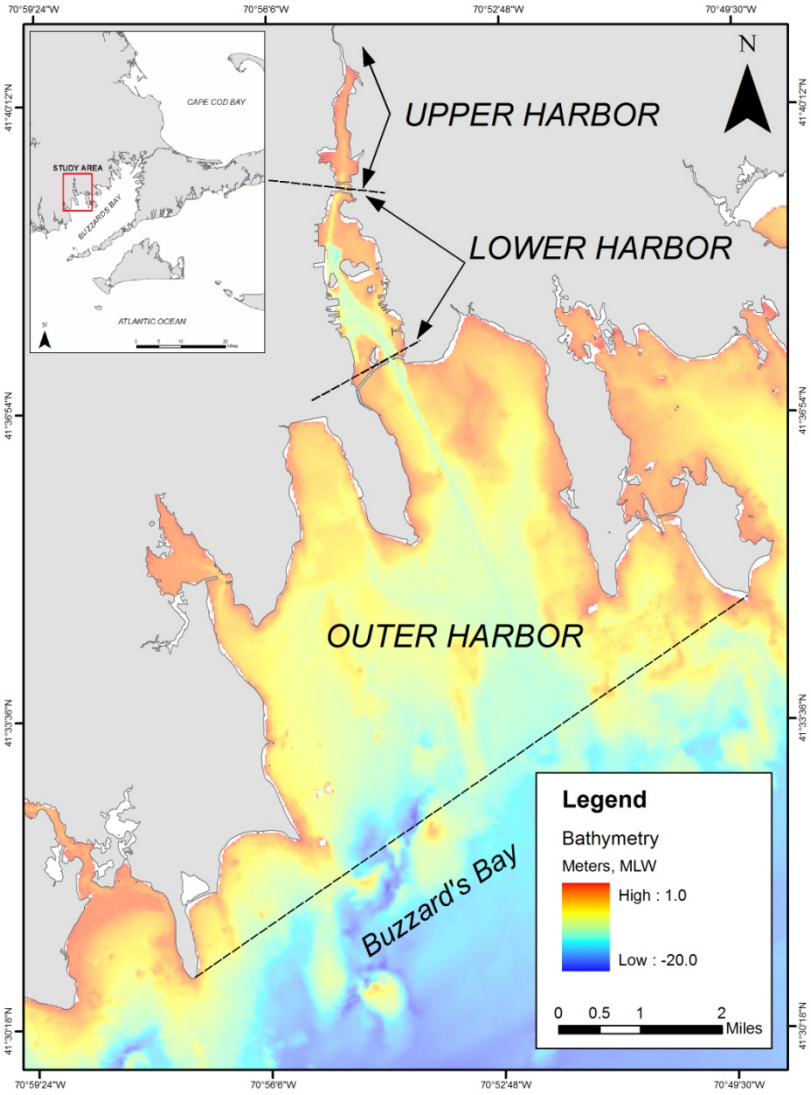

Figure 1. Basemap of New Bedford Harbor Superfund Site

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.

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 sources of the PCB contamination have been attributed to two electrical capacitor manufacturing facilities that operated between the 1940s and the 1970s. One facility, Aerovox Corporation, is located near the northern boundary of the Site and is the primary source of PCB s to the harbor, 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 and gradients of contamination (Figure 1). 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 the removal of the most contaminated hot spot sediments in 1994 and 1995 as part of EPA's first cleanup phase, 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 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).

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 2010, remediation activities at the Site included hydraulic dredging and/or debris removal in six areas: M, G, J, N, K and L (Figure 2). Five of the six areas (Areas M, G, J, N, and K) that were dredged during the 2010 season were in the vicinity of the Aerovox facility. These areas comprised the majority of the estuary between the Wood Street Bridge and the Aerovox facility. The sixth area, Area L, is located south of the submerged cable crossing.

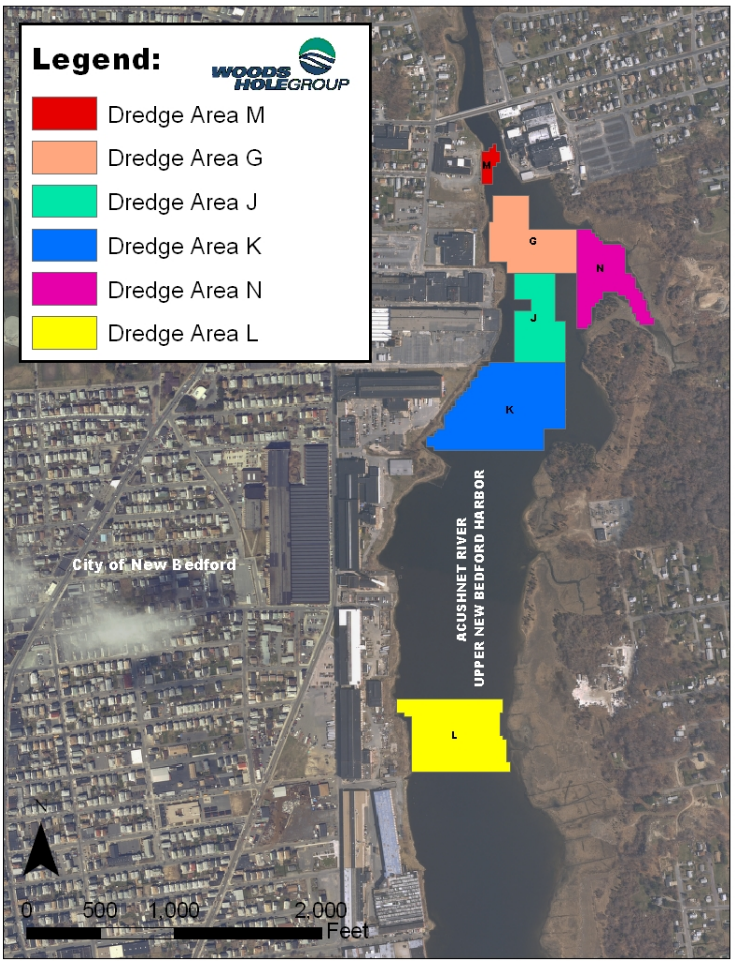

Figure 2. Basemap of 2010 Remediation Dredging Areas

The re-suspension of sediments during dredging, and dredging related activities, can transport contaminated sediments away from the dredge area. Additionally, contaminated sediments suspended in the water column present a concern for toxicity to aquatic organisms in the area.

The primary objective of the 2010 sediment trap study was to assess sedimentation rates throughout the Upper Harbor and evaluate the potential for redistribution or transport of contaminated sediments through re-suspension caused by dredging. The goal of this program was to monitor PCB concentrations in suspended sediments captured in the traps to help determine whether PCB contamination is being transported into areas of lower PCB concentrations south of the Coggeshall Street Bridge, as well as previously remediated areas such as north of Wood Street (NWS).

Changes in sedimentation rates and contaminant concentrations observed at the sediment trap stations could be associated with a number of processes, including but not limited to: 1) re-suspension of contaminated material by remedial dredging activities; 2) naturally occurring movement of suspended sediments in the harbor (e.g., river flow, tides, winds, etc.); and 3) upland sources such as combined sewer overflows (CSOs). Analytical data collected to support the study objectives included: sediment grain size; total organic carbon (TOC) concentration; and polychlorinated biphenyls (PCBs) concentrations. Analytical tests were conducted on sediment trap samples and adjacent surface sediments collected at each trap location. *In-situ* water quality measurements (e.g., turbidity) were recorded during sediment trap deployment and recovery to establish typical baseline water quality standards at each site.

2.0 METHODS

The study design and methods used to collect and analyze sediment trap and surface sediment samples are summarized in this section and described in detail in the project Field Sampling Plan (Woods Hole Group 2010a) and Quality Assurance Project Plan (Woods Hole Group 2010b).

2.1 STUDY AREA AND DESIGN

The 2010 sediment trap study area spanned the previously remediated area north of Wood Street (NWS) south through upper New Bedford Harbor to the Coggeshall Street and Interstate-195 bridges. This area included the entire active remediation dredge locations and combined sewer overflows (CSOs). North of the Wood Street Bridge, the estuary is shallow and the narrow channel is flanked with steep marsh banks. As the estuary widens to the south, the western shoreline becomes more industrialized. This portion of the upper harbor contained the highest concentrations of PCB contamination, and is the active remediation site. South of the Coggeshall Street and I-195 bridges, the river opens into the lower harbor, where harbor sediment PCB concentrations are generally much lower, typically below 100 ppm.

The sediment trap study was performed over an eight month period in 2010, with individual deployments during active dredging periods and demobilization of dredge-related equipment. Sediment trap samplers were deployed at three stations within the study area (Figure 3). The northernmost station, ST-001 was located 100 feet north of the Wood Street Bridge. The centralized station was originally named ST-002 when it was located 300 feet south of Dredge Area J in Dredge Area K, but was subsequently renamed to ST-004 after being repositioned midway through the dredge season to a location 300 feet south of Dredge Area K once dredging commenced in Dredge Area K. The southernmost station, ST-003, was located about 300 feet south of the I-195 Bridge, adjacent to a sediment trap maintained by the City of New Bedford. Sediment traps were recovered once a sufficient quantity of suspended sediment material had accumulated (usually seven weeks) to meet mass requirements for physical and chemical testing. Co-located surface sediments were collected each time the sediment traps were recovered and deployed to represent an integrated measurement of newly deposited sediment characteristics and PCB concentration.

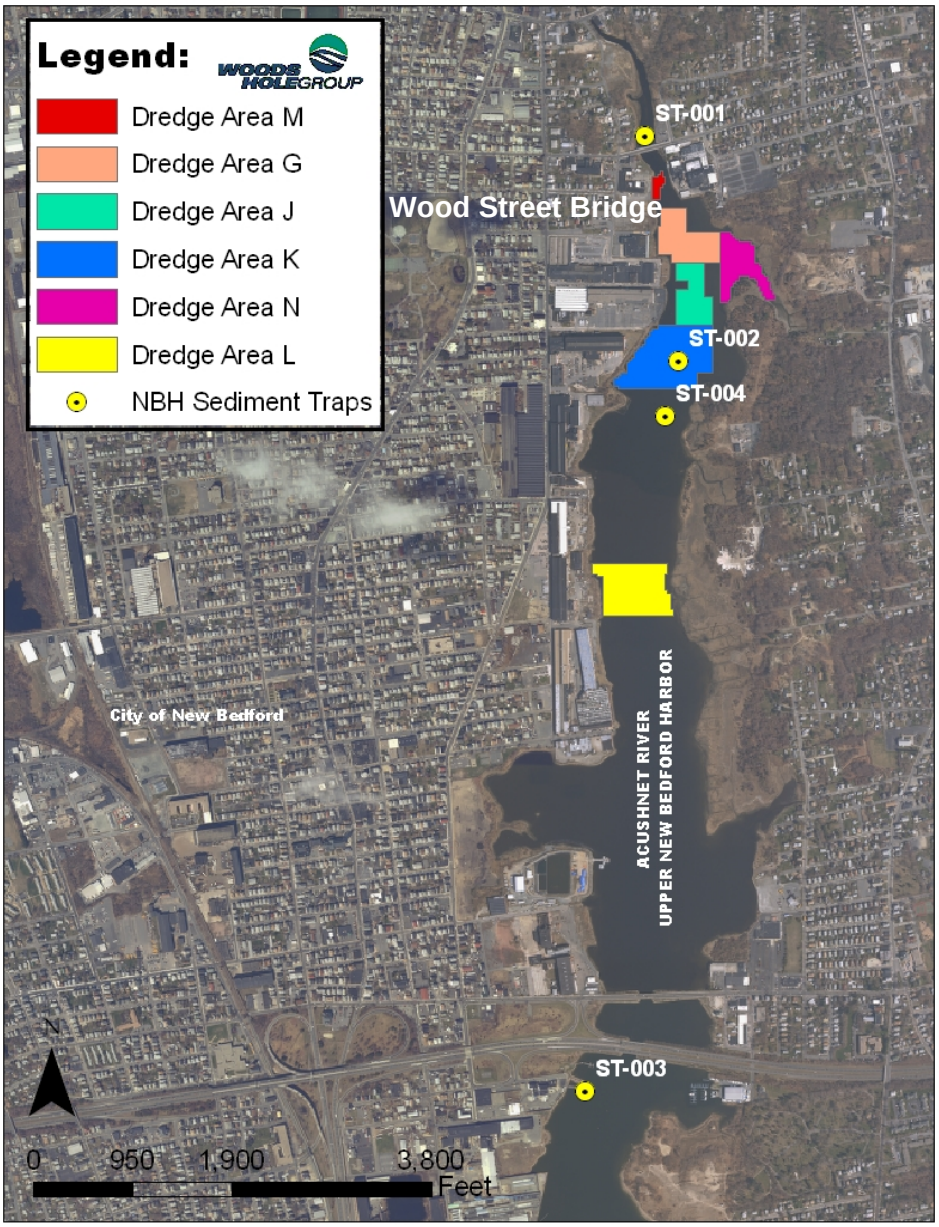

Figure 3. 2010 Sediment Trap Stations

All sediment samples (traps and surface sediment grabs) were analyzed for grain size, TOC, and PCB congeners, which were reported using the NOAA-18 PCB congener list (Woods Hole Group 2010b). As part of a separate project monitoring task, continuous in-situ water quality monitoring was performed at two of the three stations using co-located moored instruments to collect temperature, salinity, dissolved oxygen (DO) and turbidity data. During deployment and recovery, *in-situ* water quality measurements were also manually recorded at all stations. Other field data including sampling location, sample deployment and collection date, and sample depth were recorded on the field logs.

2.2 FIELD METHODS

2.2.1 Sediment Trap Deployment and Retrieval

Two sediment traps were deployed for approximately 7 weeks (49 days) at each station to ensure the collection of adequate material volume for analysis. All information pertaining to the deployment and retrieval of sediment traps was recorded in the Woods Hole Group field log book. Following sediment trap deployment at each station, an in-situ profile of turbidity, temperature, dissolved oxygen, and salinity measurements was recorded on the sediment trap deployment and surface grab sampling log sheets. (Appendix A). A Garmin GPS Map 76CSx was used to record the geographic positions of the stations.

Each sediment trap sampler consisted of a one gallon, wide mouth plastic jar with a funnel affixed to the mouth. The outer diameter of the funnel was 8 inches. The jar/funnel assembly was secured inside a weighted plastic bucket. This configuration placed the opening of the trap (mouth of the funnel) approximately 1.5 feet above the sediment water interface. Figure 4 depicts the sediment trap assembly following recovery. A line from the weighted bucket was used to lower the assembly to the bottom under control and ensure an upright deployment. During deployment, clean sediment traps were lowered slowly through the water column and placed gently on the bottom. This process was important to minimize re-suspension of sediments during deployment of the trap. A small float secured to the line kept the line buoyant to prevent it from fouling the trap. This line was attached to a surface marker buoy.

Sediment traps were retrieved after a deployment period of approximately seven-weeks, provided that a sufficient quantity of material had accumulated in the traps. Based on visual observation of traps, approximately 50 grams (g) of wet material was required to meet mass requirements for physical and chemical testing. During sediment trap retrieval, the traps were pulled to the surface in a slow, controlled manner using the surface buoy line. Every effort was made to minimize disturbance of sediments within the trap. After the traps were secured aboard the vessel, the funnel was gently removed, and a cap was placed on the 1-gallon jar. The caps were secured with tape to ensure no sediment or water was lost from the jars. Samples were kept cold (4°C) and transported under chain of custody to EnviroSystems Inc. (ESI) for dewatering and processing. At ESI, the two sample containers from each station were composited into one sediment sample. Reports from this process are available in Appendix B. These reports document the total wet sample weight and a benthic fauna count and description. The benthic fauna count and description was conducted as a routine part of the processing at ESI, these data are not incorporated as part of this study. Following sample processing at ESI, samples were transported by courier to Alpha Analytical Labs (AAL). At AAL, samples were analyzed for grain size, TOC, and PCB congeners (NOAA-18).



Figure 4. Recovered Sediment Trap Assembly

2.2.2 Surface Sediment Sampling

Surface sediment samples were collected at each of the three sediment trap locations to represent an integrated measurement of actual surface sediment characteristics and PCB concentrations before and after sediment trap sample collection. Co-located surface sediment samples were compared to sediment trap samples to determine if sediments deposited in the trap samplers are representative of the material accumulated on the adjacent estuary floor. Figure 5 contains a series of photographs depicting the surface sediment sampling process. Sediment was collected using a stainless-steel petite PONAR grab sampler. Each surface sediment sample was inspected to ensure the sample surface was undisturbed and representative of the sediment-water interface (Figure 5-A). Sediment was sampled using a pre-cleaned stainless steel spoon to scoop the top 0–2 cm of sediment in the grab (Figure 5-B). Often times, more than one grab was necessary to collect enough material for all chemical and physical analyses. The PONAR grab and sub-sampling process was repeated multiple times to ensure enough sediment was collected for all required samples (Figure 5-C). Sediment was homogenized prior to sample collection by stirring with a stainless steel spoon in a clean stainless steel container (Figure 5-D). Samples were spooned into the appropriate sample containers, stored on ice (4°C), and transported to Alpha Analytical Labs (AAL) under chain of custody. At AAL, samples were analyzed for grain size, TOC, and PCB congeners (NOAA-18).



Figure 5. Process of Collecting and Sampling Co-located Surface Sediment Grabs

2.3 LABORATORY METHODS

2.3.1 Polychlorinated Biphenyl Analyses

The methods used by the laboratory are summarized below and detailed in Alpha Analytical Laboratories SOP O-012 and the USEPA's SOP EIA-FLDPCB2 in the Quality Assurance Project Plan (Woods Hole Group, 2010b).

Upon sample preparation, an aliquot of a well-mixed, homogeneous sediment sample is accurately measured for sample preparation. Generally, 50 g 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 Aminoprpyl, 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 a modified USEPA Method 8082 (Woods Hole Group 2010b). 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) and Pattern Recognition (PR). Concentrations are calculated from the ECD response using internal standard techniques. Sample results were reported in micrograms per kilogram (µg/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.

2.3.2 Grain Size Analyses

Grain size analysis was done using both wet sieve and hydrometer methods, based on methods in ASTM D422-63. Particle size *without hydrometer* (sometimes referred to as Grain Size Analysis) is determined by mechanically sieving a dried, homogenized sample with an array of sieves. The distribution of soil sample remaining on each of the sieves is determined by weight and represents the various classes of soil including cobble, gravel, course and fine sand, silt and clay. Particle size *with hydrometer* is determined by first homogenizing samples in sodium hexametaphosphate solution. A hydrometer test is then performed to define the fraction of sample in the silt and clay size range. The sample from the hydrometer test is transferred to a number 200 sieve and washed with tap water to remove all particles less than 75 um. The sample remaining on the number 200 sieve is then re-dried, re-homogenized and mechanically sieved with an array of sieve sizes that define the medium and fine sands present in the sample. Details on the analysis are included in Alpha Lab SOP W-029, Rev. 0, 7/17/06.

2.3.3 Total Organic Carbon Analyses

TOC was analyzed using USEPA Method 9060 and 415.1. Details are provided in Alpha Lab SOP W-028, Rev. 2.0. With this method, a sample is homogenized, dried, and pre-treated with phosphoric acid to convert the inorganic carbon (i.e., carbonate and bicarbonate in the form of CO_2) prior to analysis. The sample is then re-dried, and organic carbon is measured using combustion and a carbonaceous analyzer. Prior to combustion, the sample is oxidized in a pure oxygen environment. The carrier gas (O_2) is combined with the carbon content of the combusted sample to form CO_2. The measured amount of CO_2 derived from the sample is directly proportional to the concentration of organic carbonaceous material in the sample.

2.4 QUALITY ASSURANCE/QUALITY CONTROL

2.4.1 Decontamination

All of the sampling equipment was decontaminated prior to use in the field and between stations to prevent cross-contamination. The decontamination procedure specified in EPA Region II, CERCLA Quality Assurance Manual from October 1989, Revision 1 was

implemented prior to each station for sampling equipment that came into direct contact with the media to be sampled (e.g., PONAR grab sampler, stainless steel bowls, spoons, etc.). The EPA Region II procedures used for decontamination are summarized below (solvents used during decontamination activities were collected and stored for disposal at the laboratory):

1) Rinse with tap water (or site water on board)
2) Clean with non-phosphate soap (Liquinox) and tap water (or site water)
3) Rinse with tap water (or site water on board)
4) Rinse with Isopropanol
5) Let air-dry

2.4.2 Field-Based Quality Control Samples

Replicate samples of the surface grabs were collected at one of the three stations during each sampling event. The purpose of these samples was to ensure field procedures did not affect the quality of the data. Replicate samples were used to evaluate the sampling procedure and analytical precision. The replicate samples were collected using the same techniques, and were handled, containerized, preserved, stored and transported in the same manner as field samples. All samples were analyzed by the same laboratory.

2.4.3 Laboratory-Based Quality Control Samples

A routine suite of laboratory-based quality control (QC) samples were prepared with each set of field samples to evaluate data quality in terms of accuracy and precision. Grain size QC samples consisted of one laboratory duplicate sample for each batch of 20 or fewer samples. Quality control samples for TOC consisted of one method blank and one laboratory duplicate sample for each batch of 20 or fewer samples. Quality control samples for PCB analysis included one procedural blank (also called a method blank or procedural method blank), one laboratory control sample (LCS), one matrix spike (MS) and one matrix spike duplicate (MSD) for each batch of 20 or fewer samples. Surface sediment sample data were validated by a third party to Tier I+ standards for entry into the New Bedford Harbor Superfund Site Database. Sediment trap data were not validated.

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3.0 RESULTS

This section summarizes results from the sediment trap study. Complete analytical results are provided in Appendix C of this report. Validated data from surface grab samples are provided in Appendix D.

3.1 FIELD SAMPLING SUMMARY

A total of five deployments were performed at each of the three sample locations during the eight month study. Sediment traps were recovered for analysis after approximately seven weeks (49 days). The traps were initially deployed on March, 25, 2010, followed by routine sample collection events on May 5th, July 14th, August 25th, and September 30th. Final recovery of the sediment traps occurred on November 22, 2010. Table 1 provides a summary of each sample collection event.

Table 1. Summary of Sediment Trap Deployments

Deployment Period	Deployment Duration (days)	Station ID	Station Location	Remediation Activities	Sample ID
03/25/10 - 05/11/10	46	ST-001	41° 40.719' N 70° 55.021' W	No Activity	S-10Y-T001-0-0
		ST-002	41° 40.365' N 70° 54.955' W		S-10Y-T002-0-0
		ST-003	41° 39.218' N 70° 55.161' W		S-10Y-T003-0-0
05/11/10 - 07/14/10	64	ST-001	41° 40.719' N 70° 55.021' W	Dredging and Debris Removal in Areas G and J, Dredging in Area L, Debris Removal in Area N	S-10L-T001-0-0
		ST-002	41° 40.365' N 70° 54.955' W		S-10L-T002-0-0
		ST-003	41° 39.218' N 70° 55.161' W		S-10L-T003-0-0
07/14/10 - 08/25/10	42	ST-001	41° 40.719' N 70° 55.021' W	Dredging and Debris Removal in Area K, Dredging in Area J and G, Excavating in Area M	S-10G-T001-0-0
		ST-004	41° 40.279' N 70° 54.983' W		S-10G-T002-0-0
		ST-003	41° 39.218' N 70° 55.161' W		S-10G-T003-0-0
08/25/10 - 09/30/10	36	ST-001	41° 40.719' N 70° 55.021' W	Dredging and Debris Removal in Area K, Dredging in Area G, Debris Removal in Area N	S-10S-T001-0-0
		ST-004	41° 40.279' N 70° 54.983' W		S-10S-T002-0-0
		ST-003	41° 39.218' N 70° 55.161' W		S-10S-T003-0-0
09/30/2010 - 11/22/2010	55	ST-001	41° 40.719' N 70° 55.021' W	No Activity	S-10S-T001-0-0
		ST-004	41° 40.279' N 70° 54.983' W		S-10S-T002-0-0
		ST-003	41° 39.218' N 70° 55.161' W		S-10S-T003-0-0

Co-located surface sediment samples were collected from the top 0–2 cm of sediment using a petite PONAR grab sampler before each sediment trap deployment. A final set of surface grab samples was collected on November 22, 2010 although no new trap samplers were deployed at that time.

All sediment trap samples were processed to determine the total particulate mass accumulated over the deployment period, this information was used to calculate sediment deposition rates at each station. The accumulated sediment was analyzed for PCB congeners (NOAA-18), total organic carbon (TOC), and grain size. All co-located surface sediment samples were analyzed in the same manner.

A water quality profile was recorded upon deployment and recovery of each set of sediment trap samplers. Profile parameters were recorded on field log sheets at various depths to characterize the water column in the vicinity of the sample location. Recorded water quality parameters included: depth; turbidity; dissolved oxygen (DO); salinity; and temperature. If the water was particularly shallow, only surface and bottom readings were recorded. The field log sheets containing these data are provided in Appendix A and summarized in Table 2.

Table 2. Summary of *In-Situ* Water Quality Data

Station	Water Depth (ft)	Sample Depth (ft)	Turbidity (NTU)*	DO (mg/L)	Salinity (ppt)	Temperature (°C)
March 25, 2010						
ST-001	4.1	1.01	0.8	11.51	0.08	9.86
		3.45	1.0	11.33	0.11	9.86
ST-002	4.4	1.49	1.4	11.20	2.81	9.59
		2.50	1.7	11.10	4.27	9.54
		3.93	4.1	10.83	29.69	7.32
ST-003	18.3	1.55	1.2	10.69	23.95	7.47
		8.99	1.2	10.21	31.53	6.46
		17.35	1.2	9.94	35.04	5.62
May 11, 2010						
ST-001	3.0	0.20	2.3	11.38	20.67	14.80
		1.20	2.9	10.85	27.27	15.28
		2.20	5.5	10.83	27.79	15.16
ST-002	N/A	N/A	N/A	N/A	N/A	N/A
ST-003	19.0	1.12	1.0	10.38	28.11	14.07
		6.13	1.3	10.16	28.72	13.37
		13.02	2.4	9.43	29.76	12.98
		17.65	2.8	8.47	29.91	12.87
July 14, 2010						
ST-001	4.3	0.72	8.2	6.47	26.99	26.97
		3.14	4.5	2.12	28.17	26.91
		5.25	4.2	1.68	28.30	26.97
ST-004	4.4	1.20	4.1	5.02	27.38	25.95
		3.84	3.9	4.64	27.93	25.97
		5.97	4.6	3.67	29.22	26.06
ST-003	21.3	0.91	4.1	4.98	29.46	26.41
		7.78	5.4	4.93	29.52	26.39
		16.98	5.3	4.84	29.75	26.27
August 25, 2010						
ST-001	6.0	0.58	1.2	6.14	10.98	20.48
		2.75	4.2	3.88	26.83	21.45
		4.33	5.6	2.20	27.53	21.45
ST-004	6.5	0.66	19.4	3.62	25.50	21.54
		3.06	12.1	3.13	28.27	21.41
		4.52	14.8	3.75	28.52	21.42
ST-003	18.5	1.07	1.6	5.72	28.41	22.77
		7.55	1.8	5.06	28.92	21.69
		17.45	5.7	4.71	29.59	21.46
September 30, 2010						
ST-001	6.3	1.01	3.4	9.25	19.51	22.22
		2.80	3.0	8.81	26.21	22.13
		5.02	3.4	6.22	28.88	21.95
ST-004	6.5	1.06	2.6	7.76	30.16	22.09
		3.05	2.6	7.76	30.17	22.09
		5.10	4.8	7.52	30.40	21.95
ST-003	16.5	1.05	1.8	6.60	31.59	21.37
		10.08	0.6	6.63	31.61	21.33
		15.54	0.9	6.64	31.60	21.34
November 22, 2010						
ST-001	6.1	1.05	-0.2	11.39	3.41	5.64
		2.99	-0.3	8.70	25.87	9.35
		5.55	-0.3	8.05	27.60	9.70
ST-004	7.1	1.20	-0.6	8.95	25.91	7.99
		3.01	-0.6	8.64	27.68	8.80
		6.51	-0.4	8.26	28.64	9.27
ST-003	15.5	1.15	0.0	9.31	29.27	8.55
		8.02	-0.3	9.03	29.29	8.56
		14.32	0.8	8.91	29.34	8.57

* Turbidity values are often negative when actual turbidity is near 0.0, this is a result of sensor calibration and sensitivity (±2% of reading or 0.3 NTU, whichever is greater)

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3.2 QUANTITATIVE SEDIMENT ANALYSES

3.2.1 Mass Accumulation

Mass accumulation in the sediment traps varied by location and deployment period. The wet mass of sediment in the traps ranged from 149.30 g at station ST-001 during Deployment 1 (March 25 – May 11, 2010) to 1345.92 g at station ST-003 during the second deployment (May 11 – July 14, 2010). Total solid percentages ranged from 81.2% at station ST-001 during Deployment 1 to 97.2% at the same station during the final deployment (Deployment 5).

During four of the five deployment periods, the sediment trap located south of the I-195 bridge (ST-003) accumulated the most sediment. The station north of Wood Street (ST-001) accumulated the lowest mass of sediment during four of the five deployments. Dry sediment mass data was calculated by multiplying the wet mass of sediment by the total percentage of solids.

The data presented in Tables 3 and 4 are representative of the actual sample recovered from each sediment trap. These data have not been normalized for trap surface area or deployment duration. During Deployment 3 one of the two traps at ST-003 was fouled, and only one trap sample was submitted for analysis (as opposed to creating a composite of the two traps at each station). The data are normalized for these variables in the sediment deposition and PCB flux calculations.

A priority of sample analytes was established due to the potential of limited sample collection, preventing sufficient volume for all three analytes. In the event of limited sample volume the analytical priority was: 1) PCB congeners (NOAA-18); 2) TOC; and 3) grain size.

Table 3. Summary of Sediment Trap Sample Accumulation

Deployment Period	Activity	Sample ID	Sediment Wet Weight (g)	Total Solids (%)	Sediment Dry Weight (g)
Deployment 1					
03/25/10 - 05/11/10	No Activity	S-10Y-T001-0-0	331.10	85.30	282.43
		S-10Y-T002-0-0	149.30	94.90	141.69
		S-10Y-T003-0-0	464.30	92.00	427.16
Deployment 2					
05/11/10 - 07/14/10	Dredging and Debris Removal in Area G and J, Dredging in Area L, Debris Removal in Area N	S-10L-T001-0-0	299.65	81.20	243.32
		S-10L-T002-0-0	457.67	93.70	428.84
		S-10L-T003-0-0	1345.92	91.40	1230.17
Deployment 3					
07/14/10 - 08/25/10	Dredging and Debris Removal in Area K, Dredging in Area J and G, Excavating in Area M	S-10G-T001-0-0	223.80	94.00	210.37
		S-10G-T002-0-0	376.30	84.90	319.48
		S-10G-T003-0-0	197.50	96.10	189.80
Deployment 4					
08/25/10 - 09/30/10	Dredging and Debris Removal in Area K, Dredging in Area G, Debris Removal in Area N	S-10S-T001-0-0	250.36	93.90	235.09
		S-10S-T002-0-0	223.49	96.90	216.56
		S-10S-T003-0-0	839.69	88.20	740.61
Deployment 5					
09/30/2010 - 11/22/2010	No Activity	S-10N-T001-0-0	326.77	97.2	317.62
		S-10N-T002-0-0	525.52	95.4	501.35
		S-10N-T003-0-0	777.02	97.1	754.49

3.2.2 PCB Concentrations

Sediment trap samples and co-located surface grab samples were analyzed for the NOAA-18 PCB congeners. Tables 4 and 5 summarize the trap and grab results,

respectively. Total PCB content was calculated by multiplying the sum of the NOAA-18 congeners by a known Upper and Lower New Bedford Harbor specific factor of 2.6. In the case of a non-detect for a particular congener, a value of zero was used during the summation.

Concentrations of PCBs in the sediment trap samples ranged from 20.94 mg/kg (ppm) to 281.28 mg/kg (ppm) over the 2010 season. Substantial variability in PCB concentrations was observed between the stations and deployment periods. Throughout the 2010 season the highest PCB concentrations were always collected at the central station ST-002/ST-004, while the lowest PCB concentrations were always collected at the southernmost station ST-003. A summary of the total concentration of total PCBs results for each sediment trap stations is provided in Table 4.

Table 4. Summary of Sediment Trap Analytical Results

Deployment Period	Activity	Sample ID	Sediment Dry Weight (g)	Total PCBs (mg/kg)	Total Organic Carbon (%)
Deployment 1					
03/25/10 - 05/11/10	No Activity	S-10Y-T001-0-0	282.43	26.81	5.51
		S-10Y-T002-0-0	141.69	57.21	5.57
		S-10Y-T003-0-0	427.16	20.94	3.92
Deployment 2					
05/11/10 - 07/14/10	Dredging and Debris Removal in Areas G and J, Dredging in Area L, Debris Removal in Area N	S-10L-T001-0-0	243.32	107.92	6.13
		S-10L-T002-0-0	428.84	233.01	4.58
		S-10L-T003-0-0	1230.17	32.65	4.03
Deployment 3					
07/14/10 - 08/25/10	Dredging and Debris Removal in Area K, Dredging in Areas J and G, Excavating in Area M	S-10G-T001-0-0	210.37	196.79	N/A
		S-10G-T002-0-0	319.48	281.28	N/A
		S-10G-T003-0-0	189.80	28.59	N/A
Deployment 4					
08/25/10 - 09/30/10	Dredging and Debris Removal in Area K, Dredging in Area G, Debris Removal in Area N	S-10S-T001-0-0	235.09	156.96	4.71
		S-10S-T002-0-0	216.56	223.42	4.71
		S-10S-T003-0-0	740.61	34.60	3.78
Deployment 5					
09/30/2010 - 11/22/2010	No Activity	S-10S-T001-0-0	317.62	107.20	6.16
		S-10S-T002-0-0	501.35	280.81	5.42
		S-10S-T003-0-0	754.49	45.78	4.42

Table 5. Summary of Surface Sediment Grab Analytical Results

Sampling Date	Remediation Activity	Station ID	Total PCBs (mg/kg)	Total Organic Carbon (%)
5/11/2010	No Activity	ST-001	70.79	4.87
		ST-002	231.22	5.49
		ST-002 REP	260.86	5.23
		ST-003	34.85	4.24
7/14/2010	Dredging and Debris Removal in Areas G and J, Dredging in Area L, Debris Removal in Area N	ST-001	42.66	4.34
		ST-002	279.03	5.37
		ST-002 REP	305.76	5.19
		ST-003	38.77	4.13
8/25/2010	Dredging and Debris Removal in Area K, Dredging in Areas J and G, Excavating in Area M	ST-001	54.37	4.92
		ST-002	812.76	5.06
		ST-002 REP	819.94	4.98
		ST-003	27.20	4.56
9/30/2010	Dredging and Debris Removal in Area K, Dredging in Area G, Debris Removal Area in N	ST-001	54.45	3.85
		ST-002	421.60	4.78
		ST-002 REP	600.55	4.04
		ST-003	49.15	3.27
11/22/2010	No Activity	ST-001	67.87	3.99
		ST-002	629.19	4.93
		ST-002 REP	400.72	5.11
		ST-003	51.08	3.05

3.2.3 Grain Size and Total Organic Carbon (TOC)

Results of grain size analysis for the sediment trap and surface grab samples are presented in Table 6. The first and third deployments resulted in insufficient volume for grain size analysis of trap samples from all three locations. TOC results are also presented in Table 6. Little variability in the concentration of organic carbon was observed between the sediment trap and surface sediment samples. The third deployment resulted in insufficient volume for TOC analysis of trap samples from all three locations.

Table 6. Summary of Physical Results for Sediment Trap and Surface Sediment Grab Samples

Type of Sample	Sample ID	TOC (%)	% Clay (<1.95 µm)	% Silt (1.95-62.5 µm)	% Very Fine Sand (0.063-0.125 mm)	% Fine Sand (0.125-0.25mm)	% Medium Sand (0.25 - 0.5mm)	% Coarse Sand (0.5-1.0mm)	% Very Coarse Sand (1.0-2.0mm)	% Gravel (.2.0mm)
Deployment 1										
Sediment Trap	S-10Y-T001-0-0	5.505	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	S-10Y-T002-0-0	5.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	S-10Y-T003-0-0	3.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Surface Grab	S-10Y-G001-0-0	4.865	9.9	29.9	8.6	16.9	20.3	6.1	4.4	2.1
	S-10Y-G002-0-0	5.49	31.7	56	2.4	2	2.2	2.3	2.1	1
	S-10Y-G002-0-0-REP	5.23	27.2	56	3	2.6	3.3	3.6	3.2	0.7
	S-10Y-G003-0-0	4.235	25.9	55.8	4	3.8	3.6	3.3	2.8	0.6
Deployment 2										
Sediment Trap	S-10L-T001-0-0	6.125	11.9	32.9	22.2	4.1	5	8.2	12.2	2.8
	S-10L-T002-0-0	4.58	11.9	38.4	12.4	2.4	4.8	9	14.3	5
	S-10L-T003-0-0	4.03	11.6	43.4	20.9	2.7	6.7	8.8	5.7	0.2
Surface Grab	S-10L-G001-0-0	4.335	3.7	20.9	20.6	27.4	23	2.7	1.1	0.4
	S-10L-G002-0-0	5.365	6.2	32.4	13.1	9.2	15.3	21	1.9	0.7
	S-10L-G002-0-0-REP	5.19	7	38.2	14	8.7	13.8	15.9	1.9	0.4
	S-10L-G003-0-0	4.125	3.9	33.1	17	9.4	10.1	11.9	12.6	1.6
Deployment 3										
Sediment Trap	S-10G-T001-0-0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	S-10G-T002-0-0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	S-10G-T003-0-0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Surface Grab	S-10G-G001-0-0	4.92	5.9	21.5	13.9	16.8	15.6	8.8	9	5.3
	S-10G-G002-0-0	5.055	5.3	19.3	10.6	8.1	9.3	10.2	13.4	13.9
	S-10G-G002-0-0-REP	4.98	7.1	22.1	12.2	9.8	11	11.7	13.7	7.4
	S-10G-G003-0-0	4.555	6	20.5	8.3	4.6	4.8	6.5	9.4	13.7
Deployment 4										
Sediment Trap	S-10S-T001-0-0	4.71	16.7	25.4	10.7	18.9	23.1	5.2	0.1	0.1
	S-10S-T002-0-0	4.71	25.3	36.1	9	0.6	28.9	0.1	0.1	0.1
	S-10S-T003-0-0	3.78	21.7	63.1	13.8	0.5	0.5	0.4	0.1	0.1
Surface Grab	S-10S-G001-0-0	3.85	7.3	48.5	8.8	13.9	18	2.4	0.9	0.2
	S-10S-G002-0-0	4.78	10.4	69.6	7.1	4.1	4.9	3.2	0.7	0.1
	S-10S-G002-0-0-REP	4.04	9.1	47.1	9	13.7	18.1	2	0.6	0.3
	S-10S-G003-0-0	3.27	9	60.2	8.7	6.9	4.1	3.7	3.9	1.5
Deployment 5										
Sediment Trap	S-10N-T001-0-0	6.155	20.3	73.2	4.2	1.6	0.5	0.1	0.1	0.1
	S-10N-T002-0-0	5.415	10.9	80.4	2.9	2.6	2	1	0.2	0.1
	S-10N-T003-0-0	4.42	12.6	81.1	3.3	1.6	1	0.4	0.1	0.1
Surface Grab	S-10N-G001-0-0	3.985	5.1	40.9	13.9	24.7	11.7	2.5	1.1	0.1
	S-10N-G002-0-0	4.925	21.8	59.3	7.1	4.6	3.4	2.8	0.9	0.1
	S-10N-G002-0-0-REP	5.11	19	64.7	6.8	4	3.1	1.7	0.4	0.2
	S-10N-G003-0-0	3.045	17.8	57.7	7	5.2	4.3	4.7	2.9	0.3

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4.0 DISCUSSION

This section presents an analysis of the analytical results, discusses sediment accumulation at the harbor sampling locations, and addresses trends in PCB concentrations at those sites. These data were collected to assess whether contaminated sediment particles are actively transported in the water column, and to quantify the sediment deposition rates.

4.1 SEDIMENT DEPOSITION AND PHYSICAL CHARACTERISTICS

Sediment deposition rates were calculated by dividing the total mass of dry sediment collected in the trap over the total time the traps were deployed. The calculation is represented per unit area to take into account the size of the funnel mouth, and expanded over a one square meter. Trends in sediment deposition rate ($g/m^2/day$) over the five deployment periods are presented in Figure 6.

Sediment deposition rates and physical properties of accumulated suspended sediments varied greatly between sediment trap stations and deployment periods. On average, the sediment traps located north of Wood Street (ST-001) accumulated less sediment than the traps downstream (Figure 6). Though the traps at ST-003 always accumulated the greatest amount of sediment, the traps located at ST-002/ST-004 followed a similar accumulation pattern. This is noteworthy considering ST-003 is located over one-half mile south of any dredge-related activity, and ST-002/ST-004 is located just 300 feet south of active dredging and debris removal. A possible explanation for this trend may be that the higher salinity of the lower harbor caused suspended fine grained material to flocculate and fall out of suspension. However, other explanations may include a change in physical hydraulic environment or a sediment source proximal to the ST-003 location. Additionally, the ST-003 station was down gradient of a CSO located near major construction activity.

Sediment deposition rates ranged across the study area from approximately 77 $g/m^2/day$ at ST-001 during July-August, to 319 $g/m^2/day$ at ST-003 during August-September. The deposition rates observed in the 2010 season are consistent with the rates observed in 2009, although the trends differ. Results from previous years indicate that sediment deposition rates vary seasonally, increasing from late spring to summer, reach a maximum during July and August, and decrease from late fall to winter. However, results from the five deployments during the 2010 season show peaks in deposition rates from May-July and August-September, and a decrease in deposition rate from July-August (Figure 6). Table 7 presents the calculated daily deposition rate.

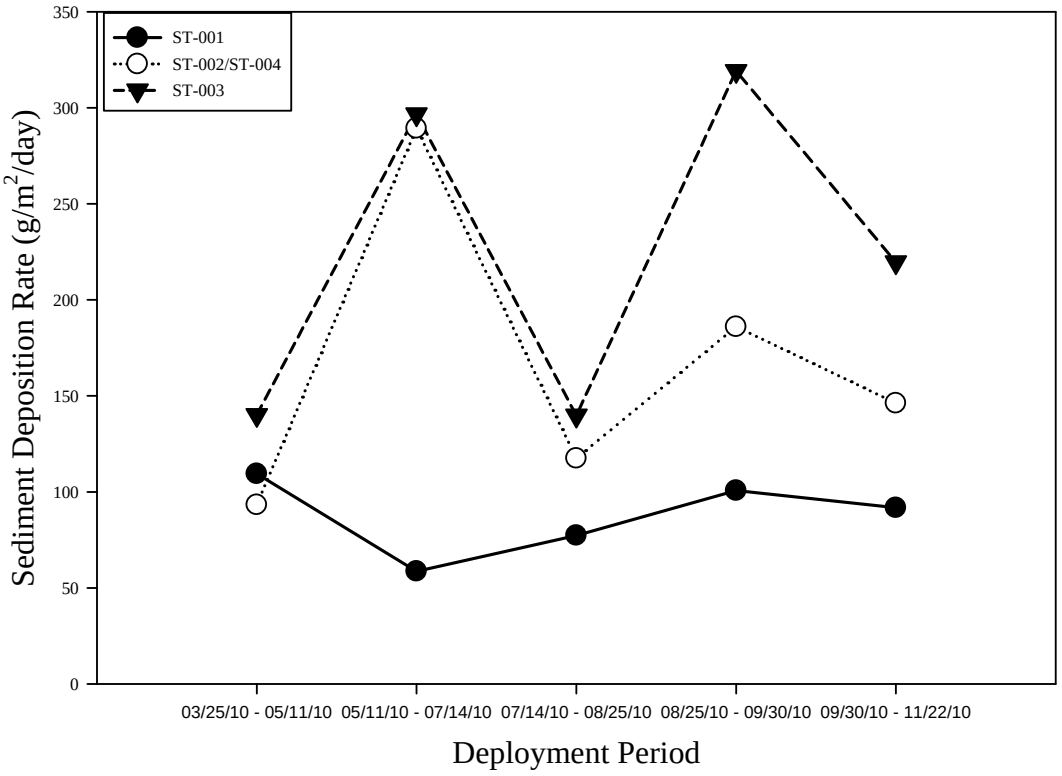

Figure 6. Sediment Deposition Rate by Deployment Period

Table 7. Summary of Sediment Deposition Rates and Total PCB Flux

Deployment Period	Activity	Sample ID	Sediment Deposition Rate ($g/m^2/day$)	Total PCB Flux ($mg/m^2/day$)
Deployment 1				
03/25/10 - 05/11/10	No Activity	S-10Y-T001-0-0	109.44	2.93
		S-10Y-T002-0-0	93.27	5.34
		S-10Y-T003-0-0	140.10	2.93
Deployment 2				
05/11/10 - 07/14/10	Dredging and Debris Removal in Areas G and J, Dredging in Area L, Debris Removal in Area N	S-10L-T001-0-0	58.70	6.33
		S-10L-T002-0-0	289.30	67.41
		S-10L-T003-0-0	296.65	9.69
Deployment 3				
07/14/10 - 08/25/10	Dredging and Debris Removal in Area K, Dredging in Area J and G, Excavating in Area M	S-10G-T001-0-0	77.35	15.22
		S-10G-T002-0-0	117.53	33.06
		S-10G-T003-0-0	139.76	4.00
Deployment 4				
08/25/10 - 09/30/10	Dredging and Debris Removal in Area K, Dredging in Area G, Debris Removal Area in N	S-10S-T001-0-0	100.69	15.80
		S-10S-T002-0-0	186.02	41.56
		S-10S-T003-0-0	319.22	11.05
Deployment 5				
09/30/10 - 11/22/10	No Activity	S-10S-T001-0-0	91.75	9.84
		S-10S-T002-0-0	146.20	41.05
		S-10S-T003-0-0	219.60	10.05

Sediment trap samples were generally comprised of fine-grained sediments (clay and silt) and contained minimal gravel. Co-located surface sediments were highly variable, containing an almost uniform assortment of sediment types. Surface sediments were

comprised of higher percentages of sand and occasionally more gravel than the co-located sediment trap samples. Due to insufficient sample volume, grain size data are only available for three of the five sediment trap deployments. Sediment analysis was prioritized to ensure proper volume for PCB analysis, followed by TOC and grain size. Concentrations of organic carbon were similar through the harbor from both the sediment traps and surface sediment samples. Organic carbon content ranged from 3.05% to 6.16% with a mean of 4.7% (Figure 7). Traps and surface samples from the southernmost station (ST-003) typically contained lower percentages of TOC.

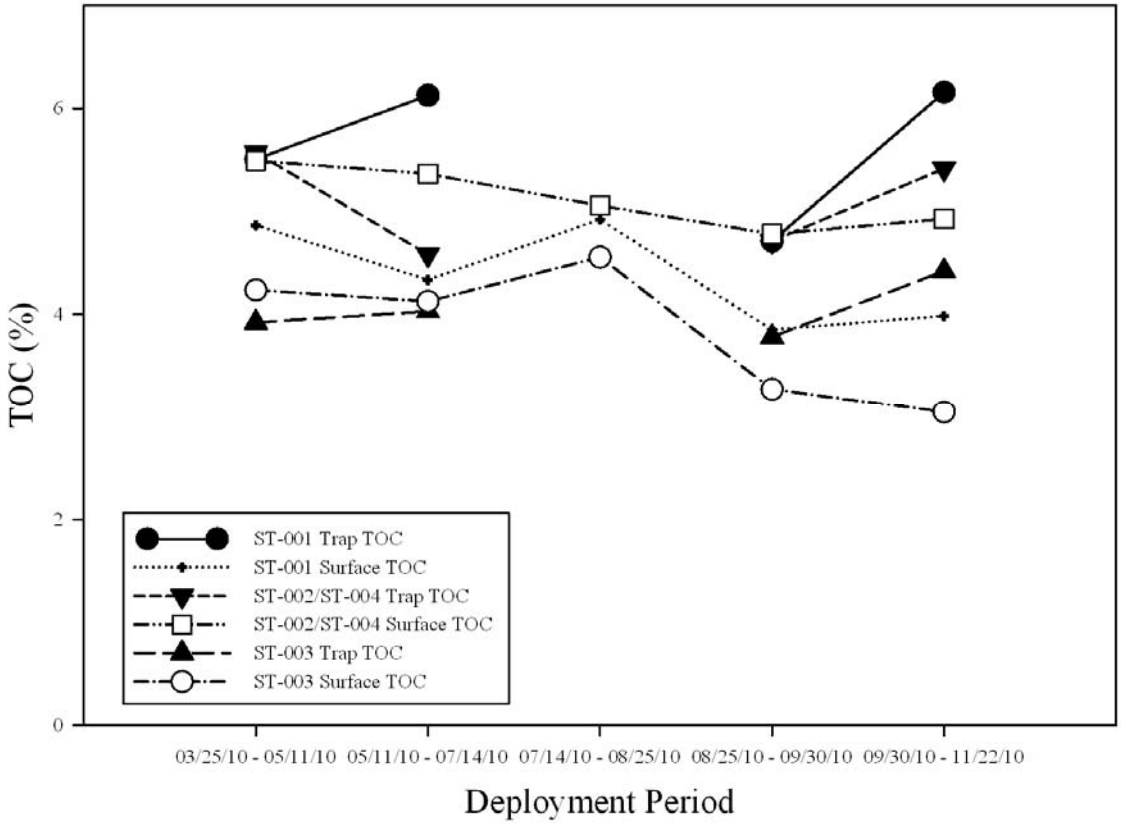

Figure 7. Total Organic Carbon Concentrations for Traps and Surface Grabs

4.2 POLYCHLORINATED BIPHENYLS

PCB flux is defined as the daily deposition rate of PCB contaminated sediments from the water column to the bottom sediments. PCB flux was quantified using the calculated sediment deposition rate ($g/m^2/day$) and the total PCB concentration of the sediment trap sample. The PCB flux is representative of the period during which the sediment trap was deployed. A summary of sediment deposition rate and PCB flux results for the 2010 season is provided in Table 7.

Flux of PCBs at the northernmost (ST-001) and southernmost (ST-003) locations remained relatively constant throughout the dredge season, averaging 10.03 ± 5.58 and

7.54 ± 3.77 mg/m^2/day, respectively. However, at the central trap station (ST-002/ST-004), daily flux of PCBs ranged from 5.34 to 67.41 mg/m^2/day. The mean rate of PCB flux at ST-002 was 37.68 ± 22.24. Statistically, the mean flux at ST-002/ST-004 is significantly greater than the traps at ST-001 and ST-003 over the entire deployment period. Statistical significance was determined by conducting a two-tailed t-test, in which the t-value is less than or equal to 0.05. Despite less total sediment deposition compared to ST-003, the greater PCB flux at ST-002/ST-004 may be attributed to the station's close proximity to remediation activities and to the Aerovox facility, where sediment PCB concentrations are highest. Figure 8 depicts the total PCB flux for each location and deployment period, and highlights the elevated flux at ST-002/ST-004 with respect to the other stations.



Figure 8. PCB Flux

Figure 9 depicts PCB concentration in sediment traps and surface grabs over the course of the 2010 season. The figure highlights the greater concentrations of ST-002/ST-004 versus the other stations in both sediment traps and surface sediment samples. Figure 9 clarifies that the positioning of ST-002/ST-004 in a "hot spot" of contaminants influences the concentrations of PCB contaminants in the traps and surface sediment samples. Furthermore, ST-002/ST-004 was located in closest proximity to remediation activities, whereas ST-001 is situated in a previously remediated area, and ST-003 is in a far-field position known to have lower contaminant levels. The t-tests revealed that PCB concentrations in sediment trap samples from ST-002 were significantly different than

those from ST-001 and ST-003. Differences between PCB concentrations in ST-001 and ST-003 sediment traps were statistically insignificant.



Figure 9. PCB Concentrations in Sediment Trap Samples and Co-located Surface Grab Samples

Co-located sediment trap samples and surface sediment samples were comparable in terms of the PCB concentrations, as indicated by insignificant t-test results. These results support the premise that sediments deposited in the trap samplers are representative of the material accumulated on the estuary floor.

4.3 DISCUSSION SUMMARY

A review of the analytical data reveals three distinct trends: 1) highest sediment deposition rates at the southern station (ST-003); 2) highest PCB flux at the central station; and 3) uniformity between co-located sediment traps and grabs.

Sediment deposition rates were highest at ST-003 and lowest at ST-001; rates at ST-003 rates and ST-002/ST-004 followed the same concentration trends. The sediment deposition rates observed in 2010 are consistent with range of rates observed in the previous year. Although ST-003 exhibited the highest sediment deposition rates, PCB flux was highest at ST-002/ST-004. PCB flux at this station was significantly greater than at other stations. This may be attributed to the station's location relative to the active remediation areas and known source of contamination. Statistical comparison between the sediment trap and grab samples at each location revealed no significant

difference in PCB concentration, suggesting that sediments deposited in the trap samplers are representative of the material that has accumulated on the estuary floor.

5.0 REFERENCES

Woods Hole Group. 2010a. 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 0010-03 for the U.S. Army Corps of Engineers New England District, Concord, MA.

Woods Hole Group. 20010b. 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 0010-03 for the U.S. Army Corps of Engineers New England District, Concord, MA.

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APPENDIX A. *IN-SITU* SEDIMENT TRAP DEPLOYMENT AND SURFACE GRAB SAMPLING LOG SHEETS (ON CD)

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APPENDIX A: *IN-SITU* SEDIMENT TRAP DEPLOYMENT AND SURFACE GRAB SAMPLING LOG SHEETS

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New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 3/25/10
Logged By: K. McCartney
Station ID: ST-ΦΦ1
Latitude: 41° 4Φ.725'
Longitude: 7Φ° 55. Φ23'
Water Depth: 4.1 ft.

Time on Station: 14:Φ3
Time off Station: 14:43

Sample Collection

Trap 1 Recovery Time: N/A
Trap 2 Recovery Time: N/A
Trap 1 Deployment Time: 14:37
Trap 2 Deployment Time: 14:38

# of Grabs Homogenized: 5
# of Unsucessful Grabs: 1

Samples Collected:

		Sample ID:
PCB Congeners (2x8-oz jar)	☑	S-1ΦM-GΦΦ1-Φ-Φ
TOC (1x4-oz jar)	☑	S-1ΦM-GΦΦ1-Φ-Φ
Grain Size (1 baggie)	☑	S-1ΦM-GΦΦ1-Φ-Φ
MS/MSD (2x8-oz jar)	☒	N/A
TOC replicate (1x4-oz jar)	☒	N/A
Grain Size replicate (1 baggie)	☒	N/A
PCB replicate (1x8oz jar)	☒	Sample ID: N/A

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.Φ1	Φ.8	Φ.Φ8	11.51	9.86
3.45	1.Φ	Φ.11	11:33	9.86

Notes: very leafy sediment, high content organic detritus, difficult to get enough surface sediment w/o leaves in sample, spotty sheen, black, H_2S odor high water content
one trap located on either side of the WQ mooring

Sampling Crew: K. McCartney, M. Walsh

Chief Scientist Signature: [signature]

* eastern trap dragged 300' South past bridge, probably by storm surge. New trap deployed 4/18/10 @ 13:05. original trap removed recovered 5/11/10 @

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 3/25/10
Logged By: K. McCartney
Station ID: ST-ØØ2
Time on Station: 12:42

Latitude: 41° 4Ø.373'
Longitude: 7Ø° 54. 95Ø'
Water Depth: 4.4 ft.
Time off Station: KCM ~~12~~ 13:30

Sample Collection

Trap 1 Recovery Time: N/A
Trap 2 Recovery Time: N/A
Trap 1 Deployment Time: 13:27
Trap 2 Deployment Time: 13:29

# of Grabs Homogenized: 6
# of Unsucessful Grabs: Ø

Samples Collected:		Sample ID:
PCB Congeners (2x8-oz jar)	☑	S-1ØM-GØØ2-Ø-Ø
TOC (1x4-oz jar)	☑	S-1ØM-GØØ2-Ø-Ø
Grain Size (1 baggie)	☑	S-1ØM-GØØ2-Ø-Ø
MS/MSD (2x8-oz jar)	☑	S-1ØM-GØØ2-Ø-ØMSMSI
TOC replicate (1x4-oz jar)	☑	S-1ØM-GØØ2-Ø-ØREP
Grain Size replicate (1 baggie)	☑	S-1ØM-GØØ2-Ø-ØREP
PCB replicate (1x8-oz jar)	☑	Sample ID: S-1ØM-GØØ2-Ø-ØREP

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.49	1.4	~~5.17~~ 2.81	12.2Ø	9.59
2.5Ø	1.7	4.27	11.1Ø	9.54
4 3.93	4.1	29.69	1Ø.83	7.32

Notes: dark olive grey/black, high water content, spotty but heavy sheen,
one trap located on either side of WQ mooring

Sampling Crew: K. McCartney, M. Walsh

Chief Scientist Signature: [signature]

recovered 5/11/10 @

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 3/25/10
Logged By: K. McCartney
Station ID: ST-ΦΦ3
Latitude: 41° 39.214'
Longitude: 70° 55.155'
Water Depth: 18.3ft.
Time on Station: 11:Φ7
Time off Station: 12:Φ5

Sample Collection

Trap 1 Recovery Time: N/A
Trap 2 Recovery Time: N/A
Trap 1 Deployment Time: 11:58
Trap 2 Deployment Time: 12:ΦΦ
# of Grabs Homogenized: 4
# of Unsucessful Grabs: 5

Samples Collected:			
PCB Congeners (2x8-oz jar)	☑	Sample ID:	S-1ΦM-GΦΦ3-Φ-Φ
TOC (1x4-oz jar)	☑	Sample ID:	S-1ΦM-GΦΦ3-Φ-Φ
Grain Size (1 baggie)	☑	Sample ID:	S-1ΦM-GΦΦ3-Φ-Φ
MS/MSD (2x8-oz jar)	☒	Sample ID:	N/A
TOC replicate (1x4-oz jar)	☒	Sample ID:	N/A
Grain Size replicate (1 baggie)	☒	Sample ID:	N/A
PCB replicate (1x8oz jar)	☒	ID:	N/A

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.55	1.2	23.95	10.69	7.47
8.99	1.2	31.53	10.21	6.46
17.35	1.2	35.04	9.94	5.62

Notes: grabs: dark olive brown over black, sandy, high water content, very shelly in areas closer towards channel – difficult to get a grab easier to grab closer to south side of old wooden pier
traps were set ~40ft apart to account for length of line & weather conditions at this deeper, more exposed station

Sampling Crew: K. McCartney, M. Walsh

Chief Scientist Signature: Karen McCartney

recovered 5/11/10 @

wrong location → ~~[illegible] sed trap dragged 300's (south of bridge) possibly by storm surge. recovered 4/6/10. redeployed 4/8/10 @ 13:0~~

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 5/11/10 Latitude: 41° 39.216'

Logged By: KGM Longitude: 70° 55.137'

Station ID: ST-003 Water Depth: 19.0 ft.

Time on Station: 12:55 Time off Station: 13:50

Sample Collection

Trap 1 Recovery Time: 12:55 Trap 1 Deployment Time: 13:47

Trap 2 Recovery Time: 12:58 Trap 2 Deployment Time: 13:48

# of Grabs Homogenized: 4 # of Unsucessful Grabs: ~~2~~ KGM 2

Samples Collected:	PCB Congeners (2x8-oz jar)	☑	Sample ID: S-10Y-GOO3-O-O
	TOC (1x4-oz jar)	☑	Sample ID: S-10Y-GOO3-O-O
	Grain Size (1 baggie)	☑	Sample ID: S-10Y-GOO3-O-O
	MS/MSD (2x8-oz jar)	☐	Sample ID: NA
	TOC replicate (1x4-oz jar)	☐	Sample ID: NA
	Grain Size replicate (1 baggie)	☐	Sample ID: NA

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.12	1.0	28.11	10.38	14.07
6.13	1.3	28.72	10.16	13.37
13.02	2.4	29.76	9.43	12.98
17.65	2.8	29.91	8.47	12.87

Notes:

Sampling Crew: M. Walsh, D. Bailey, K. McCartney

Chief Scientist Signature:

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 5/11/10
Logged By: KGM
Station ID: ST-ØØ1
Latitude: 41°4Ø.723'
Longitude: 7Ø° 55.ØI8'
Water Depth: 3.Ø
Time on Station: Ø9:35
Time off Station: 1Ø:12

Sample Collection

Trap 1 Recovery Time: 09:37 (deployed 3/25)
Trap 1 Deployment Time: 1Ø:1Ø (east)
Trap 2 Recovery Time: 09:38 (deployed 4/8)
Trap 2 Deployment Time: 1Ø:11 (west)
# of Grabs Homogenized: 4
# of Unsucessful Grabs: Ø

Samples Collected:			Sample ID:
	PCB Congeners (2x8-oz jar)	☑	S-1ØY-GØØ1-Ø-Ø
	TOC (1x4-oz jar)	☑	S-1ØY-GØØ1-Ø-Ø
	Grain Size (1 baggie)	☑	S-1ØY-GØØ1-Ø-Ø
	MS/MSD (2x8-oz jar)	☐	NA
	TOC replicate (1x4-oz jar)	☐	NA
	Grain Size replicate (1 baggie)	☐	NA

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
Ø.2Ø	2.3	2Ø.67	11.38	14.8Ø
1.2Ø	2.9	27.27	1Ø.85	15.28
2.2Ø	~~KN~~ 5.5	27.79	1Ø.83	15.16

Notes:

Sampling Crew: M. Walsh, D. Bailey, K. McCartney
Chief Scientist Signature:

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 5/11/10
Logged By: KGM
Station ID: ST-002
Latitude: 41° 40.369'
Longitude: 70° 54.954'
Water Depth: _____

Time on Station: 10:36
Time off Station: 11:17

Sample Collection

Trap 1 Recovery Time: 10:39
Trap 2 Recovery Time: 10:39
Trap 1 Deployment Time: _____
Trap 2 Deployment Time: _____

# of Grabs Homogenized: 6
# of Unsucessful Grabs: _____

Samples Collected:		Sample ID:
PCB Congeners (2x8-oz jar)	☑	S-1Y-G002-0-0
TOC (1x4-oz jar)	☑	"
Grain Size (1 baggie)	☑	"
MS/MSD (2x8-oz jar)	☑	S-1Y-G-002-0-0 MS MS
TOC replicate (1x4-oz jar)	☑	S-1Y-G002-0-0 REP
Grain Size replicate (1 baggie)	☑	"
PCB replicate (1x 8oz)	☑	"

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)

Notes: grabs taken upon recovery 5/11/10
traps deployed

Sampling Crew: M. Walsh, P. Bailey, K. McCartney

Chief Scientist Signature: [signature]

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 7/14/2010
Logged By: KGM
Station ID: ST-001
Latitude: 41° 40.724'
Longitude: 70° 55.019
Water Depth: 4.3'

Time on Station: 09:20
Time off Station:

Sample Collection

Trap 1 Recovery Time: 09:20
Trap 2 Recovery Time: 09:22
Trap 1 Deployment Time: 10:43 (E)
Trap 2 Deployment Time: 10:44 (W)

# of Grabs Homogenized: 4
# of Unsucessful Grabs: Ø

Samples Collected:			
PCB Congeners (2x8-oz jar)	☑	Sample ID:	S-1ØL-GØØ1-Ø-Ø
TOC (1x4-oz jar)	☑	Sample ID:	S-1ØL-GØØ1-Ø-Ø
Grain Size (1 baggie)	☑	Sample ID:	S-1ØL-GØØ1-Ø-Ø
MS/MSD (2x8-oz jar)	☐	Sample ID:	NA
TOC replicate (1x4-oz jar)	☐	Sample ID:	NA
Grain Size replicate (1 baggie)	☐	Sample ID:	NA

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
0.72	8.2	26.99	6.47	26.97
3.14	4.5	28.17	2.12	26.91
5.25	4.2	28.30	1.68	26.97

Notes: black sandy silt, strong H_2S odor, highly organic (detritus), black noticeable sheen on surface of grab samples, high water content

Sampling Crew: M. Walsh, K. McCartney

Chief Scientist Signature:

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 7/14/2010

Logged By: KGM

ST-004 ← Station ID: ~~ST-002~~ ① M.WALSH

new location S of K

Latitude: 41°40.279'

Longitude: 70°54.982'

Water Depth: 4.4'

Time on Station: 1130

Time off Station: 12:32

Sample Collection

Trap 1 Recovery Time: 11:30

Trap 2 Recovery Time: 11:30

Trap 1 Deployment Time: 12:30 (E)

Trap 2 Deployment Time: 12:31 (W)

# of Grabs Homogenized: 6

# of Unsucessful Grabs: Ø

Samples Collected:			
PCB Congeners (2x8-oz jar)	☑	Sample ID:	S-1ØL-GØØ2-Ø-Ø
TOC (1x4-oz jar)	☑	Sample ID:	"
Grain Size (1 baggie)	☑	Sample ID:	"
MS/MSD (1x8-oz jar)	☑	Sample ID:	S-1ØL-GØØ2-Ø-ØMSMSD
TOC replicate (1x4-oz jar)	☑	Sample ID:	S-1ØL-GØØ2-Ø-ØREP
Grain Size replicate (1 baggie)	☑	Sample ID:	"
PCB replicate (1x8oz)	☑		"

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.2	4.1	27.38	~~27.38~~ ① 5.02	25.75
3.84	3.9	27.93	4.64	25.97
5.97	4.6	29.22	3.67	26.06

Notes: Soft silt, high water content, fine sand, olivegrey over black slight H_2S odor, spotty sheen.

① wrong line mw 7/15/10

Sampling Crew: M. Walsh, K. McCartney

Chief Scientist Signature: [signature]

① station location moved so station name needed to changed from ST-002 to ST-004 M.WALSH 9/22/10

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 7/14/2010
Logged By: KGM
Station ID: ST-ΦΦ3

adjusted:
Latitude: 41° 39.212'
Longitude: 70° 55.163'
Water Depth: 21.32

Time on Station: ~~ST-ΦΦ3~~ 13:25
Time off Station: 14:35

Sample Collection

Trap 1 Recovery Time: 13:25
Trap 2 Recovery Time: 13:40
Trap 1 Deployment Time: 14:30
Trap 2 Deployment Time: 14:35

# of Grabs Homogenized: 5
# of Unsucessful Grabs: 7

Samples Collected:		Sample ID:
PCB Congeners (2x8-oz jar)	☑	S-1ΦL-GΦΦ3-Φ-Φ
TOC (1x4-oz jar)	☑	"
Grain Size (1 baggie)	☑	"
MS/MSD.(2x8-oz jar)	☐	NA
TOC replicate (1x4-oz jar)	☐	NA
Grain Size replicate (1 baggie)	☐	NA

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
0.91	4.1	29.46	4.98	26.41
7.78	5.4	29.52	4.93	26.39
16.98	5.3	29.75	4.84	26.27

Notes: Impossible to get a grab where traps were located. Found a spot ~20 yrds SW where there was sediment. Black sandy silt w/ quahogs, slight sheen

Sampling Crew: M. Walsh, K. McCourtney

Chief Scientist Signature:

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 8/25/10
Logged By: KGM
Station ID: ST-0001
Time on Station: 10:00

Latitude: 41° 40. 725'
Longitude: 70° 55. 022'
Water Depth: 6.0
Time off Station: 11:01

Sample Collection

Trap 1 Recovery Time: 10:01
Trap 2 Recovery Time: 10:03
# of Grabs Homogenized: 4

Trap 1 Deployment Time: 10:59
Trap 2 Deployment Time: 11:00
# of Unsucessful Grabs: 0

Samples Collected:		Sample ID:
PCB Congeners (2x8-oz jar)	☐	S-1006-G0001-0-0
TOC (1x4-oz jar)	☐	"
Grain Size (1 baggie)	☐	"
MS/MSD (1x8-oz jar)	☐	
PCB replicate (1x8-oz jar)	☐	
TOC replicate (1x4-oz jar)	☐	
Grain Size replicate (1 baggie)	☐	
Other (see notes below)	☐	

@10:45 8/25/10

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
0.58	1.2	10.98	6.14	20.48
2.75	4.2	26.83	3.88	21.45
4.33	5.6	27.53	2.20	21.45

Notes: black, sandy silt, significant sheen, H_2S odor with slight petrol odor high water content, bacterial mat on surface, organic detritus

Sampling Crew: K. McCartney, M. Walsh
Chief Scientist Signature: [signature]

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 8/25/10
Logged By: KCM
ST-004 ← Station ID: ~~ST-007~~ ① m.walsh
Latitude: 41°40.279'
Longitude: 70°54.983'
Water Depth: 6.5 ft.
Time on Station: 11:16
Time off Station: 12:20

Sample Collection

Trap 1 Recovery Time: 11:16
Trap 2 Recovery Time: 11:19
Trap 1 Deployment Time: 12:15
Trap 2 Deployment Time: 12:19
# of Grabs Homogenized: 8
# of Unsucessful Grabs: 0

Samples Collected:		Sample ID:
PCB Congeners (2x8-oz jar)	☐	S-106-6002-0-0 @ 12:00 8/25/10
TOC (1x4-oz jar)	☐	"
Grain Size (1 baggie)	☐	"
MS/MSD (1x8-oz jar)	☐	S-106-6002-0-0MSMSD
PCB replicate (1x8-oz jar)	☐	S-106-6002-0-0REP
TOC replicate (1x4-oz jar)	☐	"
Grain Size replicate (1 baggie)	☐	"
Other (see notes below)	☐	

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
0.66	19.4	25.50	3.62	21.54
3.06	12.1	28.27	3.13	21.41
4.52	14.8	28.52	3.75	21.42

Notes: brown over dark grey, sandy silt, ~~significant~~ heavy sheen, high water content, shell hash H_2S and chemical odor

Sampling Crew: K. McCartney, M. Walsh
Chief Scientist Signature: [signature]

① Station location changed so station name needed to change from ST-007 to ST-004 m.walsh 9/22/10

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 8/25/10
Logged By: KGM
Station ID: ST-0003
Latitude: 41° 39.211'
Longitude: 70° 55.175'
Water Depth: ~~>15 ft.~~ 18.5 A.

Time on Station: 12:30
Time off Station: 14:10

Sample Collection

Trap 1 Recovery Time: 12:30
Trap 2 Recovery Time: NA
Trap 1 Deployment Time: 14:09
Trap 2 Deployment Time: 14:09

# of Grabs Homogenized: 4
# of Unsucessful Grabs: 1

Samples Collected:		Sample ID:
PCB Congeners (2x8-oz jar)	☐	S-1ΦG-GΦΦ3-Φ-Φ
TOC (1x4-oz jar)	☐	"
Grain Size (1 baggie)	☐	"
MS/MSD (1x8-oz jar)	☒	—
PCB replicate (1x8-oz jar)	☒	—
TOC replicate (1x4-oz jar)	☒	—
Grain Size replicate (1 baggie)	☒	—
Other (see notes below)	☒	—

@13:30 8/25/10

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.07	1.6	28.41	5.72	22.77
7.55	1.8	28.92	5.06	~~22~~ 21.69
17.45	5.7	29.59	4.71	21.46

Notes: olive grey over black, sandy silt, H_2S odor,

Sampling Crew: K. McCarney M. Walsh
Chief Scientist Signature: Karen McKear

WOODS HOLE GROUP

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 9/30/10
Logged By: KGM
Station ID: ST-001
Latitude: 41°40.725'
Longitude: 70°55.020'
Water Depth: 6.3
Time on Station: 11:42
Time off Station: 12:26

Sample Collection

Trap 1 Recovery Time: 11:42
Trap 2 Recovery Time: 11:44
Trap 1 Deployment Time: 12:24
Trap 2 Deployment Time: 12:25
# of Grabs Homogenized: 5
# of Unsucessful Grabs: 1 1

Samples Collected:			
PCB Congeners (2x8-oz jar)	☑	Sample ID:	S-105-G001-0-0
TOC (1x4-oz jar)	☑	Sample ID:	S-105-G001-0-0
Grain Size (1 baggie)	☑	Sample ID:	S-105-G001-0-0
~~MS/MSD (1x8-oz jar)~~	☐	Sample ID:	
~~PCB replicate (1x8-oz jar)~~	☐	Sample ID:	
~~TOC replicate (1x4-oz jar)~~	☐	Sample ID:	
~~Grain Size replicate (1 baggie)~~	☐	Sample ID:	
~~Other (see notes below)~~	☐	Sample ID:	

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.01	3.4	19.51	9.25	22.22
2.80	3.0	26.21	8.81	22.13
5.02	3.4	28.88	6.22	21.95

Notes: grey over black (bacterial mat?) high water content, leafy organic detritus, strong H_2S, spotty sheen, sampled @ 12:05

Sampling Crew: M. Nash, K. McCarthy
Chief Scientist Signature:

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 9/30/10
Logged By: KGM
Station ID: ST-003
Latitude: 41° 39.217'
Longitude: 70° 55.168'
Water Depth: 16.5 ft.

Time on Station: 09:24
Time off Station: 10:30

Sample Collection

Trap 1 Recovery Time: 09:24
Trap 2 Recovery Time: 09:25
Trap 1 Deployment Time: 10:23
Trap 2 Deployment Time: 10:27

# of Grabs Homogenized: IIII 4
# of Unsucessful Grabs: IIII 5

Samples Collected:		Sample ID:
PCB Congeners (2x8-oz jar)	☑	S-10S-G003-0-0
TOC (1x4-oz jar)	☑	S-10S-G003-0-0
Grain Size (1 baggie)	☑	S-10S-G003-0-0
~~MS/MSD (1x8-oz jar)~~	☐	Sample ID:
~~PCB replicate (1x8-oz jar)~~	☐	Sample ID:
~~TOC replicate (1x4-oz jar)~~	☐	Sample ID:
~~Grain Size replicate (1 baggie)~~	☐	Sample ID:
~~Other (see notes below)~~	☐	Sample ID:

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.05	1.8	31.59	6.60	21.37
10.08	0.6	31.61	6.63	21.33
15.54	0.9	31.60	6.64	21.34

Notes: Olive grey over black, sandy silt, high water content, no odor observed, slight spotty sheen — sampled @ 10:06

Sampling Crew: M. Walsh, K. McCartney

Chief Scientist Signature:

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 9/30/10
Logged By: KGM
Station ID: ~~ST-002~~ ST-004
Time on Station: 10:40
Latitude: 41°40.283'
Longitude: 70°54.983'
Water Depth: 10.5
Time off Station: 11:32

Sample Collection

Trap 1 Recovery Time: 10:41
Trap 2 Recovery Time: N/A
Trap 1 Deployment Time: 11:30
Trap 2 Deployment Time: ~~N/A~~ 9/22/10 @ 13:15

# of Grabs Homogenized: ~~11~~ 7
# of Unsucessful Grabs: 1 1

Samples Collected:			Sample ID:
PCB Congeners (2x8-oz jar)	☑		S-10S-G002-0-0
TOC (1x4-oz jar)	☑		S-10S-G002-0-0
Grain Size (1 baggie)	☑		S-10S-G002-0-0
MS/MSD (1x8-oz jar)	☑		S-10S-G002-0-0MSMSD
PCB replicate (1x8-oz jar)	☑		S-10S-G002-0-0REP
TOC replicate (1x4-oz jar)	☑		S-10S-G002-0-0REP
Grain Size replicate (1 baggie)	☑		S-10S-G002-0-0REP
~~Other (see notes below)~~	☐		Sample ID:

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.06	2.6	30.16	7.76	22.09
3.05	2.6	30.17	7.76	22.09
5.10	4.8	30.40	7.52	21.95

Notes: olive grey over black, spotty sheen, shell hash, sandy silt, high water content, sampled @ 11:15

Sampling Crew: M. Walsh, K. McCartney

Chief Scientist Signature:

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 11/22/10 Latitude: _____

Logged By: KGM Longitude: _____

Station ID: ST-001 Water Depth: 6.1

Time on Station: 08:41 Time off Station: 09:16

Sample Collection

Trap 1 Recovery Time: 08:41 Trap 1 Deployment Time: X

Trap 2 Recovery Time: 08:44 Trap 2 Deployment Time: X

# of Grabs Homogenized: 4 # of Unsucessful Grabs: 0

Samples Collected:			
PCB Congeners (2x8-oz jar)	☐	Sample ID:	S-10N-0001-0-0
TOC (1x4-oz jar)	☐	Sample ID:	S-10N-0001-0-0
Grain Size (1 baggie)	☐	Sample ID:	S-10N-0001-0-0
MS/MSD (2x8-oz jar)	☑	Sample ID:	—
TOC replicate (1x4-oz jar)	☑	Sample ID:	—
Grain Size replicate (1 baggie)	☑	Sample ID:	—

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.05	-0.2	3.41	11.39	5.64
2.99	-0.3	25.87	8.70	9.35
5.55	-0.3	27.60	8.05	9.70

Notes: Samples collected @ 09:10

Sampling Crew: M. Walsh K. McCartney

Chief Scientist Signature: [signature]

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 11/22/10 Latitude: _____

Logged By: KLM Longitude: _____

Station ID: ~~ST-0004~~ ST-004 Water Depth: 7.1

Time on Station: 09:33 Time off Station: 10:09

Sample Collection

Trap 1 Recovery Time: 09:33 Trap 1 Deployment Time: _____

Trap 2 Recovery Time: 09:36 Trap 2 Deployment Time: _____

# of Grabs Homogenized: 5 # of Unsucessful Grabs: 0

Samples Collected:			Sample ID:	
	PCB Congeners (2x8-oz jar)	☑	S-WQN-GRAB-1-0	
	TOC (1x4-oz jar)	☑	"	
	Grain Size (1 baggie)	☑	"	
	MS/MSD (2x8-oz jar)	☑	"	MS/MSD
	TOC replicate (1x4-oz jar)	☑	"	REP
	Grain Size replicate (1 baggie)	☑	"	REP
	PCB replicate (1 8oz jar)		"	REP

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.20	-0.6	25.91	8.95	7.99
3.01	-0.6	27.68	8.64	8.80
6.51	-0.4	28.64	8.26	9.27

Notes: Samples collected at 10:00

Sampling Crew: M. Walsh, K. McCartney

Chief Scientist Signature: [signature]

New Bedford Harbor Environmental Monitoring
Sediment Trap Deployment and Surface Grab Sampling

General Information

Date: 11/22/10 Latitude: ____

Logged By: KGM Longitude: ____

Station ID: ST-003 Water Depth: 15.5

Time on Station: 10:31 Time off Station: 11:15

Sample Collection

Trap 1 Recovery Time: 10:31 Trap 1 Deployment Time: —

Trap 2 Recovery Time: 10:31 Trap 2 Deployment Time: —

# of Grabs Homogenized: 3 # of Unsucessful Grabs: Ø

Samples Collected:	PCB Congeners (2x8-oz jar)	☐	Sample ID: S-100-0005-0-0
	TOC (1x4-oz jar)	☐	Sample ID: 11
	Grain Size (1 baggie)	☐	Sample ID: 11
	MS/MSD (2x8-oz jar)	☐	Sample ID: —
	TOC replicate (1x4-oz jar)	☐	Sample ID: —
	Grain Size replicate (1 baggie)	☐	Sample ID: —

Water Quality Profile

Sample Depth (ft)	Turbidity (NTU)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Temperature (°C)
1.15	0.0	29.27	9.31	8.55
8.02	-0.3	29.29	9.03	8.56
14.32	0.8	29.34	8.91	8.57

Notes: Samples collected at 11:05

Sampling Crew: M. Walsh, R. McCartney

Chief Scientist Signature:

APPENDIX B. ENVIROSYSTEMS, INC. REPORTS AND ANALYTICAL DATA (ON CD)

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APPENDIX B: ENVIROSYSTEMS, INC. REPORTS AND ANALYTICAL DATA

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ESI

EnviroSystems, Inc.
One Lafayette Road
P.O. Box 778
Hampton, N.H. 03843-0778
p 603 926 3345 · f 603 926 3521
envirosystems.com

Dave Walsh
Woods Hole Group
81 Technology Park Drive
East Falmouth, MA 02536

PO Number: None
Report Number: 19731
Date Received: 05/14/10
Date Reported: 05/20/10

Project: NBH Envir. Monitoring

Attached please find results for analyses performed on samples received on 05/14/10 at 1530.

Samples were received in acceptable condition and under chain of custody.

Instruments used in analysis were calibrated with the appropriate frequency and to the specifications of the referenced methods.

EnviroSystems, Incorporated

Date 5/20/10

Authorized
Signature

Attachment
Report

Report No: 19731 SDG:
Project: NBH Envir. Monitoring

Sample ID: S-10Y-T001-0-0
Matrix: Solid
Sampled: 05/14/10 1330

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	19731-007	331.1	0.1	g	05/14/10	05/14/10	JL /ESI SOP 1379

Notes:

EnviroSystems, Inc. P.O. Box 778 Hampton, NH 03842-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

Report No: 19731 SDG:
Project: NBH Envir. Monitoring

Sample ID: S-10Y-T002-0-0
Matrix: Solid
Sampled: 05/14/10 1320

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	19731-008	149.3	0.1	g	05/14/10	05/14/10	JL /ESI SOP 1379

Notes:

EnviroSystems, Inc. P.O. Box 778 Hampton, NH 03842-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

Report No:	19731	SDG:	
Project:	NBH Envir. Monitoring		
Sample ID:	S-10Y-T002-0-0REP		
Matrix:	Solid		
Sampled:	05/14/10 1420		

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	19731-009	116.7	0.1	g	05/14/10	05/14/10	JL /ESI SOP 1379

Notes:

Report No: 19731 SDG:
Project: NBH Envir. Monitoring

Sample ID: S-10Y-T003-0-0
Matrix: Solid
Sampled: 05/14/10 1530

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	19731-010	464.3	0.1	g	05/14/10	05/14/10	JL /ESI SOP 1379

Notes:

EnviroSystems, Inc. P.O. Box 778 Hampton, NH 03842-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

Sediment Trap Composite Documentation

Project:	NBH Envir. Monitoring
Composite Identifier:	S-10Y-T001-0-0
Composite Lab ID:	19731-007
Composite Matrix:	Solid
Composite Prepared Date:	05/14/10
Composite Prepared Time:	13:30
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379

Final Wet Mass Determination:	331.1g
Composite Container(s):	500mL Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10Y-T001-0-0 1 of 2	19731-001	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10Y-T001-0-0 2 of 2	19731-002	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained 1 crab approximately 2cm in size.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Samples frozen on 05/14/10. Sample sent to Alpha Analytical for chemical analysis on 05/18/10.

Sediment Trap Composite Documentation

Project:	NBH Envir. Monitoring
Composite Identifier:	S-10Y-T002-0-0
Composite Lab ID:	19731-008
Composite Matrix:	Solid
Composite Prepared Date:	05/14/10
Composite Prepared Time:	13:20
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379

Final Wet Mass Determination:	149.3
Composite Container(s):	1L Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10Y-T002-0-0 1 of 1	19731-003	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained 1 snail (1cm), 1 fish (5cm), and 1 crab approximately 2 cm. in size.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Samples frozen on 05/14/10. Sample sent to Alpha Analytical for chemical analysis on 05/18/10.

Sediment Trap Composite Documentation

Project:	NBH Envir. Monitoring
Composite Identifier:	S-10Y-T002-0-0REP
Composite Lab ID:	19731-009
Composite Matrix:	Solid
Composite Prepared Date:	05/14/10
Composite Prepared Time:	14:20
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379

Final Wet Mass Determination:	116.7
Composite Container(s):	250mL. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10Y-T002-0-0REP 1 of 1	19731-004	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained 4 snails approximately 1cm. in size.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Samples frozen on 05/14/10. Sample sent to Alpha Analytical for chemical analysis on 05/18/10.

Sediment Trap Composite Documentation

Project:	NBH Envir. Monitoring
Composite Identifier:	S-10Y-T003-0-0
Composite Lab ID:	19731-010
Composite Matrix:	Solid
Composite Prepared Date:	05/14/10
Composite Prepared Time:	15:30
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379

Final Wet Mass Determination:	464.3
Composite Container(s):	500mL. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10Y-T003-0-0 1 of 2	19731-005	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10Y-T003-0-0 2 of 2	19731-006	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained 1 fish (5cm), 1 crab (5cm), and 5 smaller crabs aproximately 2cm in size.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Samples frozen on 05/14/10. Sample sent to Alpha Analytical for chemical analysis on 05/18/10.

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19731		
SDG No:			
Project:	NBH Envir. Monitoring		
Delivered via:	Client		
Date and Time Received:	05/11/10 1800	Date and TIme Logged into Lab:	05/13/10 ~~1225~~
Recieved By:	LCB	Logged into Lab by:	KAJ KAJ
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	1 C	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	4106		
COC Complete:		Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
S-10Y-T001-0-0 1 of 2	19731-001	S	STP: S-10Y-T001-0-0	1Gal P	4 C	KAJ
S-10Y-T001-0-0 2 of 2	19731-002	S	STP: S-10Y-T001-0-0	1Gal P	4 C	KAJ
S-10Y-T002-0-0 1 of 1	19731-003	S	STP: S-10Y-T002-0-0	1Gal P	4 C	KAJ
S-10Y-T002-0-0REP 1 of 1	19731-004	S	STP: S-10Y-T002-0-0REP	1Gal P	4 C	KAJ
S-10Y-T003 1 of 2	19731-005	S	STP: S-10Y-T003-0-0	1Gal P	4 C	KAJ
S-10Y-T003 2 of 2	19731-006	S	STP: S-10Y-T003-0-0	1Gal P	4 C	KAJ

Notes and qualifications:

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: ~~4106~~ (E3) KAJ 19731

CHAIN OF CUSTODY DOCUMENTATION

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: NBH Envir Mon.	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Dr	Project Number: TO-ØØ1Ø	
Invoice to: Cathy Morey	Address: E. Falmouth MA	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax: 508-540-1ØØ1	email: dwalsh@whgrp.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
-001	S-1ØY-TØØ1-Ø-Ø 1of2	5/11/10	10:00	KGM	G	1L	P	none	W	NL	composite as S-1ØY-TØØ1-Ø-Ø
-002	S-1ØY-TØØ1-Ø-Ø 2of2	5/11/10	10:00	KGM	G	1L	P				composite as S-1ØY-TØØ1-Ø-Ø
-003	S-1ØY-TØØ2-Ø-Ø 1of1	5/11/10	11:00	KGM	G	1L	P				DO NOT COMPOSITE, new ID: S-1ØY-T -Ø-Ø
-004	S-1ØY-TØØ2-Ø-ØREP 1of1	5/11/10	11:00	KGM	G	1L	P				DO NOT COMPOSITE, new ID: S-1ØY-TØØ2 -Ø-ØREP
-005	S-1ØY-TØØ3-Ø-Ø 1of2	5/11/10	14:00	KGM	G	1L	P				composite as S-1ØY-TØØ3-Ø
-006	S-1ØY-TØØ3-Ø-Ø 2of2	5/11/10	14:00	KGM	G	1L	P				

Relinquished By: [signature]	Date: 5/11/10 Time: 18:00	Received By: [signature]	Date: 5/11/10 Time: 1800
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

Sample Delivery Group No: Page of

COC Doc No:

ESI

EnviroSystems, Inc.
One Lafayette Road
P.O. Box 778
Hampton, N.H. 03843-0778
p 603 926 3345 · f 603 926 3521
envirosystems.com

Dave Walsh
Woods Hole Group
81 Technology Park Drive
East Falmouth, MA 02536

PO Number: None
Report Number: 19905
Date Received: 07/14/10
Date Reported: 08/12/10

Project: New Bedford Harbor Environ. Monitoring

Attached please find results for analyses performed on samples received on 07/14/10 1830.

Samples were received in acceptable condition and under chain of custody.

Instruments used in analysis were calibrated with the appropriate frequency and to the specifications of the referenced methods.

EnviroSystems, Incorporated

Date 8/16/10

Authorized
Signature

Attachment
Report

Report No: 19905 SDG:
Project: New Bedford Harbor Environ. Monitoring

Sample ID: S-10L-T001-0-0
Matrix: Solid
Sampled: 07/14/10 0922

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	19905-007	299.6	0.1	g	07/15/10	07/15/10	JL /ESI SOP 1379

Notes:

Report No: 19905 SDG:
Project: New Bedford Harbor Environ. Monitoring

Sample ID: S-10L-T002-0-0
Matrix: Solid
Sampled: 07/14/10 1130

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	19905-008	457.7	0.1	g	07/15/10	07/15/10	JL /ESI SOP 1379

Notes:

Report No: 19905 SDG:
Project: New Bedford Harbor Environ. Monitoring

Sample ID: S-10L-T003-0-0
Matrix: Solid
Sampled: 07/14/10 1325

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	19905-009	1345.9	0.1	g	07/15/10	07/15/10	JL /ESI SOP 1379

Notes:

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10L-T001-0-0
Composite Lab ID:	19905-007
Composite Matrix:	Solid
Composite Prepared Date:	07/15/10
Composite Prepared Time:	13:20
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379
Final Wet Mass Determination:	299.6
Composite Container(s):	16oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10L-T001-0-0 1 of 2	19905-001	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10L-T001-0-0 2 of 2	19905-002	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained one crab approximately 3 cm, one fish about 5 cm, and some leaf litter.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 07/19/10.

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10L-T002-0-0
Composite Lab ID:	19905-008
Composite Matrix:	Solid
Composite Prepared Date:	07/15/10
Composite Prepared Time:	13:50
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379
Final Wet Mass Determination:	457.7
Composite Container(s):	16oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10L-T002-0-0 1 of 2	19905-003	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10L-T002-0-0 2 of 2	19905-004	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained an estimated sixty snails approximately 1 cm in diameter, and four shrimp less than 2 cm in size.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 07/19/10.

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10L-T003-0-0
Composite Lab ID:	19905-009
Composite Matrix:	Solid
Composite Prepared Date:	07/15/10
Composite Prepared Time:	15:00
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379

Final Wet Mass Determination:	1345.9
Composite Container(s):	32oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10L-T003-0-0 1 of 2	19905-005	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10L-T003-0-0 2 of 2	19905-006	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained three crabs less than 3 cm, one fish 6 cm long, and some leaf litter.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 07/19/10.

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	19905		
SDG No:			
Project:	New Bedford Harbor Environ. Monitoring		
Delivered via:	Client		
Date and Time Received:	07/14/10 1830	Date and Time Logged into Lab:	07/15/10 0945
Recieved By:	JTP	Logged into Lab by:	LCB LCB
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	4	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	NA		
COC Complete:		Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
S-10L-T001-0-0 1 of 2	19905-001	S	STP: S-10L-T001-0-0	1 Gal P	4C	Yes
S-10L-T001-0-0 2 of 2	19905-002	S	STP: S-10L-T001-0-0	1 Gal P	4C	Yes
S-10L-T002-0-0 1 of 2	19905-003	S	STP: S-10L-T002-0-0	1 Gal P	4C	Yes
S-10L-T002-0-0 2 of 2	19905-004	S	STP: S-10L-T002-0-0	1 Gal P	4C	Yes
S-10L-T003-0-0 1 of 2	19905-005	S	STP: S-10L-T003-0-0	1 Gal P	4C	Yes
S-10L-T003-0-0 2 of 2	19905-006	S	STP: S-10L-T003-0-0	1 Gal P	4C	Yes

Notes and qualifications:

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 19905

CHAIN OF CUSTODY DOCUMENTATION

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: New Bedford Harbor Environ. Monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Dr.	Project Number: TO-0010-03	
Invoice to: Cathy Morey	Address: E. Falmouth, MA	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax: 508-540-1001	email: dwalsh@whgrp.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
-001	S-1ØL-TØØ1-Ø-Ø 1 of 2	7/14/10	09:22	KGM	C	1 gal	P	none	W	N	composite/dewater 2 jars
-003	S-1ØL-TØØ2-Ø-Ø 1 of 2	7/14/10	11:30	KGM	C	1 gal	P	none	W	N	composite/dewater 2 jars
-005	S-1ØL-TØØ3-Ø-Ø 1 of 2	7/14/10	13:25	KGM	C	1 gal	P	none	W	N	composite/dewater 2 jars
-002	S-1ØL-TØØ1-Ø-Ø 2 of 2	7/14/10	0922	KGM	C	1 gal	P	none	W	N	↓
-004	S-1ØL-TØØ2-Ø-Ø 2 of 2	7/14/10	1130	KGM	C	1 gal	P	none	W	N	↓
-006	S-1ØL-TØØ3-Ø-Ø 2 of 2	7/14/10	1325	KGM	C	1 gal	P	none	W	N	↓

Relinquished By: Kaitlyn McCartney Date: 7/14/10 Time: 15:00 Received By: [signature] Date: 7/14/10 Time: 15:00

Relinquished By: [signature] Date: 7/14/10 Time: 18:~~20~~ 30 (ES) LCS Received at Lab By: [signature] Date: 7/14/10 Time: 18:30

Comments:

Sample Delivery Group No: Page of

ESI

EnviroSystems, Inc.
One Lafayette Road
P.O. Box 778
Hampton, N.H. 03843-0778
p 603 926 3345 · f 603 926 3521
envirosystems.com

Dave Walsh
Woods Hole Group
81 Technology Park Drive
East Falmouth, MA 02536

PO Number: None
Report Number: 20110
Date Received: 08/25/10
Date Reported: 08/30/10

Project: NBH Environ. Monitoring

Attached please find results for analyses performed on samples received on 08/25/10 1749.

Samples were received in acceptable condition and under chain of custody.

Instruments used in analysis were calibrated with the appropriate frequency and to the specifications of the referenced methods.

EnviroSystems, Incorporated

Date 8/30/10

Authorized
Signature

Attachment
Report

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10G-T001-0-0
Composite Lab ID:	20110-006
Composite Matrix:	Solid
Composite Prepared Date:	08/26/10
Composite Prepared Time:	13:30
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379
Final Wet Mass Determination:	223.8
Composite Container(s):	16oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10G-T001-0-0 1 of 2	20110-001	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10G-T001-0-0 2 of 2	20110-002	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained 78 shrimp and some leaf litter.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 08/27/10.

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10G-T002-0-0
Composite Lab ID:	20110-007
Composite Matrix:	Solid
Composite Prepared Date:	08/26/10
Composite Prepared Time:	14:00
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379
Final Wet Mass Determination:	376.3
Composite Container(s):	32oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10G-T002-0-0 1 of 2	20110-003	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10G-T002-0-0 2 of 2	20110-004	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained sixty four shrimp, a 6 cm fish, and some leaf litter.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 08/27/10.

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10G-T003-0-0
Composite Lab ID:	20110-008
Composite Matrix:	Solid
Composite Prepared Date:	08/26/10
Composite Prepared Time:	14:30
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379
Final Wet Mass Determination:	197.5
Composite Container(s):	32oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10G-T003-0-0 1 of 1	20110-005	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained fifty two shrimp and some leaf litter.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 08/27/10.

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	20110		
SDG No:			
Project:	NBH Environ. Monitoring		
Delivered via:	Client		
Date and Time Received:	08/25/10 1749	Date and TIme Logged into Lab:	08/26/10 1000
Recieved By:	JL	Logged into Lab by:	LCB LCB
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	4	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	NA		
COC Complete:		Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
S-10G-T001-0-0 1 of 2	20110-001	S	STP: S-10G-T001-0-0	1 Gal P	4 C	Yes
S-10G-T001-0-0 2 of 2	20110-002	S	STP: S-10G-T001-0-0	1 Gal P	4 C	Yes
S-10G-T002-0-0 1 of 2	20110-003	S	STP: S-10G-T002-0-0	1 Gal P	4 C	Yes
S-10G-T002-0-0 2 of 2	20110-004	S	STP: S-10G-T002-0-0	1 Gal P	4 C	Yes
S-10G-T003-0-0 1 of 1	20110-005	S	STP: S-10G-T003-0-0	1 Gal P	4 C	Yes

Notes and qualifications:

EnviroSystems, Inc.

P.O Box 778
Hampton, NH 03843-0778
(603) 926-3345
(603) 926-3521 Fax
www.envirosystems.com

Invoice

Date	Invoice #
8/31/2010	24298

Bill To

WOODS HOLE GROUP, INC.
81 TECHNOLOGY PARK DRIVE
EAST FALMOUTH, MA 02536

P.O. No.	Terms	PROJECT
SEE BELOW	Net 30	20110

Qty	Description	Rate	Amount
5	SEDIMENT TRAP PREPARATION	350.00	1,750.00
	SAMPLE RECEIPT DATE: 8/26/10		
	NED ACOE JOB # TO-0010, TASK ORDER # ESI 0003	**Total**	$1,750.00

Report No:	20110	SDG:	
Project:	NBH Environ. Monitoring		
Sample ID:	S-10G-T001-0-0		
Matrix:	Solid		
Sampled:	08/26/10 1330		

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20110-006	223.8	0.1	g	08/26/10	08/26/10	JL /ESI SOP 1379

Notes:

Report No:	20110	SDG:	
Project:	NBH Environ. Monitoring		
Sample ID:	S-10G-T002-0-0		
Matrix:	Solid		
Sampled:	08/26/10 1400		

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20110-007	376.3	0.1	g	08/26/10	08/26/10	JL /ESI SOP 1379

Notes:

Report No: 20110 SDG:
Project: NBH Environ. Monitoring

Sample ID: S-10G-T003-0-0
Matrix: Solid
Sampled: 08/26/10 1430

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20110-008	197.5	0.1	g	08/26/10	08/26/10	JL /ESI SOP 1379

Notes:

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab:

ALPHA Job #: 20110

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

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E Falmouth MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environ. Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

TO ESI for sample processing

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: dewater, centrifuge, composite	SAMPLE HANDLING	TOTAL # BOTTLES
-001	S-10G-TØØ1-Ø-Ø1 1of2	8/25/10	10:03	SW	KGM	X	centrifuge, composite	2
-003	S-10G-TØØ2-Ø-Ø1 1of2	8/25/10	11:19	SW	KGM	X	centrifuge, composite	2
-005	S-10G-TØØ3-Ø-Ø1 1of1	8/25/10	12:30	SW	KGM	X	centrifuge, composite	1
-002	S-10G-TØØ1-Ø-Ø 2of2	8/25/10	1003	SW	KGM	X	↓	
-004	S-10G-TØØ2-Ø-Ø 2of2	8/25/10	1119	SW	KGM	X		

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

Container Type P
Preservative A

Relinquished By:	Date/Time	Received By:	Date/Time
	8/25/10 1445		8/25/10 1445
	8/25/10 1749		
	8/25/10 1749		

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

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

W912WJ-09-D-0001 Sediment Trap Study Summary Report B-30 6 of 6 April 2011 Delivery Order-0010-03

ESI

EnviroSystems, Inc.
One Lafayette Road
P.O. Box 778
Hampton, N.H. 03843-0778
p 603 926 3345 · f 603 926 3521
envirosystems.com

Dave Walsh
Woods Hole Group
81 Technology Park Drive
East Falmouth, MA 02536

PO Number: None
Report Number: 20226
Date Received: 09/30/10
Date Reported: 10/04/10

Project: NBH Environmental Monitoring

Attached please find results for analyses performed on samples received on 09/30/10 at 1900.

Samples were received in acceptable condition and under chain of custody.

Instruments used in analysis were calibrated with the appropriate frequency and to the specifications of the referenced methods.

EnviroSystems, Incorporated

Date 10/04/10

Authorized
Signature

Attachment
Report

Report No:	20226	SDG:	
Project:	NBH Environmental Monitoring		
Sample ID:	S-10S-T001-0-0		
Matrix:	Solid		
Sampled:	10/01/10 1050		

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20226-006	250.36	0.1	g	10/01/10	10/01/10	JL /ESI SOP 1379

Notes:

Report No: 20226 SDG:
Project: NBH Environmental Monitoring

Sample ID: S-10S-T002-0-0
Matrix: Solid
Sampled: 10/01/10 1130

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20226-007	223.49	0.1	g	10/01/10	10/01/10	JL /ESI SOP 1379

Notes:

Report No:	20226	SDG:	
Project:	NBH Environmental Monitoring		
Sample ID:	S-10S-T003-0-0		
Matrix:	Solid		
Sampled:	10/01/10 1310		

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20226-008	839.69	0.1	g	10/01/10	10/01/10	JL /ESI SOP 1379

Notes:

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10S-T001-0-0
Composite Lab ID:	20226-006
Composite Matrix:	Solid
Composite Prepared Date:	10/01/10
Composite Prepared Time:	10:50
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379

Final Wet Mass Determination:	250.36
Composite Container(s):	16oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10S-T001-0-0 1 of 2	20226-001	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10S-T001-0-0 2 of 2	20226-002	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained some leaf litter and two crab arms.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 10/02/10.

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10S-T002-0-0
Composite Lab ID:	20226-007
Composite Matrix:	Solid
Composite Prepared Date:	10/01/10
Composite Prepared Time:	11:30
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379
Final Wet Mass Determination:	223.49
Composite Container(s):	9oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10S-T002-0-0 1 of 1	20226-003	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained two shrimp and two crab arms.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 10/02/10.

Sediment Trap Composite Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10S-T003-0-0
Composite Lab ID:	20226-008
Composite Matrix:	Solid
Composite Prepared Date:	10/01/10
Composite Prepared Time:	13:10
Composite Prepared By:	JL
Protocol Procedure:	ESI SOP 1379
Final Wet Mass Determination:	839.69
Composite Container(s):	32oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded	Amount Added	Notes
S-10S-T003-0-0 1 of 2	20226-004	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10S-T003-0-0 2 of 2	20226-005	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained two crabs approximately 2cm in diameter and three shrimp.
1 Gallon Sampling containers were partially filled.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 10/02/10.

ESI

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	20226		
SDG No:			
Project:	NBH Environmental Monitoring		
Delivered via:	Client		
Date and Time Received:	09/30/10 1900	Date and TIme Logged into Lab:	09/30/10 1907
Recieved By:	LCB	Logged into Lab by:	LCB LCB
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	3	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	NA		
COC Complete:		Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
S-10S-T001-0-0 (1 of 2)	20226-001	S	STP: S-10S-T001-0-0	1 Gal P	4C	Yes
S-10S-T001-0-0 (2 of 2)	20226-002	S	STP: S-10S-T001-0-0	1 Gal P	4C	Yes
S-10S-T002-0-0 (1 of 1)	20226-003	S	STP: S-10S-T002-0-0	1 Gal P	4C	Yes
S-10S-T003-0-0 (1 of 2)	20226-004	S	STP: S-10S-T003-0-0	1 Gal P	4C	Yes
S-10S-T003-0-0 (2 of 2)	20226-005	S	STP: S-10S-T003-0-0	1 Gal P	4C	Yes

Notes and qualifications:

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 20226

CHAIN OF CUSTODY DOCUMENTATION

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: NBH Environmental monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Dr.	Project Number: TO-0010-03	
Invoice to: Cathy Morey	Address: E. Falmouth, MA	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax: 508-540-1001	email: dwalsh@whgrp.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
-001	S-10S-T001-0-0 (1of2)	9/30/10	11:44	KGM	G	1gal	P	ice	W	N	dewater & composit w/ 2of2
-002	S-10S-T001-0-0 (2of2)	9/30/10	11:44	KGM	G	1gal	P	ice	W	N	dewater & composite w/ 1of2
-003	S-10S-T002-0-0 (1of1)	9/30/10	10:41	KGM	G	1gal	P	ice	W	N	dewater (centrifuge)
-004	S-10S-T003-0-0 (1of2)	9/30/10	09:25	KGM	G	1gal	P	ice	W	N	dewater & composit w/ 2of2
-005	S-10S-T003-0-0 (2of2)	9/30/10	09:25	KGM	G	1gal	P	ice	W	N	dewater & composite w/ 1of2

Relinquished By: [signature] Date: 9/30/10 Time: 19:00 Received By: [signature] Date: 9/30/10 Time: 1900

Relinquished By: Date: Time: Received at Lab By: Date: Time:

Comments:

Sample Delivery Group No: Page of

COC Doc No: 4152

Sediment Trap Study Summary Report
W9JWJ-08-D-0001
Page 9 of 9
Delivery Order-0010-03
April 2011

ESI

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One Lafayette Road
P.O. Box 778
Hampton, N.H. 03843-0778
p 603 926 3345 · f 603 926 3521
envirosystems.com

Dave Walsh
Woods Hole Group
81 Technology Park Drive
East Falmouth, MA 02536

PO Number: None
Report Number: 20424
Date Received: 11/22/10
Date Reported: 12/06/10

Project: New Bedford Harbor Environ. Monitoring

Attached please find results for analyses performed on samples received on 11/22/10 at 1600.

Samples were received in acceptable condition and under chain of custody.

Instruments used in analysis were calibrated with the appropriate frequency and to the specifications of the referenced methods.

EnviroSystems, Incorporated

Date 12/5/10

Authorized
Signature

Attachment
Report

Report No: 20424 SDG:
Project: New Bedford Harbor Environ. Monitoring

Sample ID: S-10N-T001-0-0
Matrix: Solid
Sampled: 11/23/10 1120

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20424-007	326.77	0.1	g	11/23/10	11/23/10	JEB/ESI SOP 1379

Notes:

Report No: 20424 SDG:
Project: New Bedford Harbor Environ. Monitoring

Sample ID: S-10N-T002-0-0
Matrix: Solid
Sampled: 11/23/10 1220

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20424-008	525.52	0.1	g	11/23/10	11/23/10	JEB/ESI SOP 1379

Notes:

Report No: 20424 SDG:
Project: New Bedford Harbor Environ. Monitoring

Sample ID: S-10N-T003-0-0
Matrix: Solid
Sampled: 11/23/10 1330

Parameter		Result	Quant Limit	Units	Date Prepared	Date of Analysis	INIT/Method/Reference
Total Wet Mass Recovered	20424-009	777.02	0.1	g	11/23/10	11/23/10	JEB/ESI SOP 1379

Notes:

Laboratory Composite Preparation Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10N-T001-0-0
Composite Lab ID:	20424-007
Composite Matrix:	Solid
Composite Prepared Date:	11/23/10
Composite Prepared Time:	1120
Composite Prepared By:	JEB
Protocol Procedure:	ESI SOP 1379
Composite Final Amount:	326.77
Composite Container(s):	16oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded (%)	Amount Added (Kg)	Notes
S-10N-T001-0-0 1of 1	20424-001	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10N-T001-0-0 1of 2	20424-002	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained an estimated 100 shrimp all approximately 3cm in length, and three fish approximately 4cm in length.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 11/24/10.

Laboratory Composite Preparation Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10N-T002-0-0
Composite Lab ID:	20424-008
Composite Matrix:	Solid
Composite Prepared Date:	11/23/10
Composite Prepared Time:	1220
Composite Prepared By:	JEB
Protocol Procedure:	ESI SOP 1379
Composite Final Amount:	525.52
Composite Container(s):	16oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded (%)	Amount Added (Kg)	Notes
S-10N-T002-0-0 1of 1	20424-003	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10N-T002-0-0 1of 2	20424-004	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained an estimated thirty shrimp all approximately 3cm in length, four crabs approximately 2cm in width ,and one eel approximately 30 cm long.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 11/24/10.

Laboratory Composite Preparation Documentation

Project:	New Bedford Harbor Environ. Monitoring
Composite Identifier:	S-10N-T003-0-0
Composite Lab ID:	20424-009
Composite Matrix:	Solid
Composite Prepared Date:	11/23/10
Composite Prepared Time:	1330
Composite Prepared By:	JEB
Protocol Procedure:	ESI SOP 1379
Composite Final Amount:	777.02
Composite Container(s):	32oz. Glass

This composite was prepared according to protocols cited using the samples and amounts listed below.

Field ID	ESI Lab ID	Matrix	Liquids Excluded (%)	Solids Excluded (%)	Amount Added (Kg)	Notes
S-10N-T003-0-0 1of 1	20424-005	Solid	>99	All Visible Invertebrates	1 Gallon	
S-10N-T003-0-0 1of 2	20424-006	Solid	>99	All Visible Invertebrates	1 Gallon	

Composite Notes:

Excluded samples contained four crabs approximately 2cm in width, and three crabs approximately 1cm in width.

Subsamples removed:

Sample sent to Alpha Analytical for chemical analysis on 11/24/10.

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	20424		
SDG No:			
Project:	New Bedford Harbor Environ. Monitoring		
Delivered via:	Client		
Date and Time Received:	11/22/10 1600	Date and TIme Logged into Lab:	11/22/10 1645
Recieved By:	RAM	Logged into Lab by:	LCB MEJ
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	1	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	NA		
COC Complete:		Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
S-10N-T001-0-0 (1 of 2)	20424-001	S	STP: S-10N-T001-0-0	1 Gal P	4C	Yes
S-10N-T001-0-0 (2 of 2)	20424-002	S	STP: S-10N-T001-0-0	1 Gal P	4C	Yes
S-10N-T002-0-0 (1 of 2)	20424-003	S	STP: S-10N-T002-0-0	1 Gal P	4C	Yes
S-10N-T002-0-0 (2 of 2)	20424-004	S	STP: S-10N-T002-0-0	1 Gal P	4C	Yes
S-10N-T003-0-0 (1 of 2)	20424-005	S	STP: S-10N-T003-0-0	1 Gal P	4C	Yes
S-10N-T003-0-0 (1 of 2)	20424-006	S	STP: S-10N-T003-0-0	1 Gal P	4C	Yes

Notes and qualifications:

EnviroSystems, Inc. One Lafayette Road P.O. Box 778 Hampton, NH 03842-0778 (603) 926-3345 fax (603) 926-0532 www.envirosystems.com

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843
Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 20424

CHAIN OF CUSTODY DOCUMENTATION

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: New Bedford Harbor Environ. Monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Dr.	Project Number: TO-0010-03	
Invoice to: Cathy Morey	Address: E. Falmouth, MA 02536	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax: 508-540-1001	email: dwalsh@whgrp.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
-001	S-1ΦN-TΦΦ1-Φ-Φ (1of2)	11/22/10	08:44	KGM	G	1gal	P	ice	W	N	Centrifuge & combine with TΦΦ1(2of
-002	S-1ΦN-TΦΦ1-Φ-Φ (2of2)	11/22/10	08:44	KGM	G	1gal	P	ice	W	N	Centrifuge & combine w/ TΦΦ1 (1of 2)
-003	S-1ΦN-TΦΦ2-Φ-Φ (1of2)	11/22/10	09:36	KGM	G	1gal	P	ice	W	N	Centrifuge & combine w/ TΦΦ2 (2of2
-004	S-1ΦN-TΦΦ2-Φ-Φ (2of2)	11/22/10	09:36	KGM	G	1gal	P	ice	W	N	Centrifuge & combine w/ TΦΦ2 (1of2
-005	S-1ΦN-TΦΦ3-Φ-Φ (1of2)	11/22/10	10:31	KGM	G	1gal	P	ice	W	N	Centrifuge & combine w/ TΦΦ3 (2of2
-006	S-1ΦN-TΦΦ3-Φ-Φ (2of2)	11/22/10	10:31	KGM	G	1gal	P	ice	W	N	Centrifuge & combine w/ TΦΦ3 (1of2

Relinquished By: [signature] Date: 11/22/10 Time: 1600 Received By: [signature] Date: 11/22/10 Time: 1600

Relinquished By: Date: Time: Received at Lab By: Date: Time:

Comments:

Sample Delivery Group No: Page of

COC Doc No: 4153

Sediment Grab Sampling Summary Report WHG-WWJ-D-0001
Delivery Order-0001003
April 2011

APPENDIX C. ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA (ON CD)

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APPENDIX C: ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA

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ANALYTICAL REPORT

Lab Number:	L1007001
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
Report Date:	05/26/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007001
Report Date: 05/26/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1007001-01	S-10Y-G001-0-0	NEW BEDFORD, MA	05/11/10 10:05
L1007001-02	S-10Y-G002-0-0	NEW BEDFORD, MA	05/11/10 11:00
L1007001-03	S-10Y-G002-0-0REP	NEW BEDFORD, MA	05/11/10 11:00
L1007001-04	S-10Y-G003-0-0	NEW BEDFORD, MA	05/11/10 13:30

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007001
Project Number:	TO-0010	**Report Date:**	05/26/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on May 11, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until May 17, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007001
Project Number:	TO-0010	**Report Date:**	05/26/10

Case Narrative (continued)

whether it was the higher or lower value.

All samples were analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compounds that exceeded the calibration range.

Samples L1007001-01 through -04 as well as sample specific associated QC have the surrogates diluted out.

The WG413335-4,-5 MS/MSD recoveries and RPD, performed on L1007001-02, are outside the acceptance criteria for majority of the target compounds. The native sample concentrations were more than 4 times the spike concentration thereby effectively diluting out the spike.

The closing continuing calibration standard for samples L1007001-01D2, -02D, -03D as well as the associated QC and the opening continuing calibration for samples L1007001-01D, -04D had increased responses for BZ8 (21.7%-RTx-5, 29.9%-CLPII), BZ18 (15.9%RTx-5, 25.2%-CLPII) and BZ28(15.5%-RTx-5) above the individual acceptance criteria but within the method allowance. BZ8 and BZ18 in the associated samples were reported off CLPII and BZ28 was reported off RTx-5.

Grain Size

The WG413381-1 Laboratory Duplicate RPD, associated with L1007001-02, is outside the acceptance criteria for sieve, #10(51%),sieve, #20(74%),sieve, #40(74%),sieve, #60(74%),sieve, #140(69%),sieve, #200(67%),gravel(57%),% very coarse sand(83%),% coarse sand(77%),% medium sand(72%),% fine sand(49%),% very fine sand(40%),clay(27%),sand(66%). The elevated RPD has been attributed to the non-homogenous nature of the sample utilized for the laboratory duplicate.

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007001
Project Number:	TO-0010	**Report Date:**	05/26/10

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: 05/26/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-01 D2	Date Collected:	05/11/10 10:05
Client ID:	S-10Y-G001-0-0	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/21/10 17:12	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	7370		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-01 D2	Date Collected:	05/11/10 10:05
Client ID:	S-10Y-G001-0-0	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/21/10 17:12	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5800		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-01 D	Date Collected:	05/11/10 10:05
Client ID:	S-10Y-G001-0-0	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/21/10 22:40	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1250		ug/kg	137	--	100
Cl3-BZ#18	2510		ug/kg	137	--	100
Cl4-BZ#52	5400	E	ug/kg	137	--	100
Cl4-BZ#66	2250		ug/kg	137	--	100
Cl5-BZ#118	1240		ug/kg	137	--	100
Cl6-BZ#138	1120		ug/kg	137	--	100
Cl7-BZ#187	298		ug/kg	137	--	100
Cl7-BZ#180	250		ug/kg	137	--	100
Cl7-BZ#170	197		ug/kg	137	--	100
Cl8-BZ#195	ND		ug/kg	137	--	100
Cl9-BZ#206	ND		ug/kg	137	--	100
Cl10-BZ#209	ND		ug/kg	137	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-01 D	Date Collected:	05/11/10 10:05
Client ID:	S-10Y-G001-0-0	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/21/10 22:40	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4270	E	ug/kg	137	--	100
Cl4-BZ#44	1760		ug/kg	137	--	100
Cl5-BZ#101	1500		ug/kg	137	--	100
Cl6-BZ#153	1250		ug/kg	137	--	100
Cl5-BZ#105	280		ug/kg	137	--	100
Cl6-BZ#128	150		ug/kg	137	--	100

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-02 D	Date Collected:	05/11/10 11:00
Client ID:	S-10Y-G002-0-0	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/21/10 17:53	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5150		ug/kg	1400	--	1000
Cl3-BZ#18	15100		ug/kg	1400	--	1000
Cl4-BZ#66	7370		ug/kg	1400	--	1000
Cl5-BZ#118	3100		ug/kg	1400	--	1000
Cl5-BZ#105	ND		ug/kg	1400	--	1000
Cl6-BZ#138	3220		ug/kg	1400	--	1000
Cl7-BZ#187	ND		ug/kg	1400	--	1000
Cl6-BZ#128	ND		ug/kg	1400	--	1000
Cl7-BZ#180	ND		ug/kg	1400	--	1000
Cl7-BZ#170	ND		ug/kg	1400	--	1000
Cl8-BZ#195	ND		ug/kg	1400	--	1000
Cl9-BZ#206	ND		ug/kg	1400	--	1000
Cl10-BZ#209	ND		ug/kg	1400	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-02 D	Date Collected:	05/11/10 11:00
Client ID:	S-10Y-G002-0-0	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/21/10 17:53	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	16500		ug/kg	1400	--	1000
Cl4-BZ#52	22100		ug/kg	1400	--	1000
Cl4-BZ#44	7160		ug/kg	1400	--	1000
Cl5-BZ#101	4930		ug/kg	1400	--	1000
Cl6-BZ#153	4300		ug/kg	1400	--	1000

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-03 D	Date Collected:	05/11/10 11:00
Client ID:	S-10Y-G002-0-0REP	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/21/10 19:56	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7280		ug/kg	1400	--	1000
Cl3-BZ#18	12900		ug/kg	1400	--	1000
Cl4-BZ#66	8480		ug/kg	1400	--	1000
Cl5-BZ#118	3480		ug/kg	1400	--	1000
Cl5-BZ#105	ND		ug/kg	1400	--	1000
Cl6-BZ#138	3480		ug/kg	1400	--	1000
Cl7-BZ#187	ND		ug/kg	1400	--	1000
Cl6-BZ#128	ND		ug/kg	1400	--	1000
Cl7-BZ#180	ND		ug/kg	1400	--	1000
Cl7-BZ#170	ND		ug/kg	1400	--	1000
Cl8-BZ#195	ND		ug/kg	1400	--	1000
Cl9-BZ#206	ND		ug/kg	1400	--	1000
Cl10-BZ#209	ND		ug/kg	1400	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-03 D	Date Collected:	05/11/10 11:00
Client ID:	S-10Y-G002-0-0REP	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/21/10 19:56	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	20900		ug/kg	1400	--	1000
Cl4-BZ#52	25600		ug/kg	1400	--	1000
Cl4-BZ#44	8120		ug/kg	1400	--	1000
Cl5-BZ#101	5350		ug/kg	1400	--	1000
Cl6-BZ#153	4740		ug/kg	1400	--	1000

DBOB	**0**	Q	30-150	
BZ 198	**0**	Q	30-150	

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-04 D	Date Collected:	05/11/10 13:30
Client ID:	S-10Y-G003-0-0	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/22/10 02:04	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	89%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	329		ug/kg	147	--	100
Cl3-BZ#18	590		ug/kg	147	--	100
Cl4-BZ#52	2110		ug/kg	147	--	100
Cl4-BZ#66	1780		ug/kg	147	--	100
Cl5-BZ#118	1470		ug/kg	147	--	100
Cl6-BZ#138	1110		ug/kg	147	--	100
Cl7-BZ#187	225		ug/kg	147	--	100
Cl7-BZ#180	238		ug/kg	147	--	100
Cl7-BZ#170	182		ug/kg	147	--	100
Cl8-BZ#195	ND		ug/kg	147	--	100
Cl9-BZ#206	ND		ug/kg	147	--	100
Cl10-BZ#209	ND		ug/kg	147	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

SAMPLE RESULTS

Lab ID:	L1007001-04 D	Date Collected:	05/11/10 13:30
Client ID:	S-10Y-G003-0-0	Date Received:	05/11/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/17/10 16:08
Analytical Date:	05/22/10 02:04	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	05/18/10
Percent Solids:	89%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1690		ug/kg	147	--	100
Cl4-BZ#44	814		ug/kg	147	--	100
Cl5-BZ#101	1270		ug/kg	147	--	100
Cl6-BZ#153	1060		ug/kg	147	--	100
Cl5-BZ#105	353		ug/kg	147	--	100
Cl6-BZ#128	181		ug/kg	147	--	100

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 05/21/10 15:10
Analyst: NS

Extraction Method: EPA 3540C
Extraction Date: 05/17/10 16:08
Cleanup Method1: EPA 3630
Cleanup Date1: 05/18/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-04 Batch: WG413335-1					
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	97		30-150
BZ 198	109		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007001
Report Date: 05/26/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 05/21/10 15:10
Analyst: NS

Extraction Method: EPA 3540C
Extraction Date: 05/17/10 16:08
Cleanup Method1: EPA 3630
Cleanup Date1: 05/18/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-04 Batch: WG413335-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	109		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007001
Report Date: 05/26/10

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): 01-04 QC Batch ID: WG413335-4 WG413335-5 QC Sample: L1007001-02 Client ID: S-10Y-G002-0-0												
Cl2-BZ#8	5150	867	6590	**166**	Q	4590	**0**	Q	40-140	**200**	Q	30
Cl3-BZ#18	15100	867	13800	**0**	Q	11500	**0**	Q	40-140	NC		30
Cl3-BZ#28	16500	867	18900	**277**	Q	14600	**0**	Q	40-140	**200**	Q	30
Cl4-BZ#52	22100	867	24200	**242**	Q	17400	**0**	Q	40-140	**200**	Q	30
Cl4-BZ#44	7160	867	8260	127		5950	**0**	Q	40-140	**200**	Q	30
Cl4-BZ#66	7370	867	8820	**167**	Q	6400	**0**	Q	40-140	**200**	Q	30
Cl5-BZ#101	4930	867	5770	97		4240	**0**	Q	40-140	**200**	Q	30
Cl5-BZ#118	3100	867	4010	105		3000	**0**	Q	40-140	**200**	Q	30
Cl6-BZ#153	4300	867	5200	104		3840	**0**	Q	40-140	**200**	Q	30
Cl5-BZ#105	ND	867	ND	**0**	Q	ND	**0**	Q	40-140	NC		30
Cl6-BZ#138	3220	867	4120	104		3070	**0**	Q	40-140	**200**	Q	30
Cl7-BZ#187	ND	867	1880	**217**	Q	1420	**164**	Q	40-140	28		30
Cl6-BZ#128	ND	867	1500	**173**	Q	ND	**0**	Q	40-140	**200**	Q	30
Cl7-BZ#180	ND	867	1510	**174**	Q	ND	**0**	Q	40-140	**200**	Q	30
Cl7-BZ#170	ND	867	ND	**0**	Q	ND	**0**	Q	40-140	NC		30
Cl8-BZ#195	ND	867	ND	**0**	Q	ND	**0**	Q	40-140	NC		30
Cl9-BZ#206	ND	867	ND	**0**	Q	ND	**0**	Q	40-140	NC		30
Cl10-BZ#209	ND	867	ND	**0**	Q	ND	**0**	Q	40-140	NC		30

Matrix Spike Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007001
Report Date: 05/26/10

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): 01-04 QC Batch ID: WG413335-4 WG413335-5 QC Sample: L1007001-02 Client ID: S-10Y-G002-0-0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	**0**	Q	**0**	Q	30-150
DBOB	**0**	Q	**0**	Q	30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007001
Report Date: 05/26/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG413335-2		WG413335-3			
Cl2-BZ#8	77		74		40-140	4		30
Cl3-BZ#18	103		95		40-140	8		30
Cl3-BZ#28	94		100		40-140	6		30
Cl4-BZ#52	101		100		40-140	1		30
Cl4-BZ#44	94		92		40-140	2		30
Cl4-BZ#66	94		94		40-140	0		30
Cl5-BZ#101	98		97		40-140	1		30
Cl5-BZ#118	101		102		40-140	1		30
Cl5-BZ#105	94		93		40-140	1		30
Cl6-BZ#138	99		99		40-140	0		30
Cl7-BZ#187	96		96		40-140	0		30
Cl6-BZ#128	98		96		40-140	2		30
Cl7-BZ#180	99		98		40-140	1		30
Cl7-BZ#170	93		93		40-140	0		30
Cl8-BZ#195	94		92		40-140	2		30
Cl9-BZ#206	106		102		40-140	4		30
Cl10-BZ#209	95		92		40-140	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007001
Report Date: 05/26/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG413335-2		WG413335-3			
DBOB	91		83		30-150			
BZ 198	103		100		30-150			
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG413335-2		WG413335-3			
Cl6-BZ#153	89		89		40-140	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	91		83		30-150
BZ 198	103		100		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007001
Report Date: 05/26/10

SAMPLE RESULTS

Lab ID: L1007001-01
Client ID: S-10Y-G001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 05/11/10 10:05
Date Received: 05/11/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.93		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Total Organic Carbon (Rep2)	4.80		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	2.10		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	4.40		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	6.10		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	20.3		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	16.9		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	8.60		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	29.9		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	9.90		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	96.2		%	0.100	--	1	-	05/14/10 11:31	30,2540G	KB
Solids, Total (Pre-Dried)	32.8		%	0.100	NA	1	-	05/12/10 17:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007001
Report Date: 05/26/10

SAMPLE RESULTS

Lab ID: L1007001-02
Client ID: S-10Y-G002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 05/11/10 11:00
Date Received: 05/11/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.52		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Total Organic Carbon (Rep2)	5.46		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	1.00		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	2.10		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	2.30		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	2.20		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	2.00		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	2.40		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	56.0		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	31.7		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	94.2		%	0.100	--	1	-	05/14/10 11:31	30,2540G	KB
Solids, Total (Pre-Dried)	24.8		%	0.100	NA	1	-	05/12/10 17:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007001
Report Date: 05/26/10

SAMPLE RESULTS

Lab ID: L1007001-03
Client ID: S-10Y-G002-0-0REP
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 05/11/10 11:00
Date Received: 05/11/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.30		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Total Organic Carbon (Rep2)	5.16		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.700		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	3.20		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	3.60		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	3.30		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	2.60		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	3.00		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	56.0		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	27.2		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	94.0		%	0.100	--	1	-	05/14/10 11:31	30,2540G	KB
Solids, Total (Pre-Dried)	24.7		%	0.100	NA	1	-	05/12/10 17:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007001
Report Date: 05/26/10

SAMPLE RESULTS

Lab ID: L1007001-04
Client ID: S-10Y-G003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 05/11/10 13:30
Date Received: 05/11/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.23		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Total Organic Carbon (Rep2)	4.24		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.600		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	2.80		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	3.30		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	3.60		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	3.80		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	4.00		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	55.8		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	25.9		%	0.100	NA	1	-	05/17/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	89.3		%	0.100	--	1	-	05/14/10 11:31	30,2540G	KB
Solids, Total (Pre-Dried)	27.0		%	0.100	NA	1	-	05/12/10 17:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007001

Project Number: TO-0010 **Report Date:** 05/26/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-04 Batch: WG414579-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	05/25/10 15:00	1,9060	NR

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007001
Report Date: 05/26/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG414579-4 QC Sample: L1007001-02 Client ID: S-10Y-G002-0-0												
Total Organic Carbon (Rep1)	5.52	1.74	7.29	102		-	-		75-125	-		25
Total Organic Carbon (Rep2)	5.46	2.91	8.50	102		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007001
Report Date: 05/26/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG413037-1 QC Sample: L1007001-02 Client ID: S-10Y-G002-0-0						
Solids, Total	94.2	94.6	%	0		20
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG413381-1 QC Sample: L1007001-02 Client ID: S-10Y-G002-0-0						
Gravel (>2.00mm)	1.0	1.80	%	**57**	Q	20
Very Coarse Sand (1.00-2.00 mm)	2.1	5.10	%	**83**	Q	20
Coarse Sand (0.50-1.00 mm)	2.3	5.20	%	**77**	Q	20
Medium Sand (0.25-0.50 mm)	2.2	4.70	%	**72**	Q	20
Fine Sand (0.125-0.25 mm)	2.0	3.30	%	**49**	Q	20
Very Fine Sand (0.063-0.125 mm)	2.4	3.60	%	**40**	Q	20
Silt - (1.95-62.5 um)	56.0	51.8	%	8		20
Clay - (<1.95 um)	31.7	24.1	%	**27**	Q	20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG414579-3 QC Sample: L1007001-02 Client ID: S-10Y-G002-0-0						
Total Organic Carbon (Rep1)	5.52	5.23	%	5		25
Total Organic Carbon (Rep2)	5.46	5.44	%	0		25

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007001
Project Number:	TO-0010	**Report Date:**	05/26/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG414579-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	121		75-125
Total Organic Carbon (Rep2)	107		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007001
Report Date: 05/26/10

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(*)
L1007001-01A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA(),A2-TS(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1007001-01B	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA()
L1007001-01C	Glass 100ml unpreserved	A	N/A	3.3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)
L1007001-01D	Bag	A	N/A	3.3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1007001-02A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA(),A2-TS(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1007001-02B	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA()
L1007001-02C	Glass 100ml unpreserved	A	N/A	3.3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007001
Report Date: 05/26/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1007001-02D	Bag	A	N/A	3.3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1007001-02E	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA()
L1007001-03A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA(),A2-TS(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1007001-03C	Glass 100ml unpreserved	A	N/A	3.3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)
L1007001-03D	Bag	A	N/A	3.3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1007001-04A	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA(),A2-TS(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1007001-04B	Glass 250ml unpreserved	A	N/A	3.3	Y	Absent	A2-PCBCONG-8082-NOAA()
L1007001-04C	Glass 100ml unpreserved	A	N/A	3.3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007001
Report Date: 05/26/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1007001-04D	Bag	A	N/A	3.3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007001
Project Number:	TO-0010	**Report Date:**	05/26/10

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.

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.

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.

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.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007001
Project Number:	TO-0010	**Report Date:**	05/26/10

Data Qualifiers

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	**Lab Number:**	L1007001
Project Number:	TO-0010	**Report Date:**	05/26/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

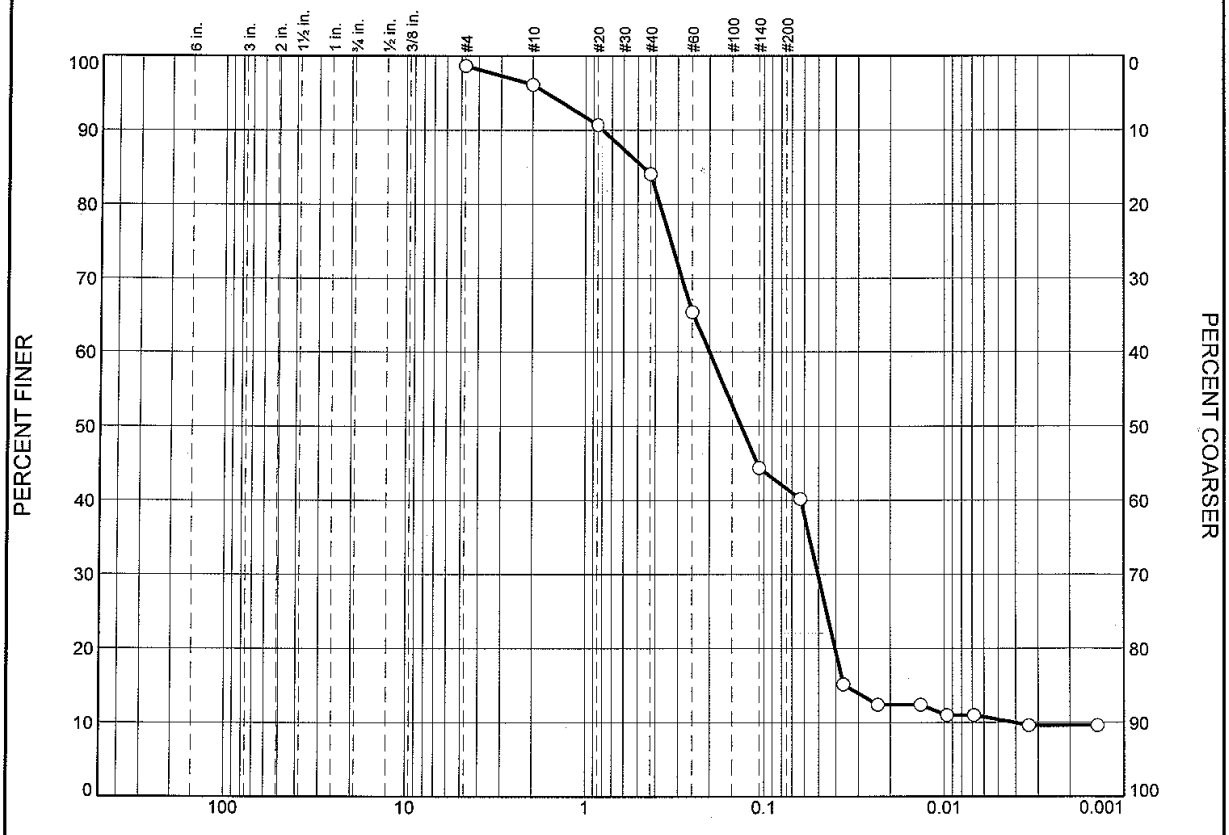
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○				2.1	4.4	6.1	20.3	16.9	8.6	25.7	1.7	1.4	1.1	9.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4680	0.2009	0.1335	0.0504	0.0355	0.0041	3.06	48.78

	Material Description	USCS	AASHTO
○			

Project No. L1007001 **Client:** Woods Hole Group

Project: NBH Environmental Monitoring

○ **Source of Sample:** S-10Y-G001-0-0 **Sample Number:** L1007001-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

5/26/2010

Client: Woods Hole Group
Project: NBH Environmental Monitoring
Project Number: L1007001
Location: S-10Y-G001-0-0
Sample Number: L1007001-01
Sieve opening list: BS Bulk Sieve

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
46.60	0.00	#4	528.94	528.32	98.7	1.3
		#10	494.68	493.50	96.1	3.9
		#20	420.68	418.15	90.7	9.3
		#40	379.65	376.56	84.1	15.9
		#60	374.75	366.02	65.3	34.7
		#140	353.02	343.24	44.4	55.6
		#230	321.72	319.78	40.2	59.8

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 40.2
Weight of hydrometer sample =46.6
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0363	15.1	84.9
5.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0234	12.4	87.6
15.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0135	12.4	87.6
30.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0096	11.0	89.0
60.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0068	11.0	89.0
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	9.6	90.4
1440.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0014	9.6	90.4

Fractional Components

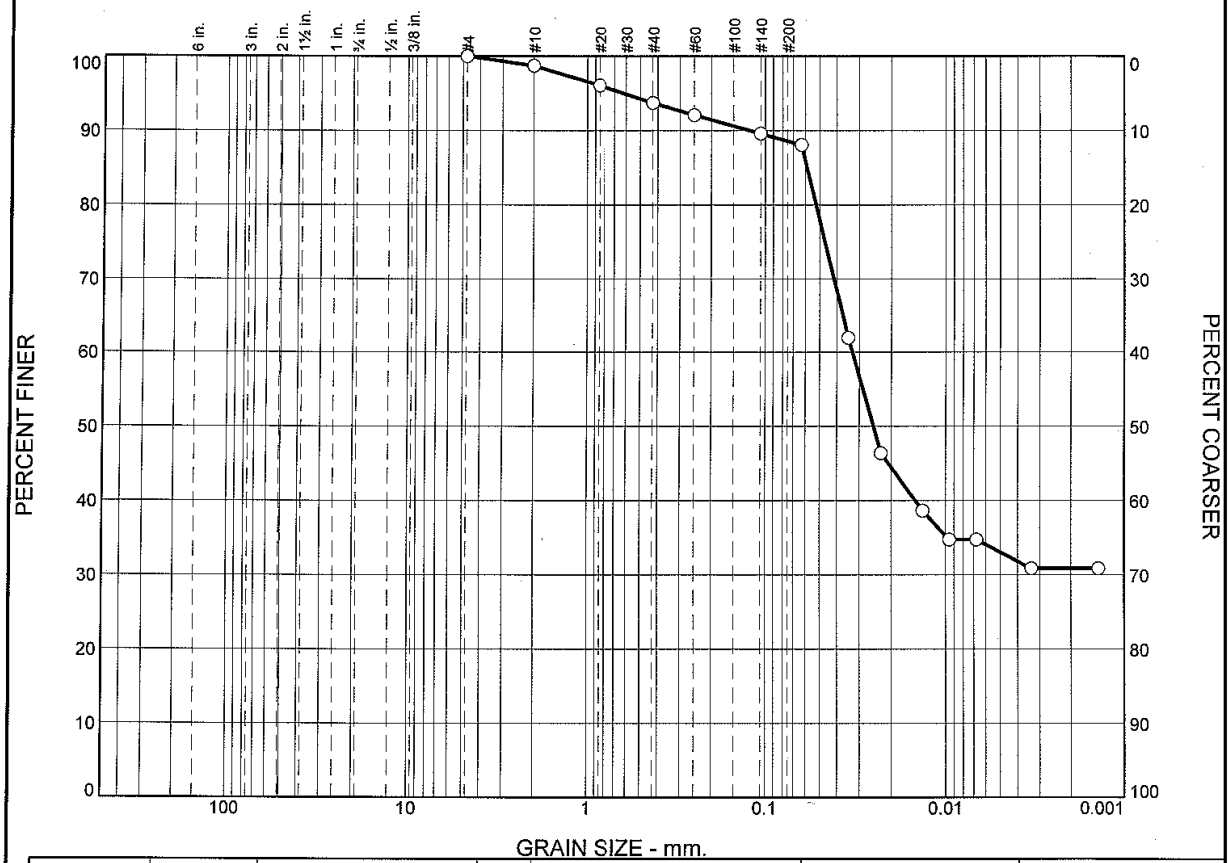
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
			2.1	4.4	6.1	20.3	16.9	8.6	56.3	25.7	1.7	1.4	1.1	29.9	9.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0041	0.0355	0.0404	0.0504	0.1335	0.2009	0.3786	0.4680	0.7894	1.6718

Fineness Modulus	C_u	C_c
1.00	48.78	3.06

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.3	1.0	2.1	2.3	2.2	2.0	2.4	29.9	17.0	6.1	3.0	31.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0587	0.0329	0.0251					

	Material Description	USCS	AASHTO
○			

Project No. L1007001 **Client:** Woods Hole Group
Project: NBH Environmental Monitoring

○ **Source of Sample:** S-10Y-G002-0-0 **Sample Number:** L1007001-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

5/26/2010

Client: Woods Hole Group
Project: NBH Environmental Monitoring
Project Number: L1007001
Location: S-10Y-G002-0-0
Sample Number: L1007001-02
Sieve opening list: BS Bulk Sieve

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
36.40	0.00	#4	527.83	527.83	100.0	0.0
		#10	494.24	493.78	98.7	1.3
		#20	424.47	423.51	96.1	3.9
		#40	375.68	374.81	93.7	6.3
		#60	361.46	360.87	92.1	7.9
		#140	338.38	337.48	89.6	10.4
		#230	320.01	319.45	88.1	11.9

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 88.1
Weight of hydrometer sample =36.4
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0160	1.0159	0.0136	13.0	12.9	0.0346	61.9	38.1
5.00	20.0	1.0120	1.0119	0.0136	9.0	13.9	0.0228	46.4	53.6
15.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0134	38.6	61.4
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	34.7	65.3
60.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0068	34.7	65.3
250.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0033	30.8	69.2
1440.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0014	30.8	69.2

Fractional Components

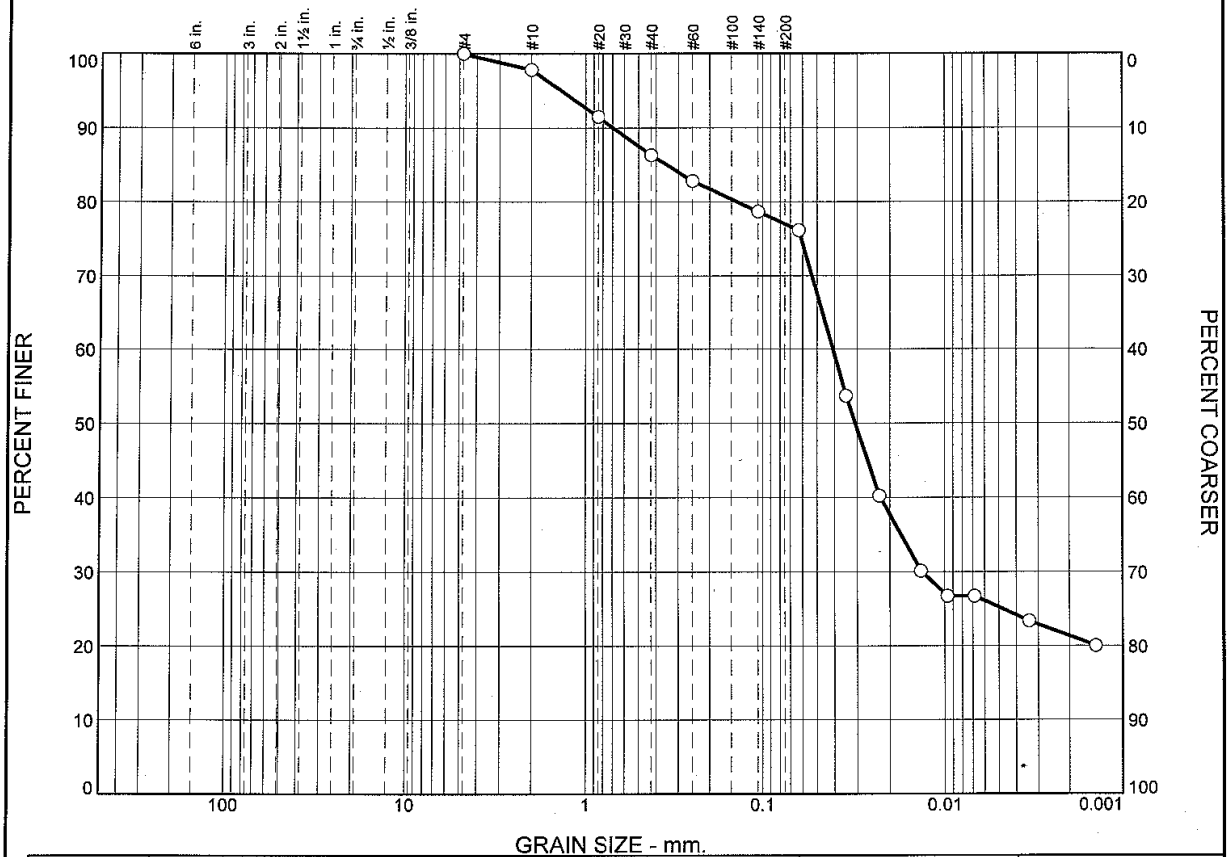
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.3	1.0	2.1	2.3	2.2	2.0	2.4	11.0	29.9	17.0	6.1	3.0	56.0	31.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0251	0.0329	0.0524	0.0587	0.1211	0.6180

Fineness Modulus
0.26

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.4	1.8	5.1	5.2	4.7	3.3	3.6	25.7	17.3	6.2	2.6	24.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3483	0.0409	0.0308	0.0134				

	Material Description	USCS	AASHTO
○			

Project No. L1007001 **Client:** Woods Hole Group
Project: NBH Environmental Monitoring

○ **Source of Sample:** S-10Y-G002-0-0 **Sample Number:** WG413381-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

5/26/2010

Client: Woods Hole Group
Project: NBH Environmental Monitoring
Project Number: L1007001
Location: S-10Y-G002-0-0
Sample Number: WG413381-1
Sieve opening list: BS Bulk Sieve

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
26.30	0.00	#4	528.32	528.32	100.0	0.0
		#10	494.07	493.50	97.8	2.2
		#20	419.82	418.15	91.5	8.5
		#40	377.92	376.56	86.3	13.7
		#60	366.94	366.02	82.8	17.2
		#140	344.33	343.24	78.7	21.3
		#230	320.44	319.78	76.2	23.8

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 76.2
Weight of hydrometer sample =36.3
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0160	1.0159	0.0136	13.0	12.9	0.0346	53.7	46.3
5.00	20.0	1.0120	1.0119	0.0136	9.0	13.9	0.0228	40.2	59.8
15.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0135	30.1	69.9
30.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0096	26.7	73.3
60.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0068	26.7	73.3
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	23.4	76.6
1440.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0014	20.0	80.0

Fractional Components

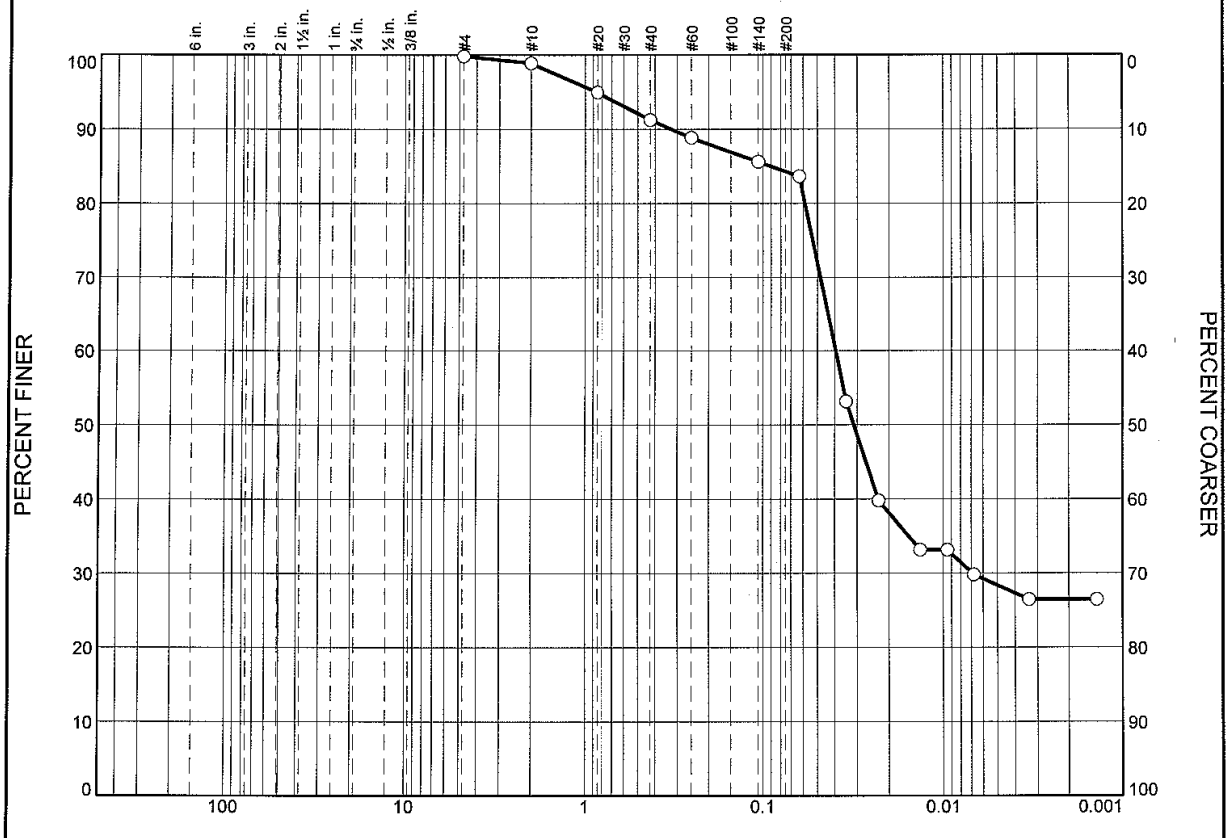
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.4	1.8	5.1	5.2	4.7	3.3	3.6	21.9	25.7	17.3	6.2	2.6	51.8	24.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0014	0.0134	0.0308	0.0409	0.1396	0.3483	0.6968	1.3654

Fineness Modulus
0.55

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○				0.7	3.2	3.6	3.3	2.6	3.0	33.6	14.6	3.8	4.0	27.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0902	0.0396	0.0314	0.0069				

	Material Description	USCS	AASHTO
○			

Project No. L1007001 **Client:** Woods Hole Group
Project: NBH Environmental Monitoring

○ **Source of Sample:** S-10Y-G002-0-0REP **Sample Number:** L1007001-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

5/26/2010

Client: Woods Hole Group
Project: NBH Environmental Monitoring
Project Number: L1007001
Location: S-10Y-G002-0-0REP
Sample Number: L1007001-03
Sieve opening list: BS Bulk Sieve

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
40.30	0.00	#4	527.90	527.83	99.8	0.2
		#10	494.16	493.78	98.9	1.1
		#20	425.09	423.51	95.0	5.0
		#40	376.31	374.81	91.2	8.8
		#60	361.84	360.87	88.8	11.2
		#140	338.78	337.48	85.6	14.4
		#230	320.24	319.45	83.6	16.4

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 83.6
Weight of hydrometer sample =40.3
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0160	1.0159	0.0136	13.0	12.9	0.0346	53.1	46.9
5.00	20.0	1.0120	1.0119	0.0136	9.0	13.9	0.0228	39.8	60.2
15.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0134	33.1	66.9
30.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0095	33.1	66.9
60.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0068	29.8	70.2
250.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0033	26.4	73.6
1440.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0014	26.4	73.6

Fractional Components

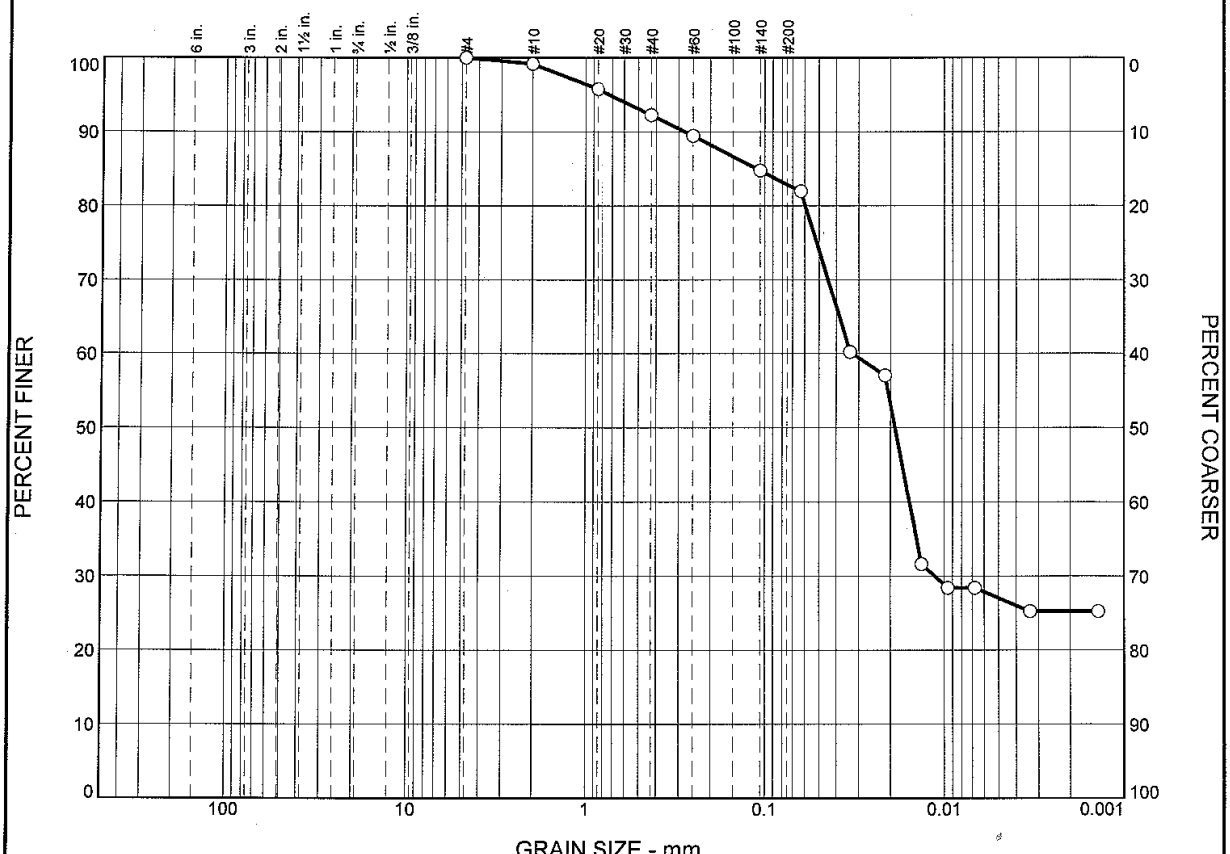
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
			0.7	3.2	3.6	3.3	2.6	3.0	15.7	33.6	14.6	3.8	4.0	56.0	27.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0069	0.0314	0.0396	0.0586	0.0902	0.3233	0.8569

Fineness Modulus
0.35

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.2	0.6	2.8	3.3	3.6	3.8	4.0	22.1	19.8	11.4	2.5	25.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○			0.1108	0.0326	0.0188	0.0113				

	Material Description	USCS	AASHTO
○			

Project No. L1007001 **Client:** Woods Hole Group

Project: NBH Environmental Monitoring

○ **Source of Sample:** S-10Y-G003-0-0 **Sample Number:** L1007001-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

5/26/2010

Client: Woods Hole Group
Project: NBH Environmental Monitoring
Project Number: L1007001
Location: S-10Y-G003-0-0
Sample Number: L1007001-04
Sieve opening list: BS Bulk Sieve

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
41.40	0.00	#4	528.32	528.32	100.0	0.0
		#10	493.84	493.50	99.2	0.8
		#20	419.55	418.15	95.8	4.2
		#40	378.02	376.56	92.3	7.7
		#60	367.18	366.02	89.5	10.5
		#140	345.19	343.24	84.8	15.2
		#230	320.94	319.78	82.0	18.0

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 82.0
Weight of hydrometer sample =41.4
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0190	1.0189	0.0136	16.0	12.1	0.0335	60.2	39.8
5.00	20.0	1.0180	1.0179	0.0136	15.0	12.3	0.0214	57.0	43.0
15.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0134	31.6	68.4
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	28.4	71.6
60.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0068	28.4	71.6
250.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0033	25.2	74.8
1440.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0014	25.2	74.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.2	0.6	2.8	3.3	3.6	3.8	4.0	17.5	22.1	19.8	11.4	2.5	55.8	25.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0113	0.0188	0.0326	0.0595	0.1108	0.2765	0.7267

Fineness Modulus
0.32

Alpha Analytical

Certificate/Approval Program Summary

Last revised May 20, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089. ***NELAP Accredited.***

Non-Potable Water (Organic Parameters: EPA 5030B, EPA 8260)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 3005A,3020, 6020, 245.1, 245.7, 1631E, 7470A, 7474, 9014, 120.1, 9050A, 180.1, SM4500H-B, 2320B, 2510B, 2540D,9040. Organic Parameters: EPA 3510C, 5030B, 9010B, 624, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab:

ALPHA Job #: L1007001

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

05261014:45

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr
E. Falmouth 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environmental Monitoring
Project Location: New Bedford, MA
Project #: TO-0010
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

Level III data report & project specific EDD

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB Cong	TOC	grainsize (Wentworth w/ hydrom)	Sample Specific Comments	TOTAL # BOTTLES
L1007001-1	S-10Y-G001-0-0	5/11/10	10:05	SE	KGM	X			sample	2
	S-10Y-G001-0-0		10:05				X		sample	1
	S-10Y-G001-0-0		10:05					X	sample	1
-2	S-10Y-G002-0-0		11:00			X			sample	2
	S-10Y-G002-0-0		11:00				X		sample	1
	S-10Y-G002-0-0		11:00					X	sample	1
	S-10Y-G002-0-0MSMSD		11:00			X			MS/MSD	1
-3	S-10Y-G002-0-0REP		11:00			X			field rep	1
	S-10Y-G002-0-0REP		11:00				X		field rep	1
	S-10Y-G002-0-0REP		11:00					X	field rep	1

Container Type	G	G	O
Preservative	A	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	5/11/10 15:50	[signature]	5/11/10 1550

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

FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL

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

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

Date Rec'd in Lab:

ALPHA Job #:

05261014:45

Client Information

Client: Woods Hole Group

Address: 81 Technology Park Dr.
E. Falmouth, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Envi. Monitoring

Project Location: New Bedford, MA

Project #: TO-0010

Project Manager: Dave Walsh

ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

Level III data report & Project Specific EDD

ANALYSIS: NOAA 18 PCB cong. | TOC | grainsize (wet sieve w/hydrometer)

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NOAA 18 PCB cong.	TOC	grainsize (wet sieve w/hydrometer)	Sample Specific Comments	TOTAL # BOTTLES
L1007001-4	S-10Y-G003-0-0	5/11/10	13:30	SE	KGM	X			sample	2
	S-10Y-G003-0-0	5/11/10	13:30	SE	KGM		X		sample	1
	S-10Y-G003-0-0	5/11/10	13:30	SE	KGM			X	sample	1

Container Type	6	6	O
Preservative	A	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01 (rev. 18-Jan-2010)

Relinquished By:	Date/Time	Received By:	Date/Time
	5/11/10 15:50		5/11/10 1550

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.

Page 53 of 53

ANALYTICAL REPORT

Lab Number:	L1007438
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
Report Date:	06/08/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007438
Report Date: 06/08/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1007438-01	S-10Y-T001-0-0	NEW BEDFORD, MA	05/14/10 13:30
L1007438-02	S-10Y-T002-0-0	NEW BEDFORD, MA	05/14/10 13:20
L1007438-03	S-10Y-T002-0-0REP	NEW BEDFORD, MA	05/14/10 14:20
L1007438-04	S-10Y-T003-0-0	NEW BEDFORD, MA	05/14/10 15:30

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007438
Project Number:	TO-0010	**Report Date:**	06/08/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Samples were received frozen on May 18, 2010. Aliquots were taken for percent solids and TOC and the remainder of the sample underwent air-drying. The samples were placed in refrigerated storage until they were removed for PCB extraction on May 24, 2010. They were placed in frozen storage May 28, 2010 until removed on June 3, 2010 for Grain Size analysis.

Sample L1007438-03 was cancelled for all analyses on May 21, 2010 per client communications.

Sample L1007438-02 was entirely consumed by the TOC and PCB analyses and therefore grain size was not performed.

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007438
Project Number:	TO-0010	**Report Date:**	06/08/10

Case Narrative (continued)

PCB Congeners by 8082

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.

All samples were analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compounds that exceeded the calibration range.

All samples had the surrogated diluted out as documented by the 0% recoveries.

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: 06/08/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007438

Project Number: TO-0010 **Report Date:** 06/08/10

SAMPLE RESULTS

Lab ID:	L1007438-01 D	Date Collected:	05/14/10 13:30
Client ID:	S-10Y-T001-0-0	Date Received:	05/18/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/24/10 15:26
Analytical Date:	06/02/10 13:09	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/01/10
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	486		ug/kg	155	--	100
Cl3-BZ#18	1270		ug/kg	155	--	100
Cl4-BZ#52	2200		ug/kg	155	--	100
Cl4-BZ#66	973		ug/kg	155	--	100
Cl7-BZ#180	ND		ug/kg	155	--	100
Cl7-BZ#170	ND		ug/kg	155	--	100
Cl9-BZ#206	ND		ug/kg	155	--	100
Cl10-BZ#209	ND		ug/kg	155	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007438

Project Number: TO-0010 **Report Date:** 06/08/10

SAMPLE RESULTS

Lab ID:	L1007438-01 D	Date Collected:	05/14/10 13:30
Client ID:	S-10Y-T001-0-0	Date Received:	05/18/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/24/10 15:26
Analytical Date:	06/02/10 13:09	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/01/10
Percent Solids:	85%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1890		ug/kg	155	--	100
Cl4-BZ#44	783		ug/kg	155	--	100
Cl5-BZ#101	642		ug/kg	155	--	100
Cl5-BZ#118	459		ug/kg	155	--	100
Cl6-BZ#153	428		ug/kg	155	--	100
Cl5-BZ#105	ND		ug/kg	155	--	100
Cl6-BZ#138	252		ug/kg	155	--	100
Cl7-BZ#187	ND		ug/kg	155	--	100
Cl6-BZ#128	ND		ug/kg	155	--	100
Cl8-BZ#195	ND		ug/kg	155	--	100

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007438

Project Number: TO-0010 **Report Date:** 06/08/10

SAMPLE RESULTS

Lab ID:	L1007438-02 D2	Date Collected:	05/14/10 13:20
Client ID:	S-10Y-T002-0-0	Date Received:	05/18/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/24/10 15:26
Analytical Date:	06/02/10 11:06	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/01/10
Percent Solids:	95%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	7430		ug/kg	1930	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007438

Project Number: TO-0010 **Report Date:** 06/08/10

SAMPLE RESULTS

Lab ID:	L1007438-02 D	Date Collected:	05/14/10 13:20
Client ID:	S-10Y-T002-0-0	Date Received:	05/18/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/24/10 15:26
Analytical Date:	06/02/10 13:50	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/01/10
Percent Solids:	95%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	817		ug/kg	193	--	100
Cl3-BZ#18	2620		ug/kg	193	--	100
Cl4-BZ#66	1720		ug/kg	193	--	100
Cl7-BZ#187	271		ug/kg	193	--	100
Cl7-BZ#180	ND		ug/kg	193	--	100
Cl7-BZ#170	ND		ug/kg	193	--	100
Cl9-BZ#206	ND		ug/kg	193	--	100
Cl10-BZ#209	ND		ug/kg	193	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007438

Project Number: TO-0010 **Report Date:** 06/08/10

SAMPLE RESULTS

Lab ID:	L1007438-02 D	Date Collected:	05/14/10 13:20
Client ID:	S-10Y-T002-0-0	Date Received:	05/18/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/24/10 15:26
Analytical Date:	06/02/10 13:50	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/01/10
Percent Solids:	95%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3310		ug/kg	193	--	100
Cl4-BZ#52	5150	E	ug/kg	193	--	100
Cl4-BZ#44	1520		ug/kg	193	--	100
Cl5-BZ#101	1200		ug/kg	193	--	100
Cl5-BZ#118	788		ug/kg	193	--	100
Cl6-BZ#153	936		ug/kg	193	--	100
Cl5-BZ#105	196		ug/kg	193	--	100
Cl6-BZ#138	423		ug/kg	193	--	100
Cl6-BZ#128	ND		ug/kg	193	--	100
Cl8-BZ#195	ND		ug/kg	193	--	100

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007438

Project Number: TO-0010 **Report Date:** 06/08/10

SAMPLE RESULTS

Lab ID:	L1007438-04 D	Date Collected:	05/14/10 15:30
Client ID:	S-10Y-T003-0-0	Date Received:	05/18/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/24/10 15:26
Analytical Date:	06/02/10 14:31	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/01/10
Percent Solids:	92%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	172		ug/kg	143	--	100
Cl3-BZ#18	387		ug/kg	143	--	100
Cl4-BZ#52	1280		ug/kg	143	--	100
Cl4-BZ#66	1090		ug/kg	143	--	100
Cl7-BZ#187	148		ug/kg	143	--	100
Cl7-BZ#170	ND		ug/kg	143	--	100
Cl9-BZ#206	ND		ug/kg	143	--	100
Cl10-BZ#209	ND		ug/kg	143	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007438

Project Number: TO-0010 **Report Date:** 06/08/10

SAMPLE RESULTS

Lab ID:	L1007438-04 D	Date Collected:	05/14/10 15:30
Client ID:	S-10Y-T003-0-0	Date Received:	05/18/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	05/24/10 15:26
Analytical Date:	06/02/10 14:31	Cleanup Method1:	EPA 3630
Analyst:	NS	Cleanup Date1:	06/01/10
Percent Solids:	92%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1000		ug/kg	143	--	100
Cl4-BZ#44	500		ug/kg	143	--	100
Cl5-BZ#101	823		ug/kg	143	--	100
Cl5-BZ#118	802		ug/kg	143	--	100
Cl6-BZ#153	574		ug/kg	143	--	100
Cl5-BZ#105	242		ug/kg	143	--	100
Cl6-BZ#138	462		ug/kg	143	--	100
Cl6-BZ#128	ND		ug/kg	143	--	100
Cl7-BZ#180	145		ug/kg	143	--	100
Cl8-BZ#195	ND		ug/kg	143	--	100

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007438
Report Date: 06/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 06/02/10 08:22
Analyst: NS

Extraction Method: EPA 3540C
Extraction Date: 05/24/10 15:26
Cleanup Method1: EPA 3630
Cleanup Date1: 06/01/10

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-02,04 Batch: WG414313-1					
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	38		30-150
BZ 198	44		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007438
Report Date: 06/08/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 06/02/10 08:22
Analyst: NS

Extraction Method: EPA 3540C
Extraction Date: 05/24/10 15:26
Cleanup Method1: EPA 3630
Cleanup Date1: 06/01/10

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-02,04 Batch: WG414313-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	38		30-150
BZ 198	44		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007438
Report Date: 06/08/10

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		Batch: WG414313-2		WG414313-3			
Cl2-BZ#8	79		74		40-140	7		30
Cl3-BZ#18	75		83		40-140	10		30
Cl3-BZ#28	72		89		40-140	21		30
Cl4-BZ#52	82		86		40-140	5		30
Cl4-BZ#44	76		85		40-140	11		30
Cl4-BZ#66	76		86		40-140	12		30
Cl5-BZ#101	78		86		40-140	10		30
Cl5-BZ#118	81		88		40-140	8		30
Cl5-BZ#105	80		87		40-140	8		30
Cl6-BZ#138	83		89		40-140	7		30
Cl7-BZ#187	79		85		40-140	7		30
Cl6-BZ#128	83		89		40-140	7		30
Cl7-BZ#180	83		89		40-140	7		30
Cl7-BZ#170	80		85		40-140	6		30
Cl8-BZ#195	82		86		40-140	5		30
Cl9-BZ#206	89		94		40-140	5		30
Cl10-BZ#209	83		88		40-140	6		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007438
Report Date: 06/08/10

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		Batch: WG414313-2 WG414313-3					

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	37		41		30-150
BZ 198	41		43		30-150

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-02,04		Batch: WG414313-2 WG414313-3					
Cl6-BZ#153	72		76		40-140	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	37		41		30-150
BZ 198	41		43		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007438
Report Date: 06/08/10

SAMPLE RESULTS

Lab ID: L1007438-01
Client ID: S-10Y-T001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 05/14/10 13:30
Date Received: 05/18/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.10		%	0.010	--	1	-	05/28/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	5.91		%	0.010	--	1	-	05/28/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.200		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	2.10		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	2.60		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	2.50		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	4.20		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	5.70		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	59.6		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	23.1		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	85.3		%	0.100	--	1	-	05/24/10 13:44	30,2540G	KB
Solids, Total (Pre-Dried)	32.5		%	0.100	NA	1	-	05/20/10 11:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007438
Report Date: 06/08/10

SAMPLE RESULTS

Lab ID: L1007438-02
Client ID: S-10Y-T002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 05/14/10 13:20
Date Received: 05/18/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.36		%	0.010	--	1	-	05/28/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	5.78		%	0.010	--	1	-	05/28/10 07:00	1,9060	NR
General Chemistry - Mansfield Lab										
Solids, Total	94.9		%	0.100	--	1	-	05/24/10 13:44	30,2540G	KB
Solids, Total (Pre-Dried)	24.1		%	0.100	NA	1	-	05/20/10 11:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007438
Report Date: 06/08/10

SAMPLE RESULTS

Lab ID: L1007438-04
Client ID: S-10Y-T003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 05/14/10 15:30
Date Received: 05/18/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.86		%	0.010	--	1	-	05/28/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	3.98		%	0.010	--	1	-	05/28/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.300		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	1.20		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	2.40		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	4.00		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	18.0		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	15.9		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	41.9		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	16.2		%	0.100	NA	1	-	06/03/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	92.0		%	0.100	--	1	-	05/24/10 13:44	30,2540G	KB
Solids, Total (Pre-Dried)	32.1		%	0.100	NA	1	-	05/20/10 11:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1007438

Project Number: TO-0010 **Report Date:** 06/08/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-02,04 Batch: WG415085-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	05/28/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	05/28/10 07:00	1,9060	NR

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007438
Report Date: 06/08/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-02,04 0				QC Batch ID: WG415085-4			QC Sample: L1007438-04		Client ID: S-10Y-T003-0-			
Total Organic Carbon (Rep1)	3.86	1.7	5.50	107		-	-		75-125	-		25
Total Organic Carbon (Rep2)	3.98	3.16	6.87	101		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007438
Report Date: 06/08/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-02,04 QC Batch ID: WG414056-1 QC Sample: L1007438-01 Client ID: S-10Y-T001-0-0						
Solids, Total	85.3	85.3	%	0		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-02,04 QC Batch ID: WG415085-3 QC Sample: L1007438-04 Client ID: S-10Y-T003-0-0						
Total Organic Carbon (Rep1)	3.86	3.95	%	2		25
Total Organic Carbon (Rep2)	3.98	3.86	%	3		25

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010
Lab Number: L1007438
Report Date: 06/08/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG415085-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	104		75-125
Total Organic Carbon (Rep2)	103		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010

Lab Number: L1007438
Report Date: 06/08/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
J	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1007438-01A	Glass 500ml unpreserved	J	N/A	4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1007438-02A	Glass 500ml unpreserved	J	N/A	4	Y	Absent	-
L1007438-03A	Glass 500ml unpreserved	J	N/A	4	Y	Absent	-
L1007438-04A	Glass 500ml unpreserved	J	N/A	4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007438
Project Number:	TO-0010	**Report Date:**	06/08/10

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.

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.

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.

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.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1007438
Project Number:	TO-0010	**Report Date:**	06/08/10

Data Qualifiers

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	**Lab Number:**	L1007438
Project Number:	TO-0010	**Report Date:**	06/08/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

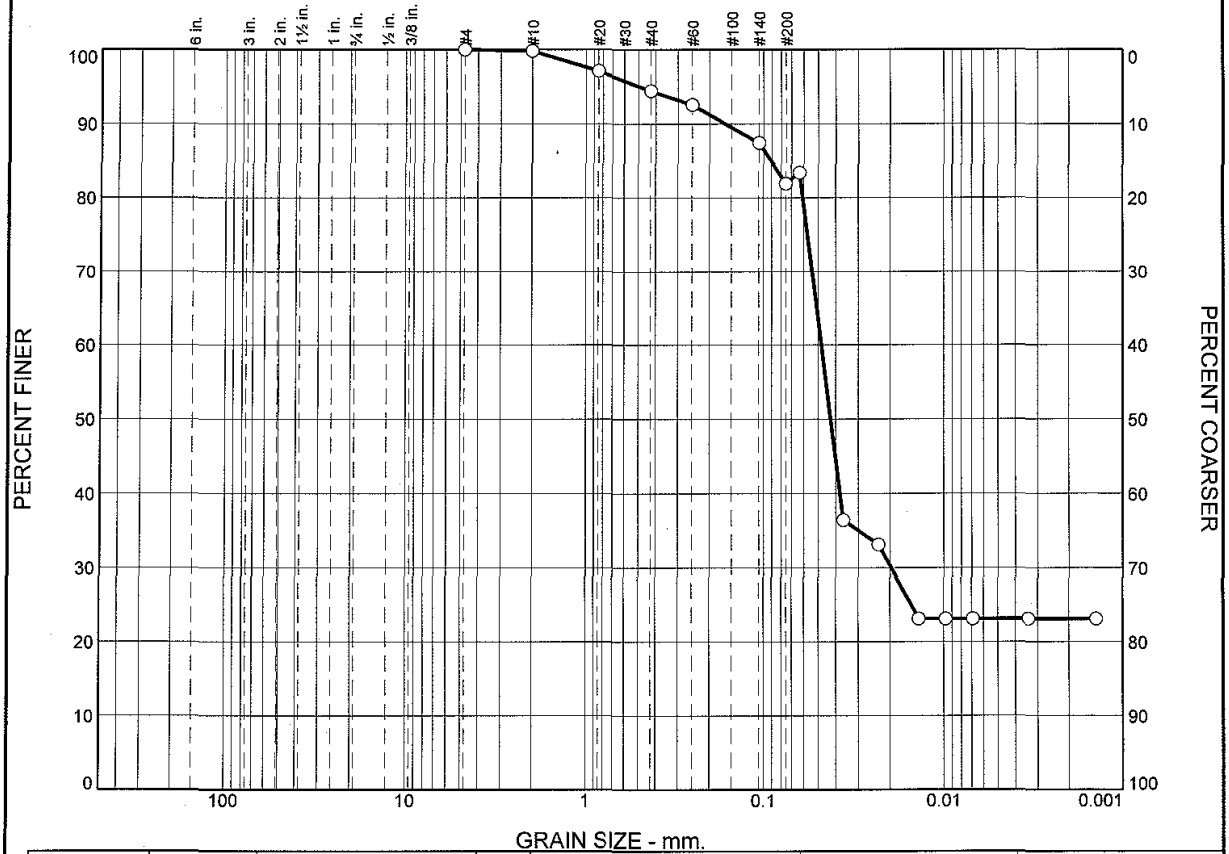
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.2	2.1	2.6	2.5	4.2	5.7	47.5	9.7	2.4	0.0	23.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0911	0.0479	0.0426	0.0197				

	Material Description	USCS	AASHTO
○			

Project No. L1007438 **Client:** Woods Hole Group
Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10Y-T001-0-0 **Sample Number:** L1007438-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

6/8/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1007438
Location: S-10Y-T001-0-0
Sample Number: L1007438-01
Sieve opening list: BS Bulk Sieve

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 11.27
Tare Wt. = 3.99
Minus #200 from wash = 81.9%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
40.22	0.00	#4	527.82	527.82	100.0	0.0
		#10	493.84	493.77	99.8	0.2
		#20	424.61	423.53	97.1	2.9
		#40	375.94	374.85	94.4	5.6
		#60	361.63	360.89	92.6	7.4
		#140	339.61	337.53	87.4	12.6
		#230	321.41	319.79	83.4	16.6

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 83.4
Weight of hydrometer sample =40.22
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0363	36.4	63.6
5.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0232	33.1	66.9
15.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0138	23.1	76.9
30.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0097	23.1	76.9
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	23.1	76.9
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	23.1	76.9
1440.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0014	23.1	76.9

Fractional Components

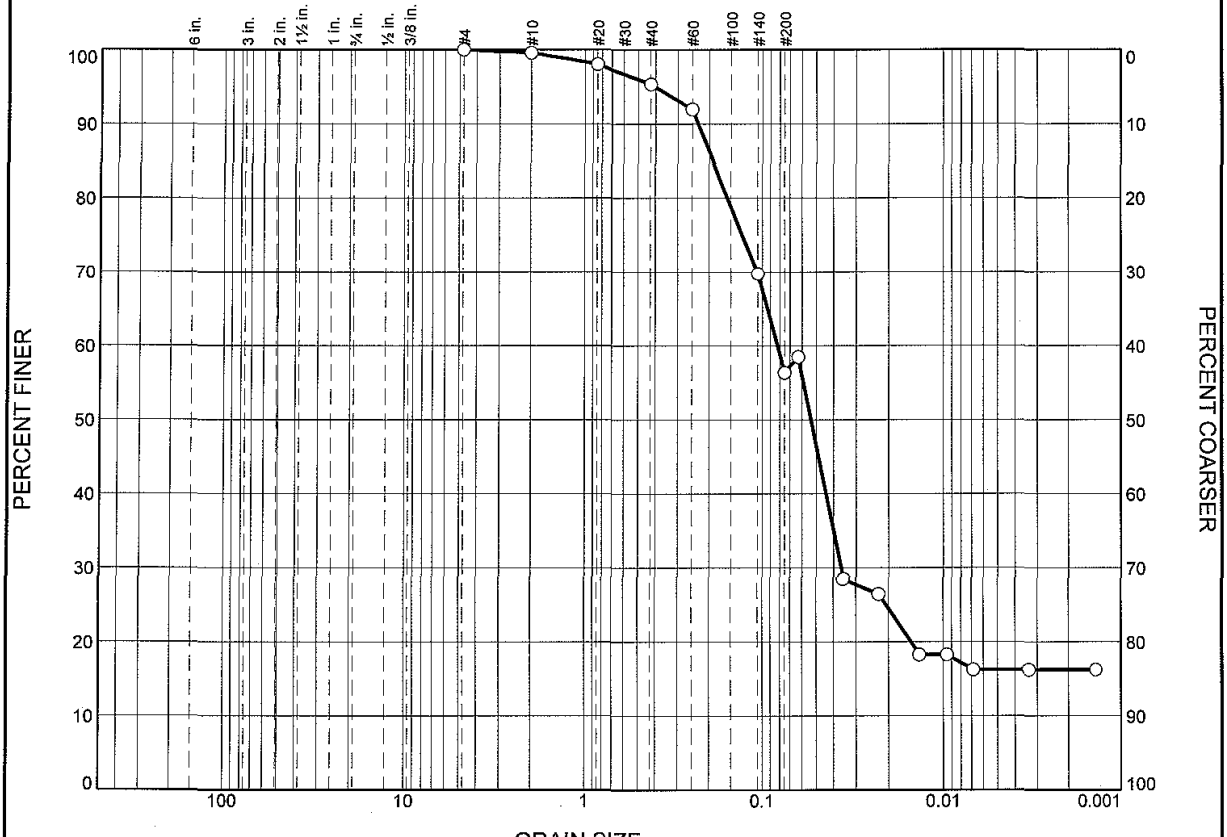
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.2	2.1	2.6	2.5	4.2	5.7	17.1	47.5	9.7	2.4	0.0	59.6	23.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0197	0.0426	0.0479	0.0605	0.0911	0.1627	0.4916

Fineness Modulus
0.23

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.1	0.3	1.2	2.4	4.0	18.0	15.9	30.2	7.3	3.6	0.8	16.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1911	0.0825	0.0535	0.0364				

	Material Description	USCS	AASHTO
○			

Project No. L1007438 **Client:** Woods Hole Group
Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10Y-T003-0-0 **Sample Number:** L1007438-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

6/8/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1007438
Location: S-10Y-T003-0-0
Sample Number: L1007438-04
Sieve opening list: BS Bulk Sieve

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 24.07
Tare Wt. = 4.00
Minus #200 from wash = 56.3%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
45.95	0.00	#4	527.82	527.82	100.0	0.0
		#10	493.96	493.77	99.6	0.4
		#20	424.23	423.53	98.1	1.9
		#40	376.09	374.85	95.4	4.6
		#60	362.45	360.89	92.0	8.0
		#140	347.76	337.53	69.7	30.3
		#230	324.95	319.79	58.5	41.5

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 58.5
Weight of hydrometer sample =45.95
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0140	1.0139	0.0136	11.0	13.4	0.0353	28.5	71.5
5.00	20.0	1.0130	1.0129	0.0136	10.0	13.6	0.0225	26.4	73.6
15.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0135	18.3	81.7
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	18.3	81.7
60.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0068	16.2	83.8
250.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0033	16.2	83.8
1440.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0014	16.2	83.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.1	0.3	1.2	2.4	4.0	18.0	15.9	41.5	30.2	7.3	3.6	0.8	41.9	16.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0151	0.0364	0.0535	0.0825	0.1576	0.1911	0.2317	0.4015

Fineness Modulus
0.33

Alpha Analytical

Certificate/Approval Program Summary

Last revised June 1, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 3005A,3020, 6020, 245.1, 245.7, 1631E, 7470A, 7474, 9014, 120.1, 9050A, 180.1, SM4500H-B, 2320B, 2510B, 2540D,9040. Organic Parameters: EPA 3510C, 5030B, 9010B, 624, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: 4108

CHAIN OF CUSTODY DOCUMENTATION

ALPHA Job # L1007438

Serial No:06081012:19

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: NBH Envir. Monitor	Page 1 of 1
Report to:	Address: 81 Technology Park Drive	Project Number:	
Invoice to:	Address: E. Falmouth, MA 02536	Project Manager: Dave Walsh	
Invoice: 508-540-8080	Fax: 508-540-1001	email: DWALSH@WHGPP.COM	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
07438.1	S-10Y-T001-0-0	5/14/10	1330	JL	C	500	G	-	S	-	Grain Size, TOC, PCB Congeners *
2	S-10Y-T002-0-0	5/14/10	1320	JL	C	1000	G	-	S	-	Grain Size, TOC, PCB Congeners *
3	S-10Y-T002-0-OREP	5/14/10	1420	JL	C	250	G	-	S	-	Grain Size, TOC, PCB Congeners *
4	S-10Y-T003-0-0	5/14/0	1530	JL	C	500	G	-	S	-	Grain Size, TOC, PCB Congeners *

Relinquished By:	Date: 5/18/10 Time: 1400	Received By:	Date: 5/18/10 Time: 14
Relinquished By:	Date: 5/18/10 Time: 1630	Received at Lab By:	Date: 5/18/10 Time: 16:30

Comments: * Samples were Frozen on 5/14/10.

Rel: P. Gilbert 5/18/10 17:10 Rec: Eileen Sullivan 5/18/10 17:10

Sample Delivery Group No: Page of

COC Doc No:

Delivery Order-0010-03
April 2011
C-90
Sediment Trap Study Summary Report
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1010588
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-0010-03
Report Date:	10/14/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010588
Report Date: 10/14/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1010588-01	S-10L-G001-0-0	NEW BEDFORD, MA	07/14/10 09:45
L1010588-02	S-10L-G002-0-0	NEW BEDFORD, MA	07/14/10 12:00
L1010588-03	S-10L-G002-0-0 REP	NEW BEDFORD, MA	07/14/10 12:00
L1010588-04	S-10L-G003-0-0	NEW BEDFORD, MA	07/14/10 14:15

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010588
Project Number:	TO-0010-03	**Report Date:**	10/14/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report replaces the one issued on July 30, 2010. During client review, an anomoly was noted with the results for one sample. The laboratory has re-extracted and submitted updated results for sample L1010588-04.

Sample Receipt

Sediment samples were received intact on July 14, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until July 22, 2010 when they were removed to extract samples for PCB Congener analysis and placed in frozen storage. Sample L1010588-04 remained in frozen storage until removed for extraction on

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010588
Project Number:	TO-0010-03	**Report Date:**	10/14/10

Case Narrative (continued)

September 23, 2010.

PCB Congeners by 8082

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.

L1010588-01 was re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

L1010588-01, 02, 03 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Sample L1010588-04 had the surrogates diluted out.

The WG433629-3 LCS/LCSD RPD, associated with L1010588-04, is above the acceptance criteria for Cl3-BZ#28 (32%); however, the individual LCS/LCSD recoveries are within method limits.

The WG423929-4/-5 MS/MSD recoveries, performed on L1010588-02, were outside 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 low bias for Cl2-BZ#8 (MS 30%), Cl2-BZ#18 (281%)/(463%), Cl3-BZ#28(0%)/(149%), Cl4-BZ#52 (MS 0%), Cl7-BZ#187 (MSD 151%), Cl4-BZ#44(MS 34%), Cl9-BZ#206 (MS 0%), Cl10-BZ#209 (0%)/(0%).
The WG423929-5 MS/MSD RPDs, performed on L1010588-02, are above the acceptance criteria for Cl4-

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010588
Project Number:	TO-0010-03	**Report Date:**	10/14/10

Case Narrative (continued)

BZ#44 (106%), Cl4-BZ#66 (65%), Cl5-BZ#101 (64%),Cl6-BZ#153(49%), Cl2-BZ#8 (99%), Cl3-BZ#18 (49%), Cl6-BZ#138 (34%).

Grain Size

The WG423075-1 Laboratory Duplicate RPD, performed on L1010588-02, is outside the acceptance criteria for Gravel (80%), % Very Coarse Sand (113%),% Coarse Sand(75%), % Medium Sand (46%),% Fine Sand (22%), Silt (27%), Clay(27%), Sand (21%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Total Organic Carbon

The matrix spike associated with sample S-10L-G001-0-0 (L1010588-02) had a recovery of 100% MS#1 and 18% MS#2 which was below the 75% QC acceptance limit, possibly due to a matrix interference. The associated Laboratory Control Spike had an acceptable recovery, indicating the sample batch was in control, and all sample results were accepted.

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: 10/14/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010588

Project Number: TO-0010-03 **Report Date:** 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-01 D2	Date Collected:	07/14/10 09:45
Client ID:	S-10L-G001-0-0	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 12:50	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	4360		ug/kg	1730	--	200

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010588

Project Number: TO-0010-03 **Report Date:** 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-01 D	Date Collected:	07/14/10 09:45
Client ID:	S-10L-G001-0-0	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 19:41	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	704		ug/kg	173	--	20
Cl3-BZ#18	1960		ug/kg	173	--	20
Cl5-BZ#118	799		ug/kg	173	--	20
Cl6-BZ#138	648		ug/kg	173	--	20
Cl6-BZ#128	ND		ug/kg	173	--	20
Cl7-BZ#180	ND		ug/kg	173	--	20
Cl7-BZ#170	ND		ug/kg	173	--	20
Cl8-BZ#195	ND		ug/kg	173	--	20
Cl9-BZ#206	ND		ug/kg	173	--	20
Cl10-BZ#209	ND		ug/kg	173	--	20

DBOB	87	30-150
BZ 198	83	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010588

Project Number: TO-0010-03 **Report Date:** 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-01 D	Date Collected:	07/14/10 09:45
Client ID:	S-10L-G001-0-0	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 19:41	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3160		ug/kg	173	--	20
Cl4-BZ#52	3840	E	ug/kg	173	--	20
Cl4-BZ#44	1170		ug/kg	173	--	20
Cl4-BZ#66	1300		ug/kg	173	--	20
Cl5-BZ#101	1050		ug/kg	173	--	20
Cl6-BZ#153	869		ug/kg	173	--	20
Cl5-BZ#105	186		ug/kg	173	--	20
Cl7-BZ#187	203		ug/kg	173	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	87		30-150
BZ 198	83		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010588

Project Number: TO-0010-03 **Report Date:** 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-02 D	Date Collected:	07/14/10 12:00
Client ID:	S-10L-G002-0-0	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 13:31	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	90%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7500		ug/kg	1830	--	200
Cl3-BZ#18	14200		ug/kg	1830	--	200
Cl4-BZ#66	6710		ug/kg	1830	--	200
Cl5-BZ#118	2690		ug/kg	1830	--	200
Cl5-BZ#105	ND		ug/kg	1830	--	200
Cl6-BZ#138	3010		ug/kg	1830	--	200
Cl7-BZ#187	ND		ug/kg	1830	--	200
Cl6-BZ#128	ND		ug/kg	1830	--	200
Cl7-BZ#180	ND		ug/kg	1830	--	200
Cl7-BZ#170	ND		ug/kg	1830	--	200
Cl8-BZ#195	ND		ug/kg	1830	--	200
Cl9-BZ#206	ND		ug/kg	1830	--	200
Cl10-BZ#209	ND		ug/kg	1830	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	89		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-02 D	Date Collected:	07/14/10 12:00
Client ID:	S-10L-G002-0-0	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 13:31	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	90%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	24300		ug/kg	1830	--	200
Cl4-BZ#52	32000		ug/kg	1830	--	200
Cl4-BZ#44	7760		ug/kg	1830	--	200
Cl5-BZ#101	4820		ug/kg	1830	--	200
Cl6-BZ#153	4330		ug/kg	1830	--	200

DBOB	92	30-150
BZ 198	89	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010588

Project Number: TO-0010-03 **Report Date:** 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-03 D	Date Collected:	07/14/10 12:00
Client ID:	S-10L-G002-0-0 REP	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 15:35	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7100		ug/kg	1890	--	200
Cl3-BZ#18	20800		ug/kg	1890	--	200
Cl4-BZ#66	7030		ug/kg	1890	--	200
Cl5-BZ#118	3000		ug/kg	1890	--	200
Cl5-BZ#105	ND		ug/kg	1890	--	200
Cl6-BZ#138	3190		ug/kg	1890	--	200
Cl7-BZ#187	ND		ug/kg	1890	--	200
Cl6-BZ#128	ND		ug/kg	1890	--	200
Cl7-BZ#180	ND		ug/kg	1890	--	200
Cl7-BZ#170	ND		ug/kg	1890	--	200
Cl8-BZ#195	ND		ug/kg	1890	--	200
Cl9-BZ#206	ND		ug/kg	1890	--	200
Cl10-BZ#209	ND		ug/kg	1890	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	90		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010588

Project Number: TO-0010-03 **Report Date:** 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-03 D	Date Collected:	07/14/10 12:00
Client ID:	S-10L-G002-0-0 REP	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 15:35	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	87%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	24900		ug/kg	1890	--	200
Cl4-BZ#52	34000		ug/kg	1890	--	200
Cl4-BZ#44	8110		ug/kg	1890	--	200
Cl5-BZ#101	4990		ug/kg	1890	--	200
Cl6-BZ#153	4480		ug/kg	1890	--	200

DBOB	93	30-150
BZ 198	90	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010588

Project Number: TO-0010-03 **Report Date:** 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-04	Date Collected:	07/14/10 14:15
Client ID:	S-10L-G003-0-0	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/23/10 16:08
Analytical Date:	10/07/10 15:25	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/28/10
Percent Solids:	86%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	509		ug/kg	155	--	100
Cl3-BZ#18	1060		ug/kg	155	--	100
Cl4-BZ#52	2700		ug/kg	155	--	100
Cl4-BZ#66	1760		ug/kg	155	--	100
Cl5-BZ#118	1330		ug/kg	155	--	100
Cl6-BZ#138	951		ug/kg	155	--	100
Cl6-BZ#128	239		ug/kg	155	--	100
Cl7-BZ#180	193		ug/kg	155	--	100
Cl7-BZ#170	155		ug/kg	155	--	100
Cl8-BZ#195	ND		ug/kg	155	--	100
Cl9-BZ#206	ND		ug/kg	155	--	100
Cl10-BZ#209	ND		ug/kg	155	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

SAMPLE RESULTS

Lab ID:	L1010588-04	Date Collected:	07/14/10 14:15
Client ID:	S-10L-G003-0-0	Date Received:	07/14/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/23/10 16:08
Analytical Date:	10/07/10 15:25	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/28/10
Percent Solids:	86%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2130		ug/kg	155	--	100
Cl4-BZ#44	1030		ug/kg	155	--	100
Cl5-BZ#101	1280		ug/kg	155	--	100
Cl6-BZ#153	1040		ug/kg	155	--	100
Cl5-BZ#105	337		ug/kg	155	--	100
Cl7-BZ#187	199		ug/kg	155	--	100

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 07/27/10 10:47
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 07/22/10 14:54
Cleanup Method1: EPA 3630
Cleanup Date1: 07/27/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG423929-1					
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	85		30-150
BZ 198	94		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 07/27/10 10:47
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 07/22/10 14:54
Cleanup Method1: EPA 3630
Cleanup Date1: 07/27/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG423929-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	94		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 10/06/10 16:50
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 09/23/10 16:08
Cleanup Method1: EPA 3630
Cleanup Date1: 09/28/10

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 04 Batch: WG433629-1					
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	81		30-150
BZ 198	81		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 10/06/10 16:50
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 09/23/10 16:08
Cleanup Method1: EPA 3630
Cleanup Date1: 09/28/10

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 04 Batch: WG433629-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03 Batch: WG423929-2 WG423929-3							
Cl2-BZ#8	63		73		40-140	15		30
Cl3-BZ#18	106		83		40-140	24		30
Cl3-BZ#28	77		79		40-140	3		30
Cl4-BZ#52	99		85		40-140	15		30
Cl4-BZ#44	79		80		40-140	1		30
Cl4-BZ#66	75		82		40-140	9		30
Cl5-BZ#101	82		84		40-140	2		30
Cl5-BZ#118	81		90		40-140	11		30
Cl5-BZ#105	75		86		40-140	14		30
Cl6-BZ#138	85		89		40-140	5		30
Cl7-BZ#187	90		92		40-140	2		30
Cl6-BZ#128	83		88		40-140	6		30
Cl7-BZ#180	92		94		40-140	2		30
Cl7-BZ#170	86		92		40-140	7		30
Cl8-BZ#195	88		107		40-140	19		30
Cl9-BZ#206	96		101		40-140	5		30
Cl10-BZ#209	91		98		40-140	7		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG423929-2		WG423929-3			
DBOB	81		86		30-150			
BZ 198	90		91		30-150			
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG423929-2		WG423929-3			
Cl6-BZ#153	80		86		40-140	7		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	81		86		30-150
BZ 198	90		91		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 04		Batch: WG433629-2		WG433629-3			
Cl2-BZ#8	62		72		40-140	15		30
Cl3-BZ#18	65		84		40-140	26		30
Cl3-BZ#28	65		90		40-140	**32**	Q	30
Cl4-BZ#52	70		84		40-140	18		30
Cl4-BZ#44	73		82		40-140	12		30
Cl4-BZ#66	71		82		40-140	14		30
Cl5-BZ#101	71		82		40-140	14		30
Cl5-BZ#118	74		91		40-140	21		30
Cl5-BZ#105	70		82		40-140	16		30
Cl6-BZ#138	73		86		40-140	16		30
Cl7-BZ#187	70		80		40-140	13		30
Cl6-BZ#128	72		84		40-140	15		30
Cl7-BZ#180	72		85		40-140	17		30
Cl7-BZ#170	71		87		40-140	20		30
Cl8-BZ#195	71		86		40-140	19		30
Cl9-BZ#206	78		92		40-140	16		30
Cl10-BZ#209	72		85		40-140	17		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 04		Batch: WG433629-2		WG433629-3			

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	75		88		30-150
DBOB	72		83		30-150

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 04		Batch: WG433629-2		WG433629-3			
Cl6-BZ#153	66		82		40-140	22		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	75		88		30-150
DBOB	72		83		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

SAMPLE RESULTS

Lab ID: L1010588-01
Client ID: S-10L-G001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 07/14/10 09:45
Date Received: 07/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.34		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	4.33		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.400		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	1.10		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	2.70		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	23.0		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	27.4		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	20.6		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	20.9		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	3.70		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	95.4		%	0.100	--	1	-	07/16/10 16:20	30,2540G	KB
Solids, Total (Pre-Dried)	35.6		%	0.100	NA	1	-	07/14/10 17:25	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

SAMPLE RESULTS

Lab ID: L1010588-02
Client ID: S-10L-G002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 07/14/10 12:00
Date Received: 07/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.38		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	5.35		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.700		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	1.90		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	21.0		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	15.3		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	9.20		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	13.1		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	32.4		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	6.20		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	90.1		%	0.100	--	1	-	07/16/10 16:20	30,2540G	KB
Solids, Total (Pre-Dried)	27.0		%	0.100	NA	1	-	07/14/10 17:25	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

SAMPLE RESULTS

Lab ID: L1010588-03
Client ID: S-10L-G002-0-0 REP
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 07/14/10 12:00
Date Received: 07/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.28		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	5.10		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.400		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	1.90		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	15.9		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	13.8		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	8.70		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	14.0		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	38.2		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	7.00		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	87.4		%	0.100	--	1	-	07/16/10 16:20	30,2540G	KB
Solids, Total (Pre-Dried)	26.5		%	0.100	NA	1	-	07/14/10 17:25	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

SAMPLE RESULTS

Lab ID: L1010588-04
Client ID: S-10L-G003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 07/14/10 14:15
Date Received: 07/14/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.07		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	4.18		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	1.60		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	12.6		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	11.9		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	10.1		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	9.40		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	17.0		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	33.1		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	3.90		%	0.100	NA	1	-	07/16/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	85.9		%	0.100	--	1	-	07/16/10 16:20	30,2540G	KB
Solids, Total (Pre-Dried)	31.4		%	0.100	NA	1	-	07/14/10 17:25	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010588

Project Number: TO-0010-03 **Report Date:** 10/14/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-04 Batch: WG423076-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	07/19/10 12:00	1,9060	NR

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010588
Report Date: 10/14/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG423076-4 QC Sample: L1010588-02 Client ID: S-10L-G002-0-0												
Total Organic Carbon (Rep1)	5.38	1.92	7.30	100		-	-		75-125	-		25
Total Organic Carbon (Rep2)	5.35	1.92	5.70	**18**	Q	-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010588
Report Date: 10/14/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG423075-1 QC Sample: L1010588-02 Client ID: S-10L-G002-0-0						
Gravel (>2.00mm)	0.7	0.300	%	**80**	Q	20
Very Coarse Sand (1.00-2.00 mm)	1.9	6.80	%	**113**	Q	20
Coarse Sand (0.50-1.00 mm)	21.0	9.50	%	**75**	Q	20
Medium Sand (0.25-0.50 mm)	15.3	9.60	%	**46**	Q	20
Fine Sand (0.125-0.25 mm)	9.2	7.40	%	**22**	Q	20
Very Fine Sand (0.063-0.125 mm)	13.1	15.8	%	19		20
Silt - (1.95-62.5 um)	32.4	42.4	%	**27**	Q	20
Clay - (<1.95 um)	6.2	8.10	%	**27**	Q	20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG423076-3 QC Sample: L1010588-02 Client ID: S-10L-G002-0-0						
Total Organic Carbon (Rep1)	5.38	5.24	%	3		25
Total Organic Carbon (Rep2)	5.35	4.98	%	7		25
General Chemistry - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG423200-1 QC Sample: L1010588-02 Client ID: S-10L-G002-0-0						
Solids, Total	90.1	90.3	%	0		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010588
Report Date: 10/14/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG423076-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	112		75-125
Total Organic Carbon (Rep2)	114		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010588
Report Date: 10/14/10

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(*)
L1010588-01A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1010588-01B	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1010588-01C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)
L1010588-01D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1010588-02A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1010588-02B	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1010588-02C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010588
Report Date: 10/14/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1010588-02D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1010588-02E	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1010588-03A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1010588-03C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)
L1010588-03D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1010588-04A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1010588-04B	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1010588-04C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010588
Report Date: 10/14/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1010588-04D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)

Container Comments

L1010588-01D

L1010588-02D

L1010588-03D

L1010588-04D

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010588
Project Number:	TO-0010-03	**Report Date:**	10/14/10

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.
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.

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.
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.
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.
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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010588
Project Number:	TO-0010-03	**Report Date:**	10/14/10

Data Qualifiers

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	**Lab Number:**	L1010588
Project Number:	TO-0010-03	**Report Date:**	10/14/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

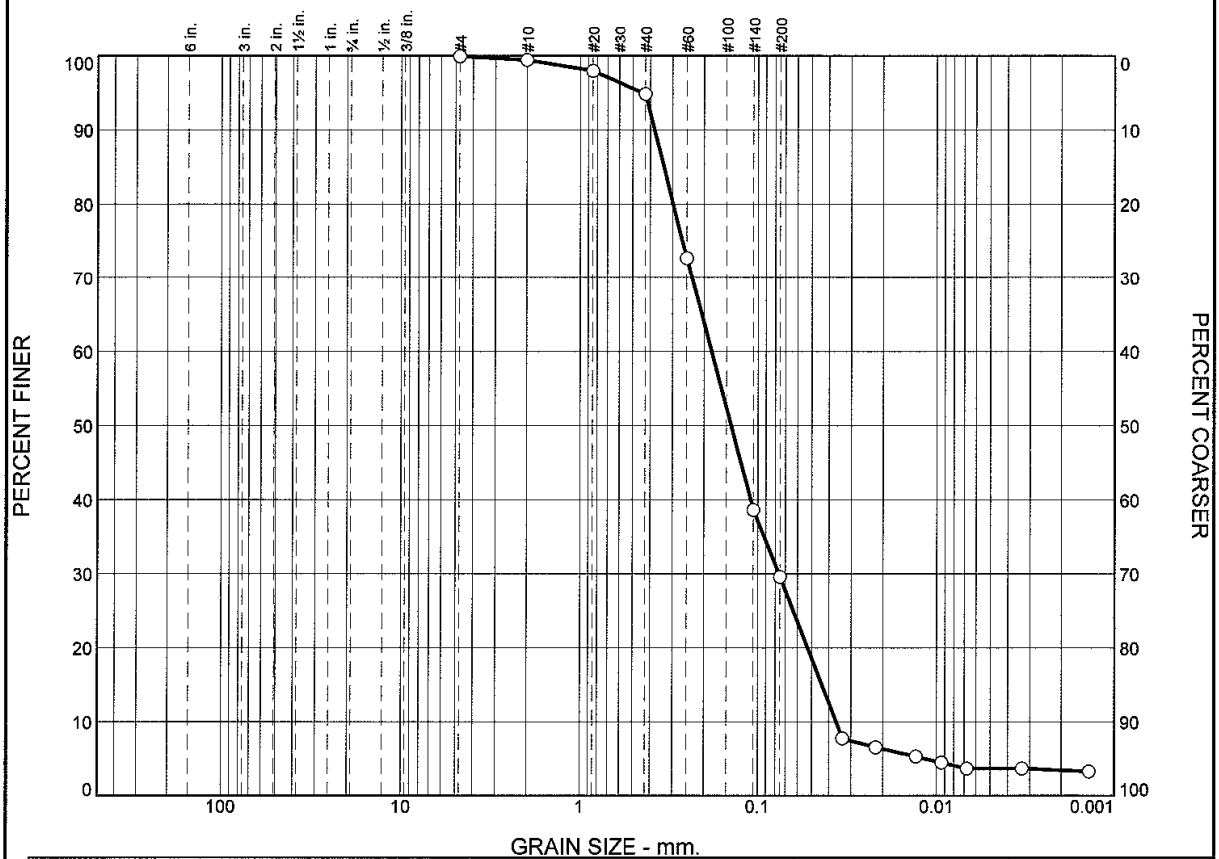
LIMITATION OF LIABILITIES

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.

Wet Sieve Hydrometer
ASTM D422

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○				0.4	1.1	2.7	23.0	27.4	20.6	17.1	1.8	1.7	0.3	3.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3359	0.1817	0.1412	0.0762	0.0438	0.0364	0.88	4.99

	Material Description	USCS	AASHTO
○			

Project No. L1010733 **Client:** Wood Hole Group

Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-G001-0-0 **Sample Number:** L1010588-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/26/2010

Client: Wood Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010733
Location: S-10L-G001-0-0
Sample Number: L1010588-01

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 98.30
Tare Wt. = 7.60
Minus #200 from wash = 21.9%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
116.07	0.00	#4	528.21	528.13	99.9	0.1
		#10	493.94	493.38	99.4	0.6
		#20	419.77	418.08	98.0	2.0
		#40	380.26	376.61	94.8	5.2
		#60	391.83	366.06	72.6	27.4
		#140	382.58	343.10	38.6	61.4
		#200	324.90	314.39	29.6	70.4

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 29.6
Weight of hydrometer sample =116.07
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0190	1.0189	0.0136	16.0	12.1	0.0335	7.8	92.2
5.00	20.0	1.0160	1.0159	0.0136	13.0	12.9	0.0219	6.5	93.5
15.00	20.0	1.0130	1.0129	0.0136	10.0	13.6	0.0130	5.3	94.7
30.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0094	4.5	95.5
60.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0068	3.7	96.3
250.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0033	3.7	96.3
1440.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0014	3.2	96.8

Fractional Components

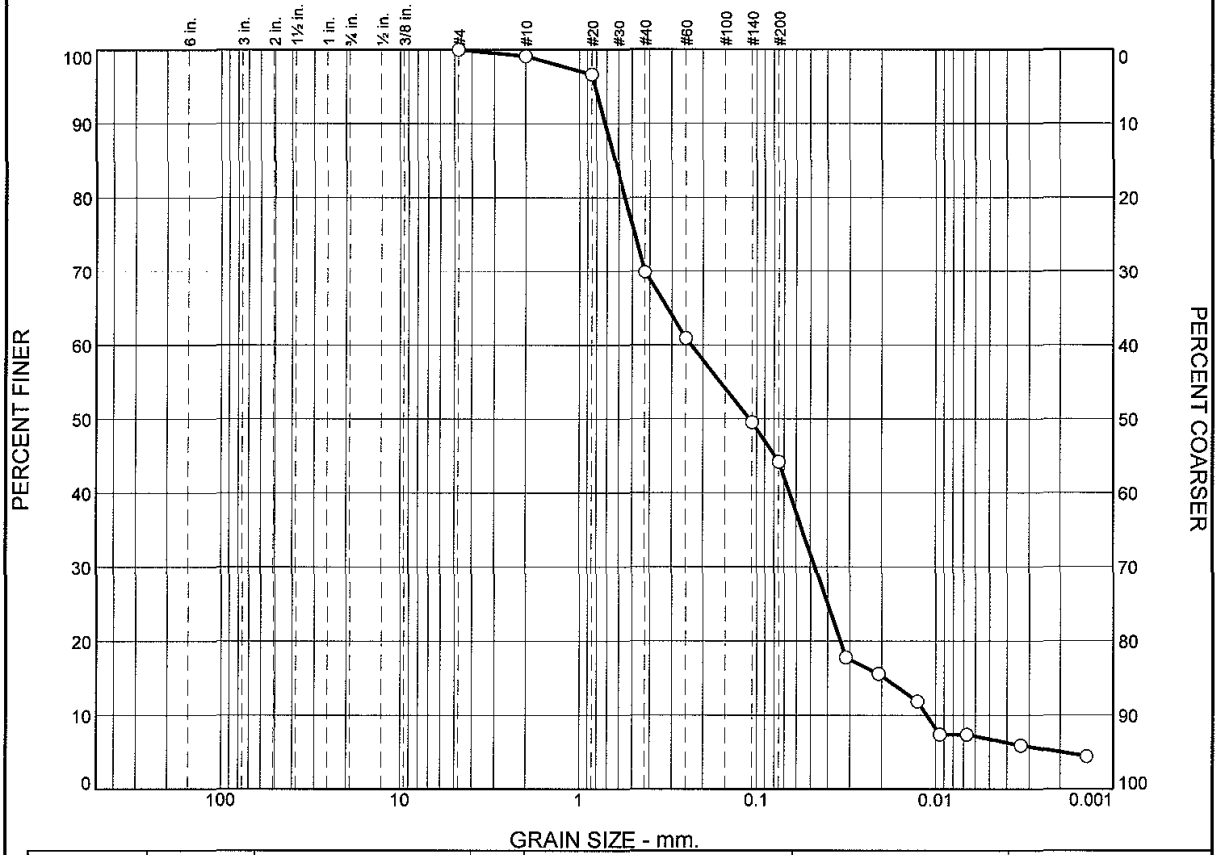
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
			0.4	1.1	2.7	23.0	27.4	20.6	74.8	17.1	1.8	1.7	0.3	20.9	3.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0364	0.0438	0.0527	0.0762	0.1412	0.1817	0.2980	0.3359	0.3785	0.4395

Fineness Modulus	C_u	C_c
0.73	4.99	0.88

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.2	0.7	1.9	21.0	15.3	9.2	13.1	20.9	4.3	6.0	1.2	6.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6283	0.2337	0.1099	0.0472	0.0193	0.0112	0.85	20.83

	Material Description	USCS	AASHTO
○			

Project No. L1010733 **Client:** Wood Hole Group

Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-G002-0-0 **Sample Number:** L1010588-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/26/2010

Client: Wood Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010733
Location: S-10L-G002-0-0
Sample Number: L1010588-02

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 65.23
Tare Wt. = 7.64
Minus #200 from wash = 39.8%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
95.59	0.00	#4	528.13	528.13	100.0	0.0
		#10	494.20	493.38	99.1	0.9
		#20	420.43	418.08	96.7	3.3
		#40	402.22	376.61	69.9	30.1
		#60	374.66	366.06	60.9	39.1
		#140	353.97	343.10	49.5	50.5
		#200	324.49	319.39	44.2	55.8

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 44.2
Weight of hydrometer sample =95.59
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0240	1.0239	0.0136	21.0	10.7	0.0316	17.8	82.2
5.00	20.0	1.0210	1.0209	0.0136	18.0	11.5	0.0207	15.5	84.5
15.00	20.0	1.0160	1.0159	0.0136	13.0	12.9	0.0126	11.8	88.2
30.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0095	7.4	92.6
60.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0067	7.4	92.6
250.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0033	5.9	94.1
1440.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0014	4.4	95.6

Fractional Components

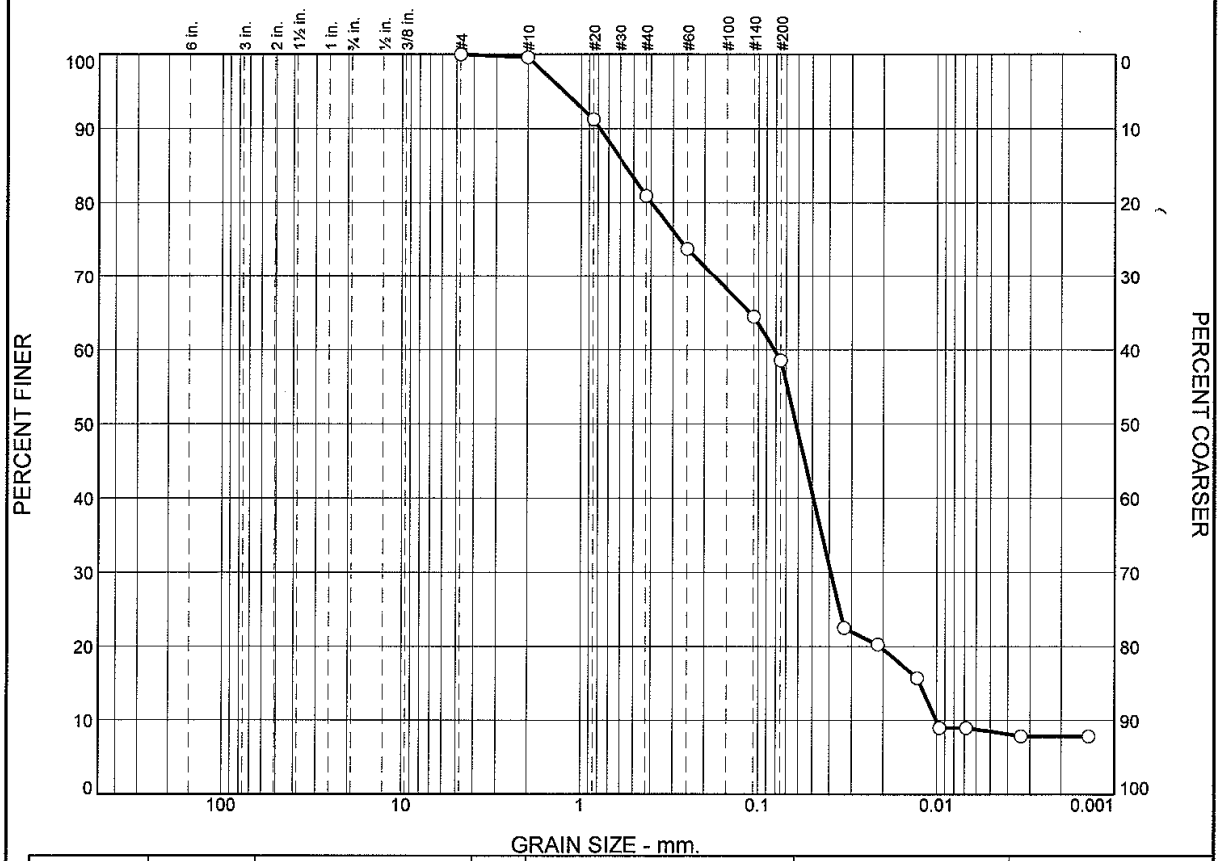
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.2	0.7	1.9	21.0	15.3	9.2	13.1	60.5	20.9	4.3	6.0	1.2	32.4	6.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0112	0.0193	0.0340	0.0472	0.1099	0.2337	0.5520	0.6283	0.7150	0.8138

Fineness Modulus	C_u	C_c
1.02	20.83	0.85

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.1	0.3	6.8	9.5	9.6	7.4	15.8	28.4	4.7	8.4	0.9	8.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5589	0.0816	0.0618	0.0393	0.0125	0.0101	1.88	8.09

Material Description	USCS	AASHTO
○		

Project No. L1010733 **Client:** Wood Hole Group
Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-G002-0-0 **Sample Number:** WG423075-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/26/2010

Client: Wood Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010733
Location: S-10L-G002-0-0
Sample Number: WG423075-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 56.30
Tare Wt. = 7.64
Minus #200 from wash = 41.7%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
83.42	0.00	#4	527.66	527.66	100.0	0.0
		#10	494.03	493.70	99.6	0.4
		#20	430.44	423.47	91.2	8.8
		#40	383.43	374.81	80.9	19.1
		#60	366.82	360.83	73.7	26.3
		#140	345.09	337.37	64.5	35.5
		#200	324.72	319.78	58.6	41.4

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 58.6
Weight of hydrometer sample =83.42
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0200	1.0199	0.0136	17.0	11.8	0.0331	22.5	77.5
5.00	20.0	1.0180	1.0179	0.0136	15.0	12.3	0.0214	20.2	79.8
15.00	20.0	1.0140	1.0139	0.0136	11.0	13.4	0.0129	15.7	84.3
30.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0096	9.0	91.0
60.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0068	9.0	91.0
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	7.8	92.2
1440.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0014	7.8	92.2

Fractional Components

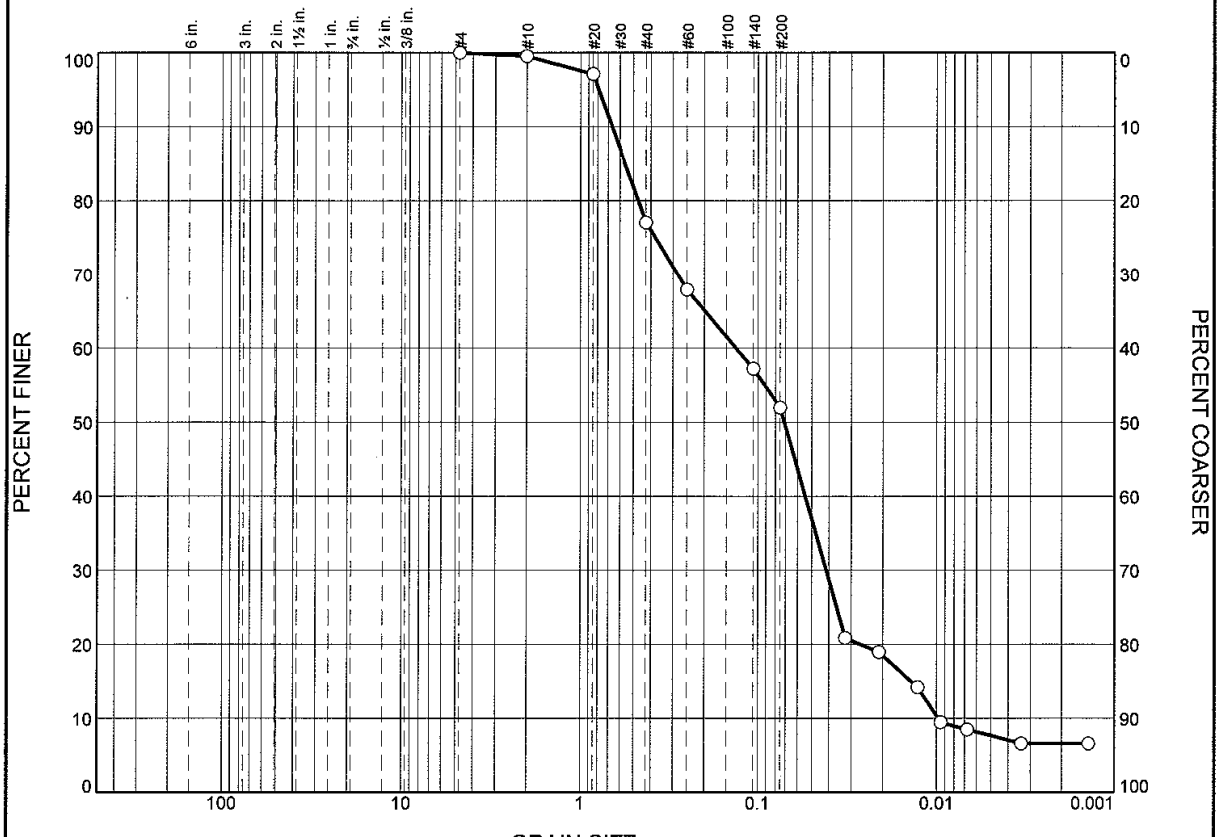
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.1	0.3	6.8	9.5	9.6	7.4	15.8	49.1	28.4	4.7	8.4	0.9	42.4	8.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0101	0.0125	0.0209	0.0393	0.0618	0.0816	0.3972	0.5589	0.7817	1.2481

Fineness Modulus	C_u	C_c
0.75	8.09	1.88

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.1	0.4	1.9	15.9	13.8	8.7	14.0	24.6	4.5	7.2	1.9	7.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5596	0.1329	0.0711	0.0415	0.0139	0.0098	1.32	13.54

Material Description	USCS	AASHTO
○		

Project No. L1010733 **Client:** Wood Hole Group
Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-G002-0-0 REP **Sample Number:** L1010588-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/26/2010

Client: Wood Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010733
Location: S-10L-G002-0-0 REP
Sample Number: L1010588-03

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 55.98
Tare Wt. = 7.58
Minus #200 from wash = 45.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
87.96	0.00	#4	527.66	527.66	100.0	0.0
		#10	494.10	493.70	99.5	0.5
		#20	425.60	423.47	97.1	2.9
		#40	392.49	374.81	77.0	23.0
		#60	368.88	360.83	67.9	32.1
		#140	346.77	337.37	57.2	42.8
		#200	324.37	319.78	52.0	48.0

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 52.0
Weight of hydrometer sample =87.96
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0220	1.0219	0.0136	19.0	11.3	0.0324	20.8	79.2
5.00	20.0	1.0200	1.0199	0.0136	17.0	11.8	0.0210	18.9	81.1
15.00	20.0	1.0150	1.0149	0.0136	12.0	13.1	0.0128	14.2	85.8
30.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0095	9.4	90.6
60.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0068	8.5	91.5
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	6.6	93.4
1440.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0014	6.6	93.4

Fractional Components

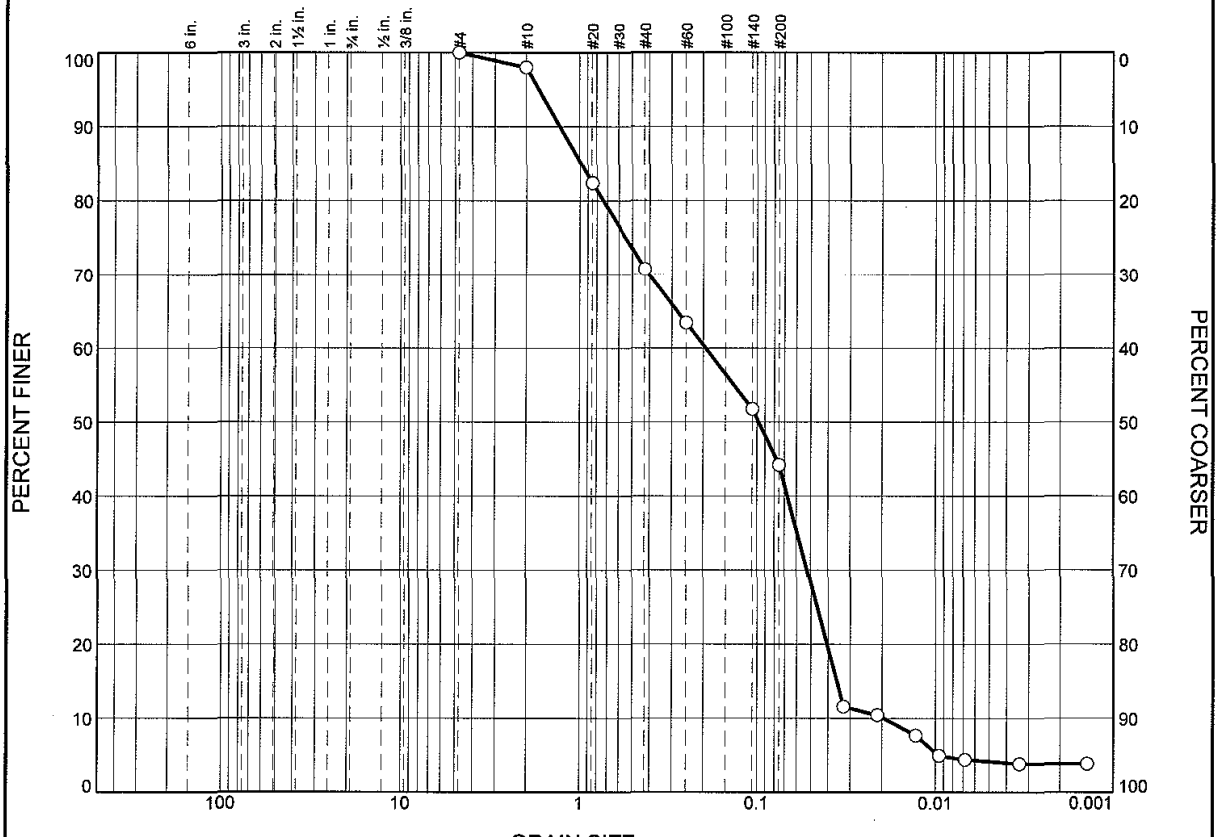
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.1	0.4	1.9	15.9	13.8	8.7	14.0	54.3	24.6	4.5	7.2	1.9	38.2	7.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0098	0.0139	0.0268	0.0415	0.0711	0.1329	0.4709	0.5596	0.6649	0.7900

Fineness Modulus	C_u	C_c
0.83	13.54	1.32

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.4	1.6	12.6	11.9	10.1	9.4	17.0	25.6	2.7	4.1	0.7	3.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9793	0.1943	0.0979	0.0523	0.0358	0.0196	0.72	9.93

Material Description	USCS	AASHTO
○		

Project No. L1010733 **Client:** Wood Hole Group
Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-G003-0-0 **Sample Number:** L1010588-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/26/2010

Client: Wood Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010733
Location: S-10L-G003-0-0
Sample Number: L1010588-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 93.30
Tare Wt. = 7.63
Minus #200 from wash = 33.5%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
128.74	0.00	#4	527.66	527.66	100.0	0.0
		#10	496.27	493.70	98.0	2.0
		#20	443.53	423.47	82.4	17.6
		#40	389.88	374.81	70.7	29.3
		#60	370.20	360.83	63.4	36.6
		#140	352.80	337.73	51.7	48.3
		#200	324.51	314.78	44.2	55.8

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 44.2
Weight of hydrometer sample =128.74
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0210	1.0209	0.0136	18.0	11.5	0.0328	11.5	88.5
5.00	20.0	1.0190	1.0189	0.0136	16.0	12.1	0.0212	10.4	89.6
15.00	20.0	1.0140	1.0139	0.0136	11.0	13.4	0.0129	7.7	92.3
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	4.9	95.1
60.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0068	4.4	95.6
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	3.8	96.2
1440.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0014	3.8	96.2

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.4	1.6	12.6	11.9	10.1	9.4	17.0	61.0	25.6	2.7	4.1	0.7	33.1	3.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0196	0.0358	0.0406	0.0523	0.0979	0.1943	0.7364	0.9793	1.2887	1.6959

Fineness Modulus	C_u	C_c
1.14	9.93	0.72

Alpha Analytical

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

CHAIN OF CUSTODY

PAGE 1 OF 2

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

Date Rec'd in Lab:

ALPHA Job #: L10 10588

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor Env. Mon.
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: dwalsh@wh Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

Level III data report & project specific EDD

ANALYSIS

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NOAA 18 PCB congeners	TOC	grainsize (w/ wash)	Sample Specific Comments	TOTAL # BOTTLES
-1	S-1ΦL-GΦΦ1-Φ-Φ	7/14/10	09:45	SE	KGM	X			Potentially high PCB Concentrations	2
	S-1ΦL-GΦΦ1-Φ-Φ		09:45				X			1
	S-1ΦL-GΦΦ1-Φ-Φ		09:45					X		1
-2	S-1ΦL-GΦΦ2-Φ-Φ		12:00			X				2
	S-1ΦL-GΦΦ2-Φ-Φ		12:00				X			1
	S-1ΦL-GΦΦ2-Φ-Φ		12:00					X		1
-2	S-1ΦL-GΦΦ2-Φ-Φ MS/MSD		12:00			X				1
-3	S-1ΦL-GΦΦ2-Φ-ΦREP		12:00			X				1
	S-1ΦL-GΦΦ2-Φ-ΦREP		12:00				X			1
	S-1ΦL-GΦΦ2-Φ-ΦREP		12:00					X		1
	Container Type					G	G	O		
	Preservative					A	A	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01 (rev. 18-Jan-2010)

Relinquished By:	Date/Time	Received By:	Date/Time
	7/14/10 15:00		7/14/10 1500
	7/14/10 16:00		7/14/10 1620

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.

Serial_No:10141012:33
Delivery Order-0010-03
April 2011
C-143
Sediment Trap Study Summary Report
W912WJ-09-D-0001

CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd in Lab:

ALPHA Job #: L1010588

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

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: New Bedford Harbor Envi. mont.
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State ~~Fed Program~~ Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

Level III data report & project specific EDD

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB congeners	TOC	grainsize (wentworth w/ hydro)	Sample Specific Comments	TOTAL # BOTTLES
-4	S-1ØL-GØØ3-Ø-Ø	7/14/10	14:15	SE	KGM	X			Potentially high PCB Concentration	2
	S-1ØL-GØØ3-Ø-Ø	↓	14:15	↓	↓		X		↓	1
	S-1ØL-GØØ3-Ø-Ø	↓	14:15	↓	↓			X	↓	1
2										
2										
3										

Container Type	G	G	O
Preservative	A	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7/14/10 1500	[signature]	7/14/10 1500
[signature]	7/14/10 16:20	[signature]	7/14/10 1620

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

FORM NO: 01-01 (rev. 18-Jan-2010)

ANALYTICAL REPORT

Lab Number:	L1010911
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-0010-03
Report Date:	08/01/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010911
Report Date: 08/01/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1010911-01	S-10L-T001-0-0	NEW BEDFORD, MA	07/15/10 13:20
L1010911-02	S-10L-T002-0-0	NEW BEDFORD, MA	07/15/10 13:50
L1010911-03	S-10L-T003-0-0	NEW BEDFORD, MA	07/15/10 15:00

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010911
Project Number:	TO-0010-03	**Report Date:**	08/01/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on July 19, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until July22, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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.

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010911
Project Number:	TO-0010-03	**Report Date:**	08/01/10

Case Narrative (continued)

L1010911-01 was re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

L1010911-01, 02, 03 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.'

The WG424862-1 Laboratory Duplicate RPD, performed on L1010911-03, is outside the acceptance criteria for Gravel (111%), % Very coarse sand (39%),% Very fine sand (54%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate. See attached scans

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: 08/01/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010911

Project Number: TO-0010-03 **Report Date:** 08/01/10

SAMPLE RESULTS

Lab ID:	L1010911-01 D2	Date Collected:	07/15/10 13:20
Client ID:	S-10L-T001-0-0	Date Received:	07/19/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 16:57	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	6800		ug/kg	2000	--	200

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

SAMPLE RESULTS

Lab ID:	L1010911-01 D2	Date Collected:	07/15/10 13:20
Client ID:	S-10L-T001-0-0	Date Received:	07/19/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 16:57	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	8100		ug/kg	2000	--	200
Cl4-BZ#52	10500		ug/kg	2000	--	200

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

SAMPLE RESULTS

Lab ID:	L1010911-01 D	Date Collected:	07/15/10 13:20
Client ID:	S-10L-T001-0-0	Date Received:	07/19/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 23:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2030		ug/kg	200	--	20
Cl3-BZ#18	6080	E	ug/kg	200	--	20
Cl5-BZ#118	1310		ug/kg	200	--	20
Cl6-BZ#138	1290		ug/kg	200	--	20
Cl6-BZ#128	246		ug/kg	200	--	20
Cl7-BZ#180	250		ug/kg	200	--	20
Cl7-BZ#170	211		ug/kg	200	--	20
Cl8-BZ#195	ND		ug/kg	200	--	20
Cl9-BZ#206	ND		ug/kg	200	--	20
Cl10-BZ#209	ND		ug/kg	200	--	20

DBOB	86	30-150
BZ 198	75	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1010911
Project Number: TO-0010-03
Report Date: 08/01/10

SAMPLE RESULTS

Lab ID:	L1010911-01 D	Date Collected:	07/15/10 13:20
Client ID:	S-10L-T001-0-0	Date Received:	07/19/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 23:47	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	81%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	9710	E	ug/kg	200	--	20
Cl4-BZ#52	11600	E	ug/kg	200	--	20
Cl4-BZ#44	3070		ug/kg	200	--	20
Cl4-BZ#66	2950		ug/kg	200	--	20
Cl5-BZ#101	2100		ug/kg	200	--	20
Cl6-BZ#153	1950		ug/kg	200	--	20
Cl5-BZ#105	273		ug/kg	200	--	20
Cl7-BZ#187	427		ug/kg	200	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	75		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010911

Project Number: TO-0010-03 **Report Date:** 08/01/10

SAMPLE RESULTS

Lab ID:	L1010911-02 D	Date Collected:	07/15/10 13:50
Client ID:	S-10L-T002-0-0	Date Received:	07/19/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 17:38	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4970		ug/kg	1740	--	200
Cl3-BZ#18	14800		ug/kg	1740	--	200
Cl5-BZ#118	2780		ug/kg	1740	--	200
Cl5-BZ#105	ND		ug/kg	1740	--	200
Cl6-BZ#138	2710		ug/kg	1740	--	200
Cl6-BZ#128	ND		ug/kg	1740	--	200
Cl7-BZ#180	ND		ug/kg	1740	--	200
Cl7-BZ#170	ND		ug/kg	1740	--	200
Cl8-BZ#195	ND		ug/kg	1740	--	200
Cl9-BZ#206	ND		ug/kg	1740	--	200
Cl10-BZ#209	ND		ug/kg	1740	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	96		30-150
BZ 198	85		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010911

Project Number: TO-0010-03 **Report Date:** 08/01/10

SAMPLE RESULTS

Lab ID:	L1010911-02 D	Date Collected:	07/15/10 13:50
Client ID:	S-10L-T002-0-0	Date Received:	07/19/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/27/10 17:38	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	17400		ug/kg	1740	--	200
Cl4-BZ#52	25400		ug/kg	1740	--	200
Cl4-BZ#44	6880		ug/kg	1740	--	200
Cl4-BZ#66	6200		ug/kg	1740	--	200
Cl5-BZ#101	4570		ug/kg	1740	--	200
Cl6-BZ#153	3910		ug/kg	1740	--	200
Cl7-BZ#187	ND		ug/kg	1740	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	96		30-150
BZ 198	85		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010911

Project Number: TO-0010-03 **Report Date:** 08/01/10

SAMPLE RESULTS

Lab ID:	L1010911-03 D	Date Collected:	07/15/10 15:00
Client ID:	S-10L-T003-0-0	Date Received:	07/19/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/28/10 01:10	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	270		ug/kg	180	--	20
Cl3-BZ#18	623		ug/kg	180	--	20
Cl4-BZ#52	1980		ug/kg	180	--	20
Cl4-BZ#66	1440		ug/kg	180	--	20
Cl5-BZ#118	1300		ug/kg	180	--	20
Cl6-BZ#138	940		ug/kg	180	--	20
Cl6-BZ#128	242		ug/kg	180	--	20
Cl7-BZ#180	202		ug/kg	180	--	20
Cl7-BZ#170	ND		ug/kg	180	--	20
Cl8-BZ#195	ND		ug/kg	180	--	20
Cl9-BZ#206	ND		ug/kg	180	--	20
Cl10-BZ#209	ND		ug/kg	180	--	20

DBOB	83	30-150
BZ 198	73	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010911

Project Number: TO-0010-03 **Report Date:** 08/01/10

SAMPLE RESULTS

Lab ID:	L1010911-03 D	Date Collected:	07/15/10 15:00
Client ID:	S-10L-T003-0-0	Date Received:	07/19/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	07/22/10 14:54
Analytical Date:	07/28/10 01:10	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	07/27/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1770		ug/kg	180	--	20
Cl4-BZ#44	797		ug/kg	180	--	20
Cl5-BZ#101	1330		ug/kg	180	--	20
Cl6-BZ#153	1120		ug/kg	180	--	20
Cl5-BZ#105	338		ug/kg	180	--	20
Cl7-BZ#187	205		ug/kg	180	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	73		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 07/27/10 10:47
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 07/22/10 14:54
Cleanup Method1: EPA 3630
Cleanup Date1: 07/27/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG423929-1					
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	85		30-150
BZ 198	94		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 07/27/10 10:47
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 07/22/10 14:54
Cleanup Method1: EPA 3630
Cleanup Date1: 07/27/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG423929-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	94		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03 Batch: WG423929-2 WG423929-3							
Cl2-BZ#8	63		73		40-140	15		30
Cl3-BZ#18	106		83		40-140	24		30
Cl3-BZ#28	77		79		40-140	3		30
Cl4-BZ#52	99		85		40-140	15		30
Cl4-BZ#44	79		80		40-140	1		30
Cl4-BZ#66	75		82		40-140	9		30
Cl5-BZ#101	82		84		40-140	2		30
Cl5-BZ#118	81		90		40-140	11		30
Cl5-BZ#105	75		86		40-140	14		30
Cl6-BZ#138	85		89		40-140	5		30
Cl7-BZ#187	90		92		40-140	2		30
Cl6-BZ#128	83		88		40-140	6		30
Cl7-BZ#180	92		94		40-140	2		30
Cl7-BZ#170	86		92		40-140	7		30
Cl8-BZ#195	88		107		40-140	19		30
Cl9-BZ#206	96		101		40-140	5		30
Cl10-BZ#209	91		98		40-140	7		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG423929-2		WG423929-3			
DBOB	81		86		30-150			
BZ 198	90		91		30-150			

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG423929-2		WG423929-3			
Cl6-BZ#153	80		86		40-140	7		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	81		86		30-150
BZ 198	90		91		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

SAMPLE RESULTS

Lab ID: L1010911-01
Client ID: S-10L-T001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 07/15/10 13:20
Date Received: 07/19/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	6.30		%	0.010	--	1	-	07/27/10 14:50	1,9060	ES
Total Organic Carbon (Rep2)	5.95		%	0.010	--	1	-	07/27/10 14:50	1,9060	ES
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	2.80		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	12.2		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	8.20		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	5.00		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	4.10		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	22.2		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	32.9		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	11.9		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	81.2		%	0.100	--	1	-	07/22/10 17:15	30,2540G	KB
Solids, Total (Pre-Dried)	27.6		%	0.100	NA	1	-	07/20/10 11:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

SAMPLE RESULTS

Lab ID: L1010911-02
Client ID: S-10L-T002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 07/15/10 13:50
Date Received: 07/19/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.66		%	0.010	--	1	-	07/27/10 14:50	1,9060	ES
Total Organic Carbon (Rep2)	4.50		%	0.010	--	1	-	07/27/10 14:50	1,9060	ES
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	5.00		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	14.3		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	9.00		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	4.80		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	2.40		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	12.4		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	38.4		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	11.9		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	93.7		%	0.100	--	1	-	07/22/10 17:15	30,2540G	KB
Solids, Total (Pre-Dried)	33.4		%	0.100	NA	1	-	07/20/10 11:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

SAMPLE RESULTS

Lab ID: L1010911-03
Client ID: S-10L-T003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 07/15/10 15:00
Date Received: 07/19/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.14		%	0.010	--	1	-	07/27/10 14:50	1,9060	ES
Total Organic Carbon (Rep2)	3.92		%	0.010	--	1	-	07/27/10 14:50	1,9060	ES
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.200		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	5.70		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	8.80		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	6.70		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	2.70		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	20.9		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	43.4		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	11.6		%	0.100	NA	1	-	07/28/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	91.4		%	0.100	--	1	-	07/22/10 17:15	30,2540G	KB
Solids, Total (Pre-Dried)	36.2		%	0.100	NA	1	-	07/20/10 11:30	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1010911

Project Number: TO-0010-03 **Report Date:** 08/01/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-03 Batch: WG424393-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	07/27/10 14:50	1,9060	ES
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	07/27/10 14:50	1,9060	ES

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010911
Report Date: 08/01/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG424041-1 QC Sample: L1010911-03 Client ID: S-10L-T003-0-0						
Solids, Total	91.4	93.0	%	2		20
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG424862-1 QC Sample: L1010911-03 Client ID: S-10L-T003-0-0						
Gravel (>2.00mm)	0.2	0.700	%	**111**	Q	20
Very Coarse Sand (1.00-2.00 mm)	5.7	8.50	%	**39**	Q	20
Coarse Sand (0.50-1.00 mm)	8.8	9.50	%	8		20
Medium Sand (0.25-0.50 mm)	6.7	5.90	%	13		20
Fine Sand (0.125-0.25 mm)	2.7	2.20	%	20		20
Very Fine Sand (0.063-0.125 mm)	20.9	12.0	%	**54**	Q	20
Silt - (1.95-62.5 um)	43.4	47.8	%	10		20
Clay - (<1.95 um)	11.6	13.2	%	13		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1010911
Report Date: 08/01/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG424393-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	88		75-125
Total Organic Carbon (Rep2)	117		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010911
Report Date: 08/01/10

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(*)
L1010911-01A	Glass 500ml unpreserved	A	N/A	4	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)
L1010911-02A	Glass 500ml unpreserved	A	N/A	4	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1010911
Report Date: 08/01/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1010911-03A	Glass 1000ml unpreserved	A	N/A	4	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010911
Project Number:	TO-0010-03	**Report Date:**	08/01/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1010911
Project Number:	TO-0010-03	**Report Date:**	08/01/10

Data Qualifiers

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	**Lab Number:**	L1010911
Project Number:	TO-0010-03	**Report Date:**	08/01/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

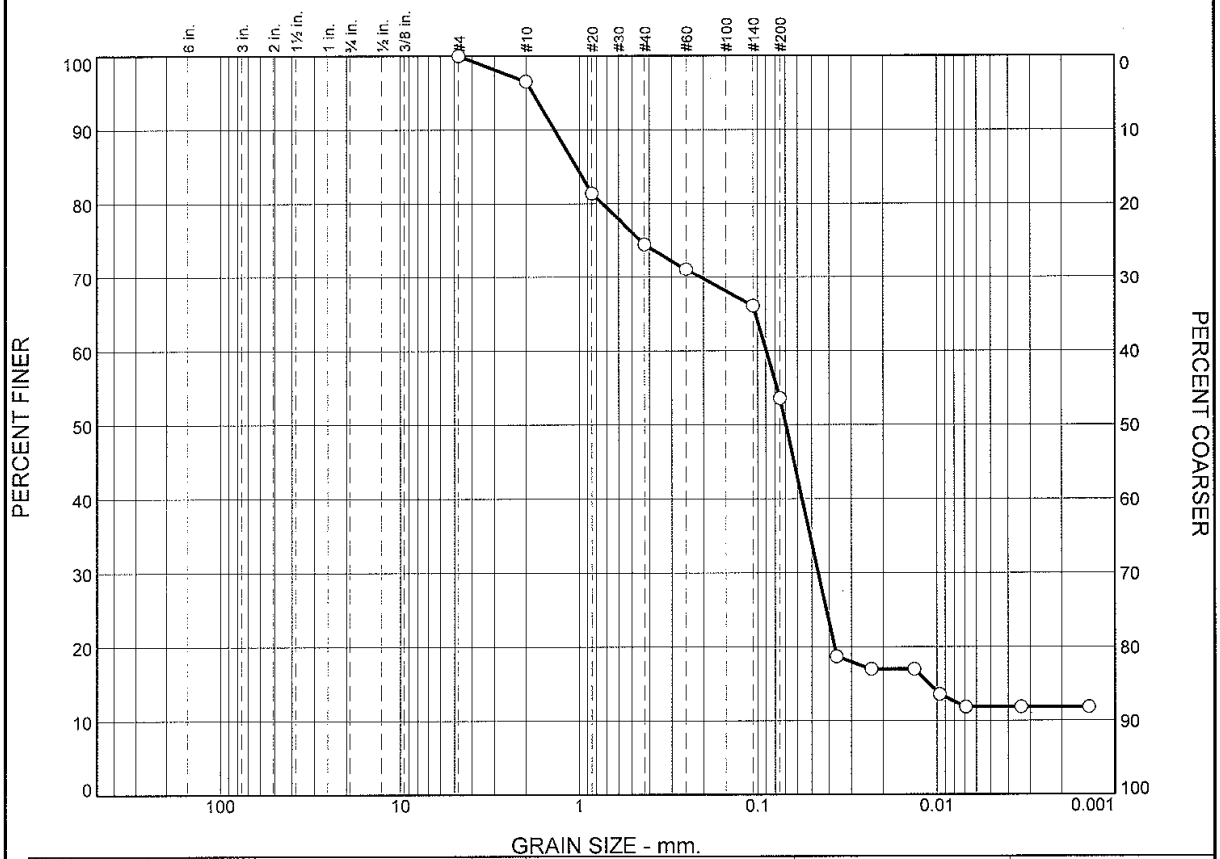
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.7	2.8	12.2	8.2	5.0	4.1	22.2	26.7	1.1	4.5	0.6	11.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0416	0.0896	0.0696	0.0460	0.0111			

Material Description	USCS	AASHTO
○		

Project No. L1010911 **Client:** Woods Hole Group

Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-T001-0-0 **Sample Number:** L1010911-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/31/2010

Client: Woods Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010911
Location: S-10L-T001-0-0
Sample Number: L1010911-01

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 28.21
Tare Wt. = 7.33
Minus #200 from wash = 58.5%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
50.33	0.00	#4	527.63	527.63	100.0	0.0
		#10	495.38	493.64	96.5	3.5
		#20	431.13	423.51	81.4	18.6
		#40	378.36	374.87	74.5	25.5
		#60	362.51	360.81	71.1	28.9
		#140	339.92	337.39	66.1	33.9
		#200	341.09	334.80	53.6	46.4

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 53.6
Weight of hydrometer sample =50.33
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0363	18.7	81.3
5.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0232	17.0	83.0
15.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0134	17.0	83.0
30.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0096	13.6	86.4
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	11.9	88.1
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	11.9	88.1
1440.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0014	11.9	88.1

Fractional Components

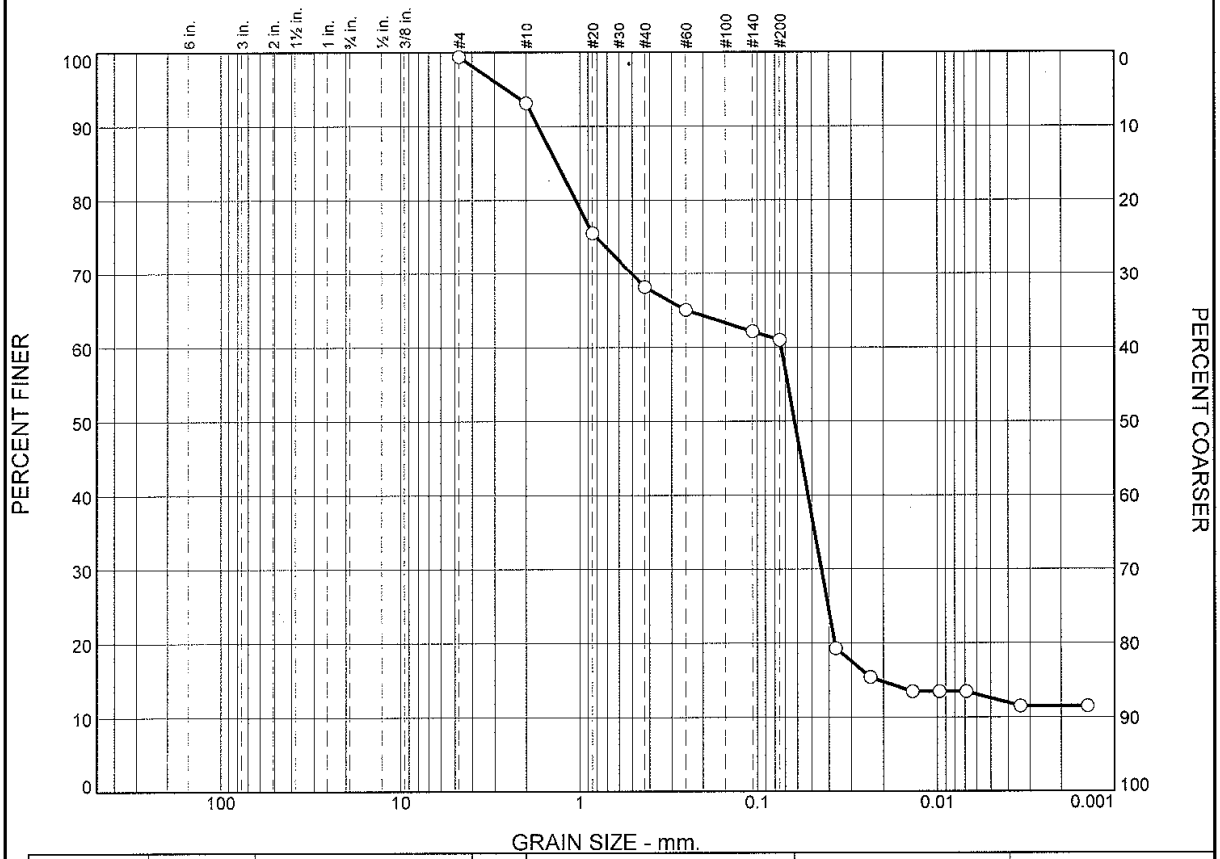
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.7	2.8	12.2	8.2	5.0	4.1	22.2	51.7	26.7	1.1	4.5	0.6	32.9	11.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0111	0.0373	0.0460	0.0696	0.0896	0.7388	1.0416	1.3818	1.8330

Fineness Modulus
0.97

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○				5.0	14.3	9.0	4.8	2.4	12.4	32.5	3.9	0.5	1.5	11.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.3457	0.0737	0.0621	0.0441	0.0213			

Material Description	USCS	AASHTO
○		

Project No. L1010911 **Client:** Woods Hole Group

Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-T002-0-0 **Sample Number:** L1010911-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/31/2010

Client: Woods Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010911
Location: S-10L-T002-0-0
Sample Number: L1010911-02

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 29.52
Tare Wt. = 7.32
Minus #200 from wash = 56.1%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
50.54	0.00	#4	528.45	528.15	99.4	0.6
		#10	496.55	493.39	93.2	6.8
		#20	426.91	418.01	75.5	24.5
		#40	380.29	376.56	68.2	31.8
		#60	367.55	365.98	65.1	34.9
		#140	344.60	343.13	62.1	37.9
		#200	338.08	337.49	61.0	39.0

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 61.0
Weight of hydrometer sample =50.54
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0367	19.3	80.7
5.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0236	15.4	84.6
15.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0138	13.4	86.6
30.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0097	13.4	86.6
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	13.4	86.6
250.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0034	11.5	88.5
1440.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0014	11.5	88.5

Fractional Components

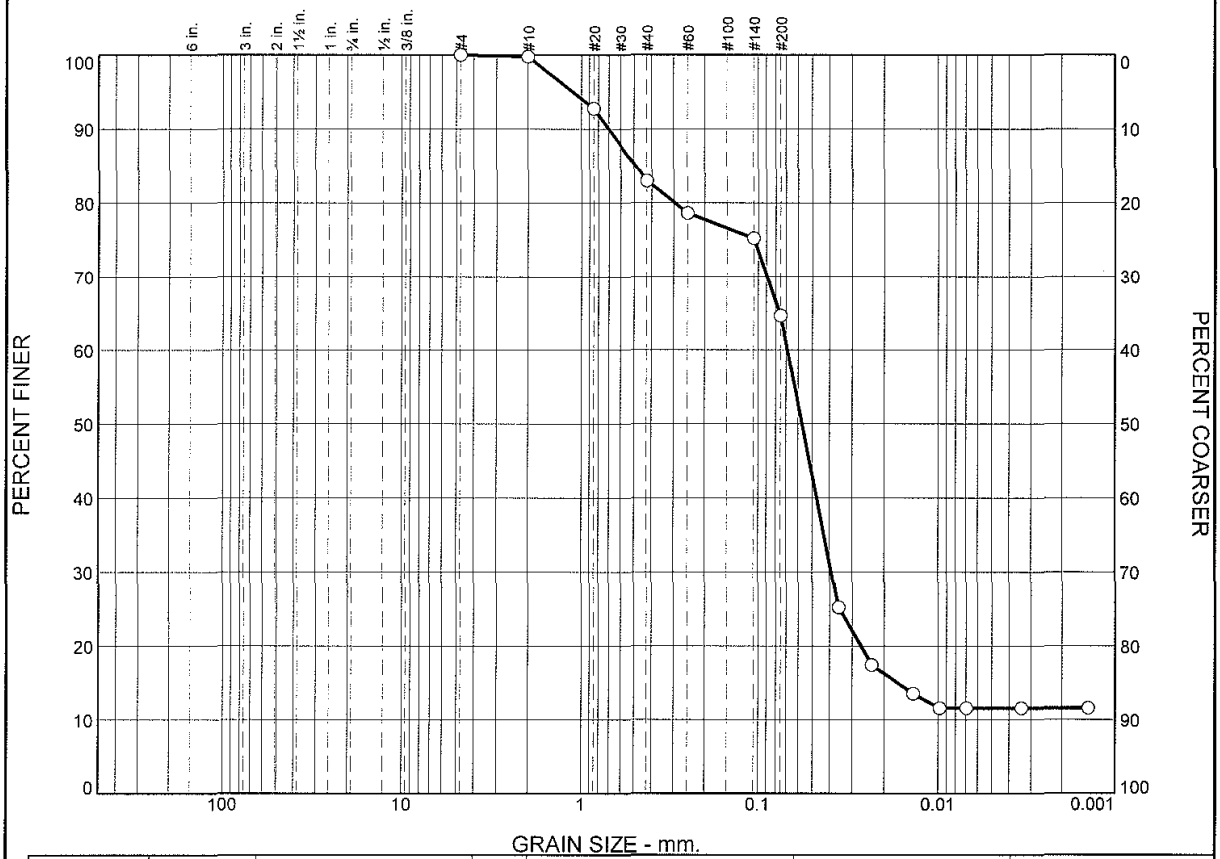
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
			5.0	14.3	9.0	4.8	2.4	12.4	42.9	32.5	3.9	0.5	1.5	38.4	11.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0213	0.0371	0.0441	0.0621	0.0737	1.0555	1.3457	1.7158	2.5819

Fineness Modulus
1.23

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.2	5.7	8.8	6.7	2.7	20.9	32.4	8.2	2.8		11.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○			0.4905	0.0687	0.0569	0.0390	0.0168			

	Material Description	USCS	AASHTO
○			

Project No. L1010911 **Client:** Woods Hole Group

Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-T003-0-0 **Sample Number:** L1010911-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/31/2010

Client: Woods Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010911
Location: S-10L-T003-0-0
Sample Number: L1010911-03

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 23.00
Tare Wt. = 7.39
Minus #200 from wash = 70.7%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
53.22	0.00	#4	527.63	527.63	100.0	0.0
		#10	493.75	493.64	99.8	0.2
		#20	427.25	423.51	92.8	7.2
		#40	380.08	374.87	83.0	17.0
		#60	363.14	360.81	78.6	21.4
		#140	339.20	337.39	75.2	24.8
		#200	340.43	334.80	64.6	35.4

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 64.6
Weight of hydrometer sample =53.22
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0130	1.0129	0.0136	10.0	13.6	0.0356	25.2	74.8
5.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0234	17.4	82.6
15.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0138	13.5	86.5
30.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0098	11.6	88.4
60.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0069	11.6	88.4
250.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0034	11.6	88.4
1440.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0014	11.6	88.4

Fractional Components

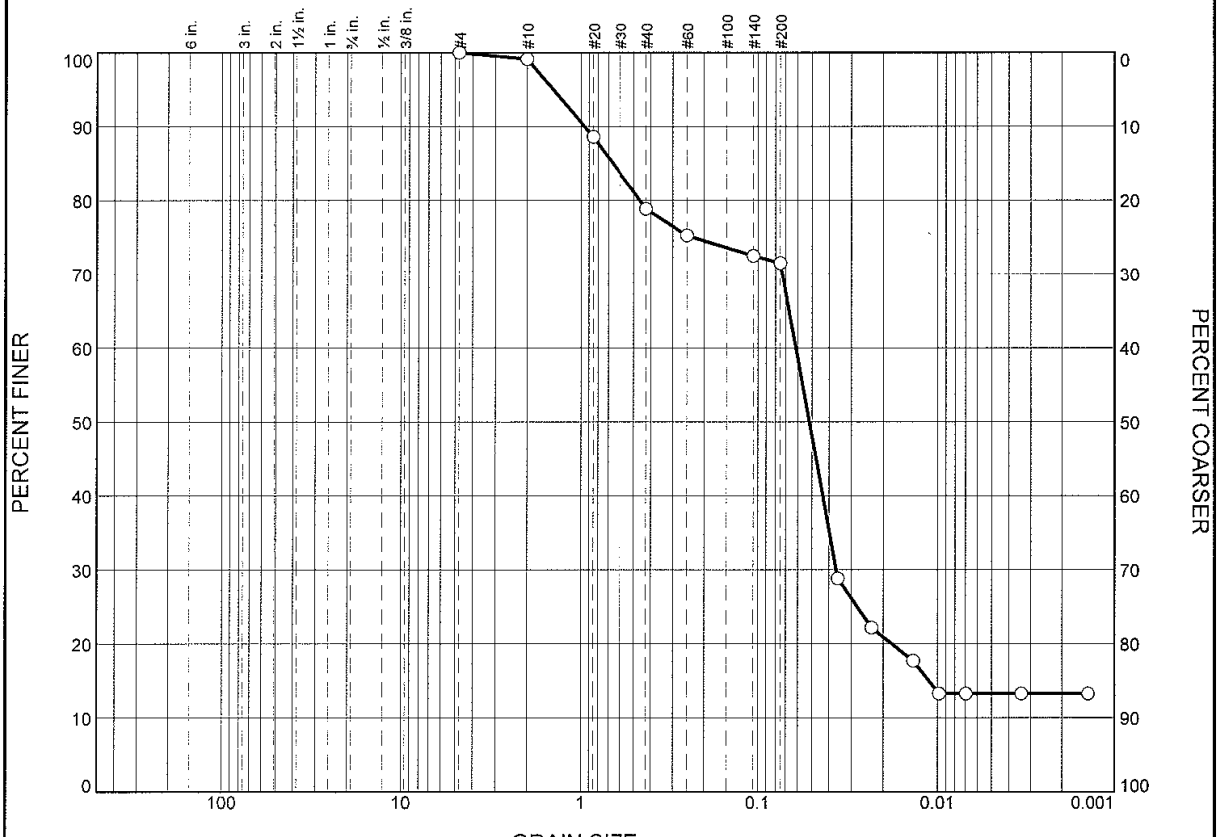
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.2	5.7	8.8	6.7	2.7	20.9	44.8	32.4	8.2	2.8		43.4	11.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0168	0.0269	0.0390	0.0569	0.0687	0.2963	0.4905	0.6988	1.1157

Fineness Modulus
0.60

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.2	0.7	8.5	9.5	5.9	2.2	12.0	34.4	7.8	5.6	0.0	13.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6588	0.0614	0.0516	0.0364	0.0112			

Material Description	USCS	AASHTO
○		

Project No. L1010911 **Client:** Woods Hole Group

Project: New Bedford Harbor Enviromental Monitoring

○ **Source of Sample:** S-10L-T003-0-0 **Sample Number:** WG424862-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

7/31/2010

Client: Woods Hole Group
Project: New Bedford Harbor Enviromental Monitoring
Project Number: L1010911
Location: S-10L-T003-0-0
Sample Number: WG424862-1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 22.80
Tare Wt. = 7.34
Minus #200 from wash = 70.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
51.57	0.00	#4	528.15	528.15	100.0	0.0
		#10	493.83	493.39	99.1	0.9
		#20	423.46	418.01	88.6	11.4
		#40	381.58	376.56	78.8	21.2
		#60	367.84	365.98	75.2	24.8
		#140	344.55	343.13	72.5	27.5
		#200	337.99	337.49	71.5	28.5

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 71.5
Weight of hydrometer sample =51.57
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0130	1.0129	0.0136	10.0	13.6	0.0356	28.8	71.2
5.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0232	22.1	77.9
15.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0136	17.7	82.3
30.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0098	13.2	86.8
60.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0069	13.2	86.8
250.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0034	13.2	86.8
1440.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0014	13.2	86.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.2	0.7	8.5	9.5	5.9	2.2	12.0	38.1	34.4	7.8	5.6	0.0	47.8	13.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0112	0.0180	0.0364	0.0516	0.0614	0.4615	0.6588	0.9537	1.4296

Fineness Modulus
0.74

Alpha Analytical

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843
Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: L1010911

Serial No:08011021:24

CHAIN OF CUSTODY DOCUMENTATION

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: New Bedford Harbor Environ. Monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Drive	Project Number: T-0-0010-03	
Invoice to: Cathy Morey	Address: E. Falmouth, MA 02536	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax: 508-540-1001	email: DWALSH@WHGRP.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
L1010911-1	S-10L-T001-0-0	7/15/10	1320	JL	C	16oz	G	4°C	S	N	Grain Size, TOC, PCB congeners
-2	S-10L-T002-0-0	7/15/10	1350	JL	C	16oz	G	4°C	S	N	Grain Size, TOC, PCB congeners
-3	S-10L-T003-0-0	7/15/10	1500	JL	C	32oz	G	4°C	S	N	Grain Size, TOC, PCB congeners

Relinquished By: Date: 7/19/10 Time: 1230 Received By: Date: 7/19/10 Time: 1230

Relinquished By: Date: 7/19/10 Time: Received at Lab By: Date: 7/19/10 Time: 17:50

Comments: To Alpha

P. Gilbert 7/19/10 19:00

COC Doc No: 3901

7/19/10 17:00

Sample Delivery Group No: Page of

Delivery Order-0010-03
April 2011
C-186
Sediment Trap Study Summary Report
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1013129
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-0010-03
Report Date:	09/16/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013129
Report Date: 09/16/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1013129-01	S-10G-G001-0-0	NEW BEDFORD, MA	08/25/10 10:45
L1013129-02	S-10G-G002-0-0	NEW BEDFORD, MA	08/25/10 12:00
L1013129-03	S-10G-G002-0-0 REP	NEW BEDFORD, MA	08/25/10 12:00
L1013129-04	S-10G-G003-0-0	NEW BEDFORD, MA	08/25/10 13:30

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013129
Project Number:	TO-0010-03	**Report Date:**	09/16/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on August 25, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage on August 30 until September 8, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013129
Project Number:	TO-0010-03	**Report Date:**	09/16/10

Case Narrative (continued)

whether it was the higher or lower value.
L1013129-01 through -04 were analyzed at a dilution due to the elevated concentrations of target compounds in the samples.
The WG431395-3 LCS/LCSD RPD(s), associated with L1013129-01 through -04, are above the acceptance criteria for Cl2-BZ#8 (33%); however, the individual LCS/LCSD recoveries are within method limits.
The WG431395-4/-5 MS/MSD recoveries and the associated %RPDs, performed on L1013129-02, are outside the acceptance criteria for several compounds. In most cases, the native sample concentrations were more than 4 times the spike concentration thereby effectively diluting out the spike.

Total Organic Carbon

The WG430056-4 MS recoveries, performed on L1013129-01, are outside the 125% acceptance criteria for Total Organic Carbon (rep1)(28%)/(rep2)(28%), possibly due to sample matrix. The associated LCS recoveries are within criteria indicating the sample batch was in control, and all sample results were accepted.

Grain Size

The WG432529-1 Laboratory Duplicate RPD, performed on L1013129-01, is outside the acceptance criteria for Gravel(36%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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

Authorized Signature: Cynthia McQueen

Title: Technical Director/Representative Date: 09/16/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013129

Project Number: TO-0010-03 **Report Date:** 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-01	Date Collected:	08/25/10 10:45
Client ID:	S-10G-G001-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 04:36	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	954		ug/kg	137	--	100
Cl3-BZ#18	2070		ug/kg	137	--	100
Cl5-BZ#118	649		ug/kg	137	--	100
Cl6-BZ#138	617		ug/kg	137	--	100
Cl6-BZ#128	ND		ug/kg	137	--	100
Cl7-BZ#180	140		ug/kg	137	--	100
Cl7-BZ#170	ND		ug/kg	137	--	100
Cl8-BZ#195	ND		ug/kg	137	--	100
Cl9-BZ#206	ND		ug/kg	137	--	100
Cl10-BZ#209	ND		ug/kg	137	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	59		30-150
BZ 198	55		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-01	Date Collected:	08/25/10 10:45
Client ID:	S-10G-G001-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 04:36	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#44	1280		ug/kg	137	--	100
Cl4-BZ#66	1220		ug/kg	137	--	100
Cl5-BZ#101	931		ug/kg	137	--	100
Cl6-BZ#153	831		ug/kg	137	--	100
Cl5-BZ#105	ND		ug/kg	137	--	100
Cl7-BZ#187	189		ug/kg	137	--	100

DBOB	59	30-150
BZ 198	55	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1013129
Project Number: TO-0010-03
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-01 D	Date Collected:	08/25/10 10:45
Client ID:	S-10G-G001-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/10/10 22:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5030		ug/kg	1370	--	1000
Cl4-BZ#52	7000		ug/kg	1370	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013129

Project Number: TO-0010-03 **Report Date:** 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-02	Date Collected:	08/25/10 12:00
Client ID:	S-10G-G002-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/10/10 23:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	21100		ug/kg	1370	--	1000
Cl5-BZ#118	11400		ug/kg	1370	--	1000
Cl5-BZ#105	ND		ug/kg	1370	--	1000
Cl6-BZ#138	6520		ug/kg	1370	--	1000
Cl7-BZ#187	2180		ug/kg	1370	--	1000
Cl6-BZ#128	ND		ug/kg	1370	--	1000
Cl7-BZ#180	1600		ug/kg	1370	--	1000
Cl7-BZ#170	ND		ug/kg	1370	--	1000
Cl8-BZ#195	ND		ug/kg	1370	--	1000
Cl9-BZ#206	ND		ug/kg	1370	--	1000
Cl10-BZ#209	ND		ug/kg	1370	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	107		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013129

Project Number: TO-0010-03 **Report Date:** 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-02	Date Collected:	08/25/10 12:00
Client ID:	S-10G-G002-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/10/10 23:08	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#44	21600		ug/kg	1370	--	1000
Cl4-BZ#66	23300		ug/kg	1370	--	1000
Cl5-BZ#101	19800		ug/kg	1370	--	1000
Cl6-BZ#153	13400		ug/kg	1370	--	1000

DBOB	97	30-150
BZ 198	107	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1013129
Project Number: TO-0010-03
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-02 D	Date Collected:	08/25/10 12:00
Client ID:	S-10G-G002-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/13/10 13:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	48500		ug/kg	6840	--	5000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1013129
Project Number: TO-0010-03
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-02 D	Date Collected:	08/25/10 12:00
Client ID:	S-10G-G002-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/13/10 13:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	67900		ug/kg	6840	--	5000
Cl4-BZ#52	75300		ug/kg	6840	--	5000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013129

Project Number: TO-0010-03 **Report Date:** 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-03	Date Collected:	08/25/10 12:00
Client ID:	S-10G-G002-0-0 REP	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 01:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	19800		ug/kg	1360	--	1000
Cl5-BZ#118	12400		ug/kg	1360	--	1000
Cl6-BZ#138	6980		ug/kg	1360	--	1000
Cl7-BZ#187	2340		ug/kg	1360	--	1000
Cl6-BZ#128	ND		ug/kg	1360	--	1000
Cl7-BZ#180	1740		ug/kg	1360	--	1000
Cl7-BZ#170	ND		ug/kg	1360	--	1000
Cl8-BZ#195	ND		ug/kg	1360	--	1000
Cl9-BZ#206	ND		ug/kg	1360	--	1000
Cl10-BZ#209	ND		ug/kg	1360	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	108		30-150
BZ 198	107		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-03	Date Collected:	08/25/10 12:00
Client ID:	S-10G-G002-0-0 REP	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 01:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#44	20000		ug/kg	1360	--	1000
Cl4-BZ#66	21100		ug/kg	1360	--	1000
Cl5-BZ#101	19300		ug/kg	1360	--	1000
Cl6-BZ#153	13500		ug/kg	1360	--	1000
Cl5-BZ#105	ND		ug/kg	1360	--	1000

DBOB	108	30-150
BZ 198	107	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1013129
Project Number: TO-0010-03
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-03 D	Date Collected:	08/25/10 12:00
Client ID:	S-10G-G002-0-0 REP	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/13/10 15:59	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	50900		ug/kg	6830	--	5000
Cl4-BZ#52	77500		ug/kg	6830	--	5000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1013129
Project Number: TO-0010-03
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-03 D	Date Collected:	08/25/10 12:00
Client ID:	S-10G-G002-0-0 REP	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/13/10 15:59	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	69800		ug/kg	6830	--	5000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013129

Project Number: TO-0010-03 **Report Date:** 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-04	Date Collected:	08/25/10 13:30
Client ID:	S-10G-G003-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/10/10 21:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	266		ug/kg	140	--	100
Cl3-BZ#18	593		ug/kg	140	--	100
Cl4-BZ#52	1840		ug/kg	140	--	100
Cl5-BZ#118	1030		ug/kg	140	--	100
Cl6-BZ#138	762		ug/kg	140	--	100
Cl6-BZ#128	194		ug/kg	140	--	100
Cl7-BZ#180	171		ug/kg	140	--	100
Cl7-BZ#170	ND		ug/kg	140	--	100
Cl8-BZ#195	ND		ug/kg	140	--	100
Cl9-BZ#206	ND		ug/kg	140	--	100
Cl10-BZ#209	ND		ug/kg	140	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	68		30-150
BZ 198	67		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1013129
Project Number: TO-0010-03
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID:	L1013129-04	Date Collected:	08/25/10 13:30
Client ID:	S-10G-G003-0-0	Date Received:	08/25/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/10/10 21:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1470		ug/kg	140	--	100
Cl4-BZ#44	677		ug/kg	140	--	100
Cl4-BZ#66	1110		ug/kg	140	--	100
Cl5-BZ#101	1040		ug/kg	140	--	100
Cl6-BZ#153	881		ug/kg	140	--	100
Cl5-BZ#105	257		ug/kg	140	--	100
Cl7-BZ#187	169		ug/kg	140	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	68		30-150
BZ 198	67		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 09/10/10 19:43
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 09/08/10 00:00
Cleanup Method1: EPA 3630
Cleanup Date1: 09/10/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-04 Batch: WG431395-1					
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	83		30-150
BZ 198	89		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 09/10/10 19:43
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 09/08/10 00:00
Cleanup Method1: EPA 3630
Cleanup Date1: 09/10/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-04 Batch: WG431395-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	89		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013129
Report Date: 09/16/10

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): 01-04 QC Batch ID: WG431395-4 WG431395-5 QC Sample: L1013129-02 Client ID: S-10G-G002-0-0												
Cl2-BZ#8	21100	1910	26300	**272**	Q	18400	**0**	Q	40-140	**35**	Q	30
Cl3-BZ#18	48500	1910	71600	**1210**	Q	36900	**0**	Q	40-140	**64**	Q	30
Cl5-BZ#118	11400	1910	15200	**199**	Q	10700	**0**	Q	40-140	**35**	Q	30
Cl6-BZ#138	6520	1910	9720	**167**	Q	6950	**23**	Q	40-140	**33**	Q	30
Cl7-BZ#187	2180	1910	4470	120		3250	56		40-140	**32**	Q	30
Cl6-BZ#128	ND	1910	3330	**174**	Q	2390	125		40-140	**33**	Q	30
Cl7-BZ#180	1600	1910	3830	117		2780	62		40-140	**32**	Q	30
Cl7-BZ#170	ND	1910	3190	**167**	Q	2260	118		40-140	**34**	Q	30
Cl8-BZ#195	ND	1910	2300	120		1620	85		40-140	**35**	Q	30
Cl9-BZ#206	ND	1910	2510	131		1790	94		40-140	**33**	Q	30
Cl10-BZ#209	ND	1910	2160	113		1540	81		40-140	**34**	Q	30
Cl3-BZ#28	67900	1910	78000	**528**	Q	51800	**0**	Q	40-140	**40**	Q	30
Cl4-BZ#52	75300	1910	87900	**658**	Q	57900	**0**	Q	40-140	**41**	Q	30
Cl4-BZ#44	21600	1910	25600	**209**	Q	18700	**0**	Q	40-140	**31**	Q	30
Cl4-BZ#66	23300	1910	27400	**214**	Q	19600	**0**	Q	40-140	**33**	Q	30
Cl5-BZ#101	19800	1910	23500	**193**	Q	17300	**0**	Q	40-140	30		30
Cl6-BZ#153	13400	1910	16400	**157**	Q	12200	**0**	Q	40-140	29		30
Cl5-BZ#105	ND	1910	3230	**169**	Q	2280	119		40-140	**34**	Q	30

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013129
Report Date: 09/16/10

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): 01-04 QC Batch ID: WG431395-4 WG431395-5 QC Sample: L1013129-02 Client ID: S-10G-G002-0-0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	114		86		30-150
DBOB	107		82		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG431395-2		WG431395-3			
Cl2-BZ#8	59		82		40-140	**33**	Q	30
Cl3-BZ#18	64		83		40-140	26		30
Cl3-BZ#28	70		91		40-140	26		30
Cl4-BZ#52	69		88		40-140	24		30
Cl4-BZ#44	77		89		40-140	14		30
Cl4-BZ#66	70		94		40-140	29		30
Cl5-BZ#101	73		91		40-140	22		30
Cl5-BZ#118	78		95		40-140	20		30
Cl5-BZ#105	75		88		40-140	16		30
Cl6-BZ#138	79		94		40-140	17		30
Cl7-BZ#187	78		94		40-140	19		30
Cl6-BZ#128	80		95		40-140	17		30
Cl7-BZ#180	80		92		40-140	14		30
Cl7-BZ#170	81		98		40-140	19		30
Cl8-BZ#195	78		98		40-140	23		30
Cl9-BZ#206	89		109		40-140	20		30
Cl10-BZ#209	82		99		40-140	19		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG431395-2		WG431395-3			
DBOB	78		88		30-150			
BZ 198	91		98		30-150			
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG431395-2		WG431395-3			
Cl6-BZ#153	81		95		40-140	16		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	78		88		30-150
BZ 198	91		98		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID: L1013129-01
Client ID: S-10G-G001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 08/25/10 10:45
Date Received: 08/25/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.56		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Total Organic Carbon (Rep2)	4.28		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	5.30		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	9.00		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	8.80		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	15.6		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	16.8		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	13.9		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	21.5		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	5.90		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	95.6		%	0.100	--	1	-	08/30/10 14:10	30,2540G	KB
Solids, Total (Pre-Dried)	29.5		%	0.100	NA	1	-	08/26/10 16:36	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID: L1013129-02
Client ID: S-10G-G002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 08/25/10 12:00
Date Received: 08/25/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.10		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Total Organic Carbon (Rep2)	5.01		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	13.9		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	13.4		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	10.2		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	9.30		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	8.10		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	10.6		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	19.3		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	5.30		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	95.7		%	0.100	--	1	-	08/30/10 14:10	30,2540G	KB
Solids, Total (Pre-Dried)	33.8		%	0.100	NA	1	-	08/26/10 16:36	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID: L1013129-03
Client ID: S-10G-G002-0-0 REP
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 08/25/10 12:00
Date Received: 08/25/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.09		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Total Organic Carbon (Rep2)	4.87		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	7.40		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	13.7		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	11.7		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	11.0		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	9.80		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	12.2		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	22.1		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	7.10		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	95.8		%	0.100	--	1	-	08/30/10 14:10	30,2540G	KB
Solids, Total (Pre-Dried)	33.5		%	0.100	NA	1	-	08/26/10 16:36	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013129
Report Date: 09/16/10

SAMPLE RESULTS

Lab ID: L1013129-04
Client ID: S-10G-G003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 08/25/10 13:30
Date Received: 08/25/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.58		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Total Organic Carbon (Rep2)	4.53		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	13.7		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	9.40		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	6.50		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	4.80		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	4.60		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	8.30		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	20.5		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	6.00		%	0.100	NA	1	-	09/15/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	93.5		%	0.100	--	1	-	08/30/10 14:10	30,2540G	KB
Solids, Total (Pre-Dried)	26.4		%	0.100	NA	1	-	08/26/10 16:36	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013129

Project Number: TO-0010-03 **Report Date:** 09/16/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-04 Batch: WG430056-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	08/30/10 09:00	1,9060	NR

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013129
Report Date: 09/16/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG430056-4 QC Sample: L1013129-01 Client ID: S-10G-G001-0-0												
Total Organic Carbon (Rep1)	5.56	1.4	5.95	**28**	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	4.28	1.97	6.11	**28**	Q	-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013129
Report Date: 09/16/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG430056-3 QC Sample: L1013129-01 Client ID: S-10G-G001-0-0						
Total Organic Carbon (Rep1)	5.56	4.79	%	15		25
Total Organic Carbon (Rep2)	4.28	4.69	%	9		25
General Chemistry - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG430062-1 QC Sample: L1013129-01 Client ID: S-10G-G001-0-0						
Solids, Total	95.6	95.1	%	1		20
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG432529-1 QC Sample: L1013129-01 Client ID: S-10G-G001-0-0						
Gravel (>2.00mm)	5.3	7.60	%	**36**	Q	20
Very Coarse Sand (1.00-2.00 mm)	9.0	9.80	%	9		20
Coarse Sand (0.50-1.00 mm)	8.8	8.70	%	1		20
Medium Sand (0.25-0.50 mm)	15.6	14.7	%	6		20
Fine Sand (0.125-0.25 mm)	16.8	14.9	%	12		20
Very Fine Sand (0.063-0.125 mm)	13.9	12.6	%	10		20
Silt - (1.95-62.5 um)	21.5	19.5	%	10		20
Clay - (<1.95 um)	5.9	5.90	%	0		20

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013129
Project Number:	TO-0010-03	**Report Date:**	09/16/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG430056-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	100		75-125
Total Organic Carbon (Rep2)	112		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013129
Report Date: 09/16/10

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(*)
L1013129-01A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1013129-01B	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1013129-01C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)
L1013129-01D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1013129-02A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1013129-02B	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1013129-02C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013129
Report Date: 09/16/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013129-02D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1013129-02E	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1013129-03A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1013129-03C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)
L1013129-03D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1013129-04A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1013129-04B	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1013129-04C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013129
Report Date: 09/16/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013129-04D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013129
Project Number:	TO-0010-03	**Report Date:**	09/16/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013129
Project Number:	TO-0010-03	**Report Date:**	09/16/10

Data Qualifiers

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	**Lab Number:**	L1013129
Project Number:	TO-0010-03	**Report Date:**	09/16/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

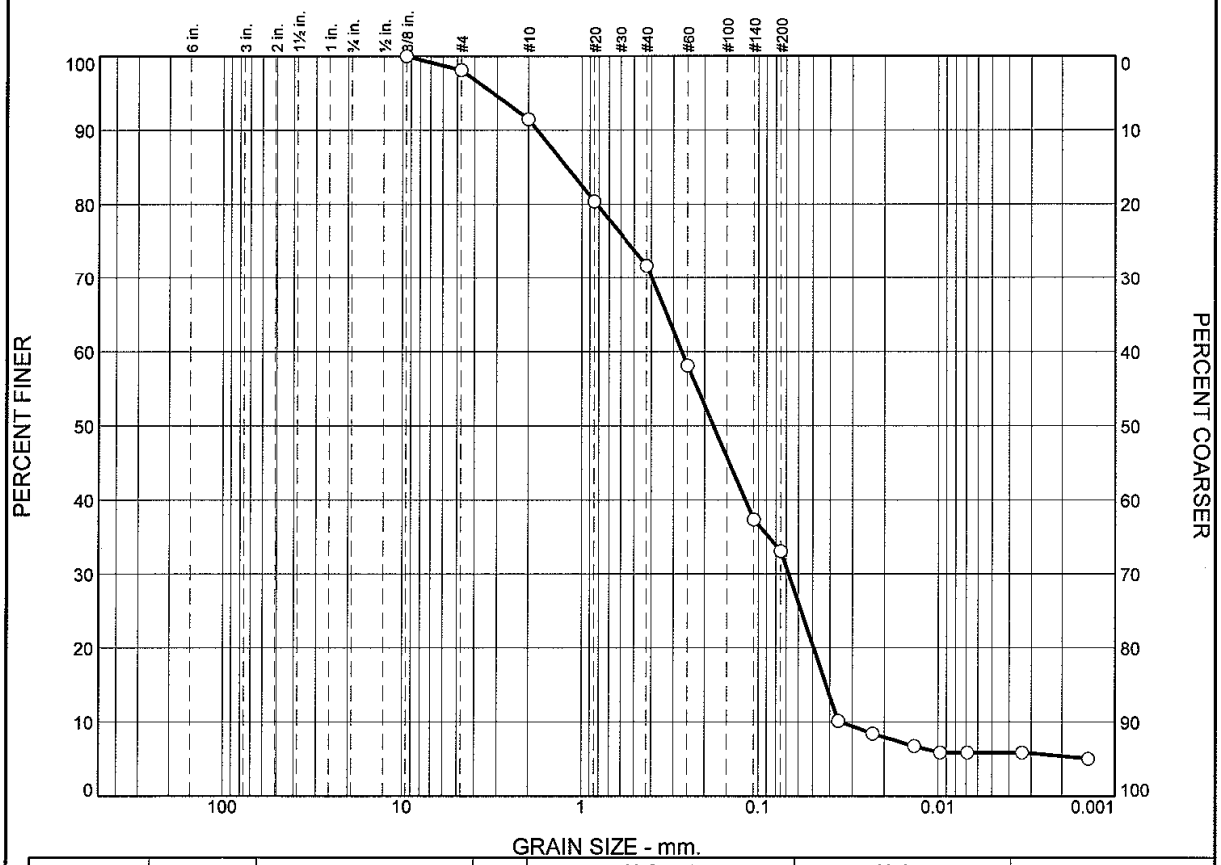
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	3.2	5.3	9.0	8.8	15.6	16.8	13.9	17.9	2.4	1.2		5.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.2133	0.2692	0.1788	0.0680	0.0421	0.0352	0.49	7.66

Material Description	USCS	AASHTO
○		

Project No. L1013129 **Client:** Woods Hole Group
Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10G-G001-0-0 **Sample Number:** L1013129-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1013129
Location: S-10G-G001-0-0
Sample Number: L1013129-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 53.85
Tare Wt. = 8.70
Minus #200 from wash = 28.1%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
62.81	0.00	0.375	566.10	566.10	100.0	0.0
		#4	528.72	527.53	98.1	1.9
		#10	497.81	493.65	91.5	8.5
		#20	430.31	423.34	80.4	19.6
		#40	380.38	374.91	71.7	28.3
		#60	369.24	360.72	58.1	41.9
		#140	350.38	337.34	37.4	62.6
		#200	342.38	339.69	33.1	66.9

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 33.1
Weight of hydrometer sample =62.81
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0120	1.0119	0.0136	9.0	13.9	0.0360	10.1	89.9
5.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0232	8.4	91.6
15.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0136	6.7	93.3
30.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0097	5.9	94.1
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	5.9	94.1
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	5.9	94.1
1440.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0014	5.0	95.0

Fractional Components

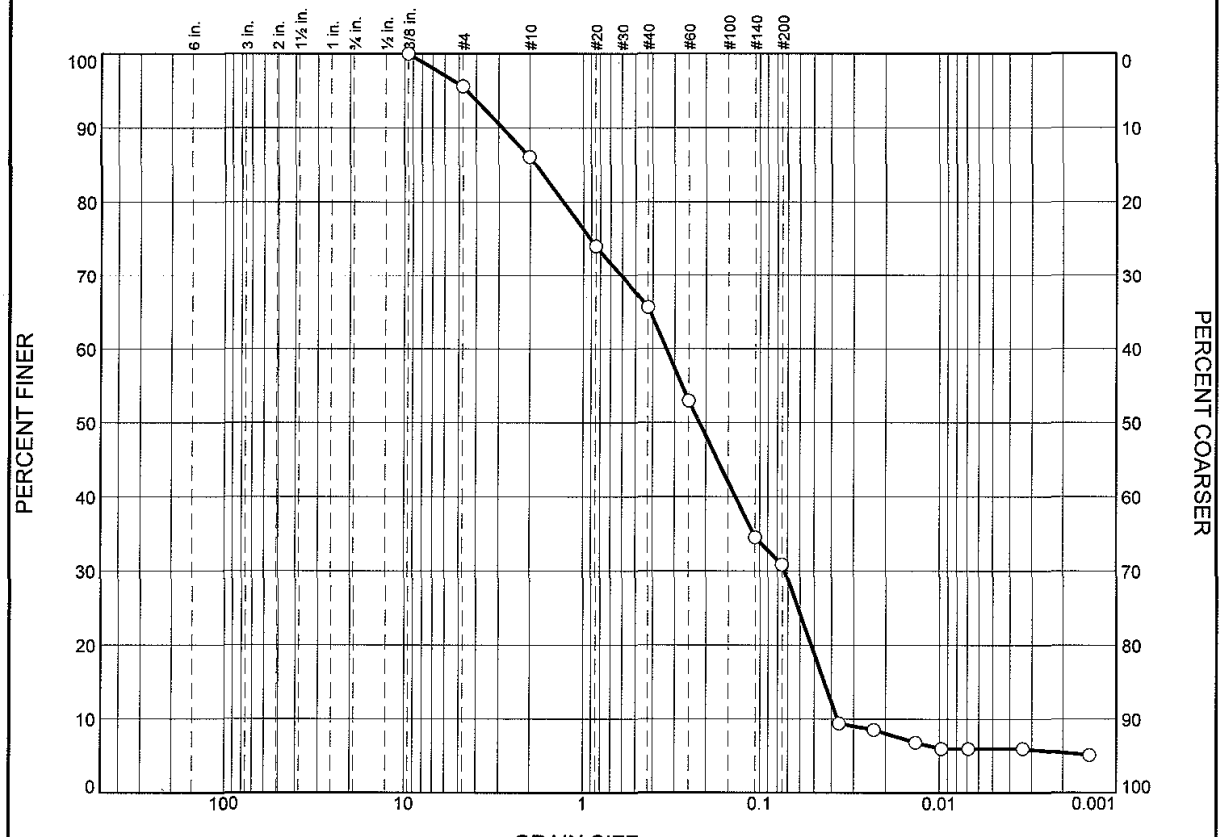
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	3.2	5.3	9.0	8.8	15.6	16.8	13.9	64.1	17.9	2.4	1.2		21.5	5.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0352	0.0421	0.0494	0.0680	0.1788	0.2692	0.8243	1.2133	1.7840	3.1663

Fineness Modulus	C_u	C_c
1.40	7.66	0.49

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	6.3	7.6	9.8	8.7	14.7	14.9	12.6	16.3	1.9	1.3		5.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.8527	0.3358	0.2181	0.0729	0.0440	0.0371	0.43	9.05

Material Description	USCS	AASHTO
○		

Project No. L1013129 **Client:** Woods Hole Group

Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10G-G001-0-0 **Sample Number:** WG432529-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1013129
Location: S-10G-G001-0-0
Sample Number: WG432529-1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 51.42
Tare Wt. = 8.95
Minus #200 from wash = 26.5%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
57.81	0.00	0.375	566.10	566.10	100.0	0.0
		#4	530.10	527.56	95.6	4.4
		#10	499.02	493.51	86.1	13.9
		#20	430.34	423.39	74.1	25.9
		#40	379.67	374.81	65.6	34.4
		#60	368.15	360.80	52.9	47.1
		#140	347.95	337.29	34.5	65.5
		#200	341.81	339.69	30.8	69.2

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 30.8
Weight of hydrometer sample =57.81
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0363	9.4	90.6
5.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0232	8.5	91.5
15.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0136	6.8	93.2
30.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0097	5.9	94.1
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	5.9	94.1
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	5.9	94.1
1440.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0014	5.1	94.9

Fractional Components

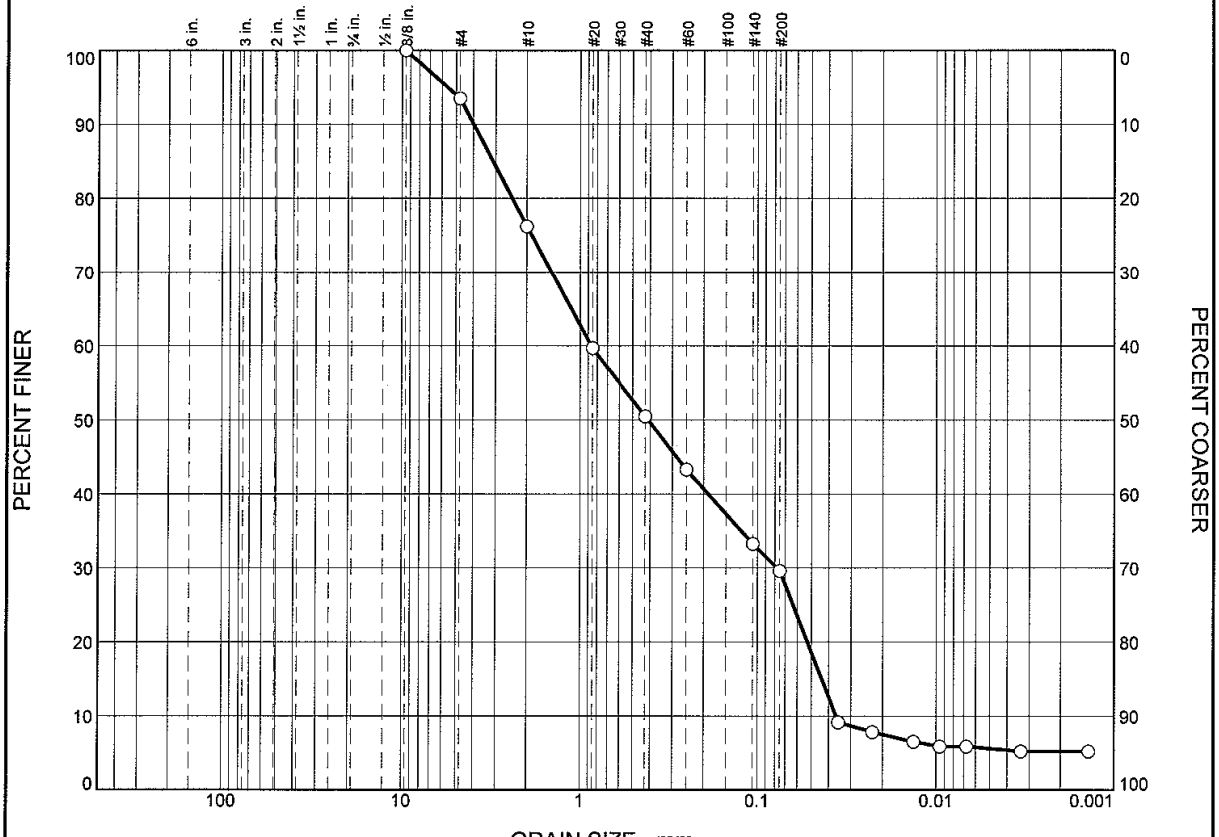
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	6.3	7.6	9.8	8.7	14.7	14.9	12.6	60.7	16.3	1.9	1.3		19.5	5.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0371	0.0440	0.0520	0.0729	0.2181	0.3358	1.2979	1.8527	2.8558	4.4957

Fineness Modulus	C_u	C_c
1.69	9.05	0.43

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	9.9	13.9	13.4	10.2	9.3	8.1	10.6	15.9	1.8	1.0	0.6	5.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.1075	0.8651	0.4100	0.0782	0.0438	0.0364	0.19	23.74

Material Description	USCS	AASHTO
○		

Project No. L1013129 **Client:** Woods Hole Group

Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10G-G002-0-0 **Sample Number:** L1013129-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1013129
Location: S-10G-G002-0-0
Sample Number: L1013129-02

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 61.73
Tare Wt. = 8.26
Minus #200 from wash = 26.2%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
72.41	0.00	0.375	566.10	566.10	100.0	0.0
		#4	532.85	528.14	93.5	6.5
		#10	505.90	493.36	76.2	23.8
		#20	429.97	418.01	59.7	40.3
		#40	383.04	376.40	50.5	49.5
		#60	371.18	365.95	43.3	56.7
		#140	350.31	343.04	33.2	66.8
		#200	340.11	337.45	29.6	70.4

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 29.6
Weight of hydrometer sample =72.41
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0140	1.0139	0.0136	11.0	13.4	0.0353	9.1	90.9
5.00	20.0	1.0120	1.0119	0.0136	9.0	13.9	0.0228	7.8	92.2
15.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0134	6.5	93.5
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	5.9	94.1
60.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0068	5.9	94.1
250.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0033	5.2	94.8
1440.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0014	5.2	94.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	9.9	13.9	13.4	10.2	9.3	8.1	10.6	51.6	15.9	1.8	1.0	0.6	19.3	5.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0364	0.0438	0.0527	0.0782	0.4100	0.8651	2.4208	3.1075	3.9891	5.5794

Fineness Modulus	C_u	C_c
2.23	23.74	0.19

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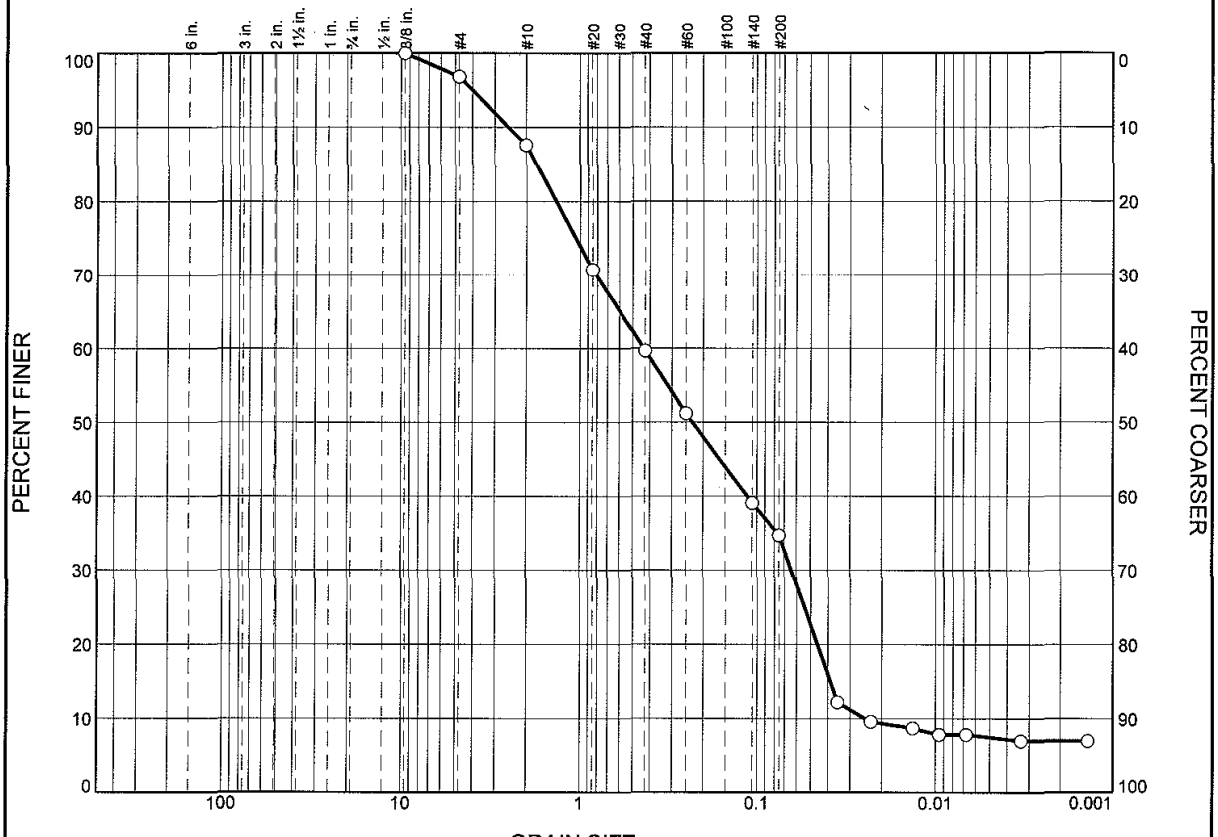
Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	5.0	7.4	13.7	11.7	11.0	9.8	12.2	17.8	2.5	1.1	0.7	7.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.7566	0.4350	0.2304	0.0641	0.0388	0.0247	0.38	17.58

	Material Description	USCS	AASHTO
○			

Project No. L1013129 **Client:** Woods Hole Group
Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10G-G002-0-0REP **Sample Number:** L1013129-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1013129
Location: S-10G-G002-0-0REP
Sample Number: L1013129-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 52.75
Tare Wt. = 8.33
Minus #200 from wash = 30.4%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
63.81	0.00	0.375	566.10	566.10	100.0	0.0
		#4	529.55	527.55	96.9	3.1
		#10	499.50	493.56	87.6	12.4
		#20	434.15	423.39	70.7	29.3
		#40	381.83	374.77	59.6	40.4
		#60	366.16	360.75	51.2	48.8
		#140	345.02	337.29	39.0	61.0
		#200	342.47	339.70	34.7	65.3

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 34.7
Weight of hydrometer sample =63.81
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0140	1.0139	0.0136	11.0	13.4	0.0353	12.2	87.8
5.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0230	9.5	90.5
15.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0134	8.7	91.3
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	7.8	92.2
60.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0068	7.8	92.2
250.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0033	6.9	93.1
1440.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0014	6.9	93.1

Fractional Components

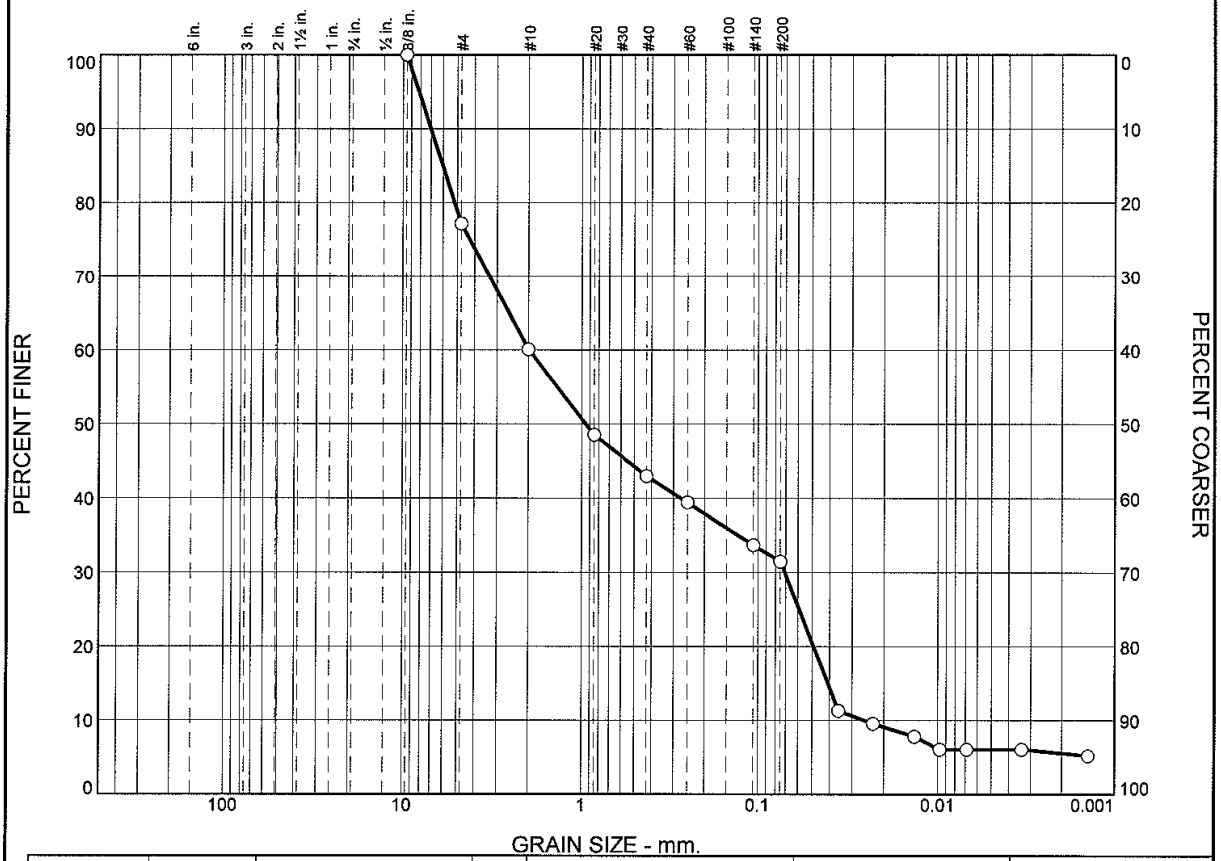
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	5.0	7.4	13.7	11.7	11.0	9.8	12.2	58.4	17.8	2.5	1.1	0.7	22.1	7.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0247	0.0388	0.0459	0.0641	0.2304	0.4350	1.3630	1.7566	2.5097	3.9940

Fineness Modulus	C_u	C_c
1.73	17.58	0.38

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	26.2	13.7	9.4	6.5	4.8	4.6	8.3	15.8	2.4	2.3	0.0	6.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			6.0299	1.9898	0.9497	0.0711	0.0409	0.0259	0.10	76.86

Material Description	USCS	AASHTO
○		

Project No. L1013129 **Client:** Woods Hole Group
Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10G-G003-0-0 **Sample Number:** L1013129-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1013129
Location: S-10G-G003-0-0
Sample Number: L1013129-04

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 43.62
Tare Wt. = 7.90
Minus #200 from wash = 38.4%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
58.00	0.00	0.375	566.10	566.10	100.0	0.0
		#4	541.40	528.16	77.2	22.8
		#10	503.27	493.35	60.1	39.9
		#20	424.70	417.99	48.5	51.5
		#40	379.62	376.40	42.9	57.1
		#60	368.00	365.95	39.4	60.6
		#140	346.39	343.05	33.7	66.3
		#200	338.72	337.45	31.5	68.5

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 31.5
Weight of hydrometer sample =58.00
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0130	1.0129	0.0136	10.0	13.6	0.0356	11.3	88.7
5.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0230	9.5	90.5
15.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0135	7.8	92.2
30.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0097	6.0	94.0
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	6.0	94.0
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	6.0	94.0
1440.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0014	5.2	94.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	26.2	13.7	9.4	6.5	4.8	4.6	8.3	33.6	15.8	2.4	2.3	0.0	20.5	6.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0259	0.0409	0.0492	0.0711	0.9497	1.9898	5.1775	6.0299	7.0225	8.1786

Fineness Modulus	C_u	C_c
2.84	76.86	0.10

Alpha Analytical

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial No:09161010:03

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab:

ALPHA Job #: L1013129

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

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Envir. Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

Level III data report & project specific EDDs

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB congeners	TOC	grainsize (w/ hydrom)	Sample Specific Comments	TOTAL # BOTTLES
L1013129 -1	S-1ØG-GØØ1-Ø-Ø	8/25/10	10:45	SE	CGM	X			>50ppm	2
	S-1ØG-GØØ1-Ø-Ø		10:45				X		>50ppm	1
	S-1ØG-GØØ1-Ø-Ø		10:45					X	>50ppm	1
-2	S-1ØG-GØØ2-Ø-Ø		12:00			X			>100ppm	2
	S-1ØG-GØØ2-Ø-Ø		12:00				X	1	>100ppm	1
	S-1ØG-GØØ2-Ø-Ø		12:00					X	>100ppm	1
-3	S-1ØG-GØØ2-Ø-ØREP		12:00			X			>100ppm	1
	S-1ØG-GØØ2-Ø-ØREP		12:00				X		>100ppm	1
	S-1ØG-GØØ2-Ø-ØREP		12:00					X	>100ppm	1
-2	S-1ØG-GØØ2-Ø-ØMSMSD		12:00			X			>100ppm	1

Container Type	G	G	O
Preservative	A	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	8/25/10 1445	[signature]	8/25/10 1445
[signature]	8/25/10 1540	[signature]	8/25/10 15:40

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

FORM NO: 01-01 (rev. 18-Jan-2010)

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL LABS
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 #: L1013129

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Dr.
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environ. Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

Level III data report; project specific EDDs

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB congeners	TOC	Grainsize (w/hydrometer)	SAMPLE HANDLING: Filtration / Preservation	Sample Specific Comments	TOTAL # BOTTLES
L1013129-41	S-106-6003-0-0	8/25/10	13:30	SC	KGM	X				~~>100 ppm~~ <50 ppm	2
	S-106-6003-0-0	↓	13:30	↓	↓		X			~~>100 ppm~~ <50 ppm	1
	S-106-6003-0-0	↓	13:30	↓	↓			X		~~>100 ppm~~ <50 ppm	1
2											
3											
4											
5											
6											
7											

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

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type	B 6 O
Preservative	A A A

Relinquished By:	Date/Time	Received By:	Date/Time
	8/25/10 1445		8/25/10 1445
	8/25/10 1540		8/25/10 15:40

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

FORM NO: 01-01 (rev. 18-Jan-2010)

ANALYTICAL REPORT

Lab Number:	L1013379
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-0010-03
Report Date:	09/20/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013379
Report Date: 09/20/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1013379-01	S-10G-T001-0-0	NEW BEDFORD, MA	08/26/10 13:30
L1013379-02	S-10G-T002-0-0	NEW BEDFORD, MA	08/26/10 14:00
L1013379-03	S-10G-T003-0-0	NEW BEDFORD, MA	08/26/10 14:30

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013379
Project Number:	TO-0010-03	**Report Date:**	09/20/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on August 28, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage on September 3, 2010 until September 8, 2010 when they were removed to extract samples for PCB Congener analysis. Samples L1013379-01 and L1013379-03 had insufficient sample volume to perform grain size analysis. These samples were analyzed for PCB Congeners and TOC only.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013379
Project Number:	TO-0010-03	**Report Date:**	09/20/10

Case Narrative (continued)

interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.
L1013379-01 - 03 were analyzed at dilution due to the high concentrations of target compounds in the sample.

The WG431395-3 LCS/LCSD RPD(s), associated with L1013379-01 through -03 are above the acceptance criteria for Cl2-BZ#8 (33%); however, the individual LCS/LCSD recoveries are within method 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: 09/20/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-01	Date Collected:	08/26/10 13:30
Client ID:	S-10G-T001-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 08:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#118	1910		ug/kg	140	--	100
Cl6-BZ#138	1970		ug/kg	140	--	100
Cl7-BZ#180	377		ug/kg	140	--	100
Cl7-BZ#170	295		ug/kg	140	--	100
Cl8-BZ#195	ND		ug/kg	140	--	100
Cl9-BZ#206	ND		ug/kg	140	--	100
Cl10-BZ#209	ND		ug/kg	140	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	86		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-01	Date Collected:	08/26/10 13:30
Client ID:	S-10G-T001-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 08:01	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#101	2580		ug/kg	140	--	100
Cl6-BZ#153	2470		ug/kg	140	--	100
Cl5-BZ#105	329		ug/kg	140	--	100
Cl7-BZ#187	633		ug/kg	140	--	100
Cl6-BZ#128	313		ug/kg	140	--	100

DBOB	104	30-150
BZ 198	86	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-01 D	Date Collected:	08/26/10 13:30
Client ID:	S-10G-T001-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 01:52	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	10900		ug/kg	1400	--	1000
Cl4-BZ#52	22800		ug/kg	1400	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-01 D	Date Collected:	08/26/10 13:30
Client ID:	S-10G-T001-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 01:52	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4060		ug/kg	1400	--	1000
Cl3-BZ#28	15600		ug/kg	1400	--	1000
Cl4-BZ#44	5780		ug/kg	1400	--	1000
Cl4-BZ#66	5670		ug/kg	1400	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-02	Date Collected:	08/26/10 14:00
Client ID:	S-10G-T002-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 08:42	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	85%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#118	2780		ug/kg	154	--	100
Cl6-BZ#138	2390		ug/kg	154	--	100
Cl7-BZ#187	718		ug/kg	154	--	100
Cl7-BZ#180	542		ug/kg	154	--	100
Cl7-BZ#170	402		ug/kg	154	--	100
Cl8-BZ#195	ND		ug/kg	154	--	100
Cl9-BZ#206	ND		ug/kg	154	--	100
Cl10-BZ#209	ND		ug/kg	154	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	69		30-150
BZ 198	58		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-02	Date Collected:	08/26/10 14:00
Client ID:	S-10G-T002-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 08:42	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	85%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl5-BZ#105	395		ug/kg	154	--	100
Cl6-BZ#128	328		ug/kg	154	--	100

DBOB	69	30-150
BZ 198	58	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-02 D	Date Collected:	08/26/10 14:00
Client ID:	S-10G-T002-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 02:33	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	85%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7180		ug/kg	1540	--	1000
Cl3-BZ#18	18400		ug/kg	1540	--	1000
Cl4-BZ#52	26200		ug/kg	1540	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-02 D	Date Collected:	08/26/10 14:00
Client ID:	S-10G-T002-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 02:33	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	85%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	23400		ug/kg	1540	--	1000
Cl4-BZ#44	7530		ug/kg	1540	--	1000
Cl4-BZ#66	6910		ug/kg	1540	--	1000
Cl5-BZ#101	5990		ug/kg	1540	--	1000
Cl6-BZ#153	5020		ug/kg	1540	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-03	Date Collected:	08/26/10 14:30
Client ID:	S-10G-T003-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 09:23	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	317		ug/kg	136	--	100
Cl3-BZ#18	735		ug/kg	136	--	100
Cl4-BZ#52	1910		ug/kg	136	--	100
Cl5-BZ#118	1130		ug/kg	136	--	100
Cl6-BZ#138	831		ug/kg	136	--	100
Cl6-BZ#128	218		ug/kg	136	--	100
Cl7-BZ#180	171		ug/kg	136	--	100
Cl7-BZ#170	ND		ug/kg	136	--	100
Cl8-BZ#195	ND		ug/kg	136	--	100
Cl9-BZ#206	ND		ug/kg	136	--	100
Cl10-BZ#209	ND		ug/kg	136	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	80		30-150
BZ 198	72		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

SAMPLE RESULTS

Lab ID:	L1013379-03	Date Collected:	08/26/10 14:30
Client ID:	S-10G-T003-0-0	Date Received:	08/28/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3570
Analytical Method:	1,8082	Extraction Date:	09/08/10 00:00
Analytical Date:	09/11/10 09:23	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	09/10/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	1600		ug/kg	136	--	100
Cl4-BZ#44	667		ug/kg	136	--	100
Cl4-BZ#66	1100		ug/kg	136	--	100
Cl5-BZ#101	1010		ug/kg	136	--	100
Cl6-BZ#153	872		ug/kg	136	--	100
Cl5-BZ#105	269		ug/kg	136	--	100
Cl7-BZ#187	166		ug/kg	136	--	100

DBOB	80	30-150
BZ 198	72	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 09/10/10 19:43
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 09/08/10 00:00
Cleanup Method1: EPA 3630
Cleanup Date1: 09/10/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG431395-1					
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	83		30-150
BZ 198	89		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 09/10/10 19:43
Analyst: JS

Extraction Method: EPA 3570
Extraction Date: 09/08/10 00:00
Cleanup Method1: EPA 3630
Cleanup Date1: 09/10/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG431395-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	89		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG431395-2		WG431395-3			
Cl2-BZ#8	59		82		40-140	**33**	Q	30
Cl3-BZ#18	64		83		40-140	26		30
Cl3-BZ#28	70		91		40-140	26		30
Cl4-BZ#52	69		88		40-140	24		30
Cl4-BZ#44	77		89		40-140	14		30
Cl4-BZ#66	70		94		40-140	29		30
Cl5-BZ#101	73		91		40-140	22		30
Cl5-BZ#118	78		95		40-140	20		30
Cl5-BZ#105	75		88		40-140	16		30
Cl6-BZ#138	79		94		40-140	17		30
Cl7-BZ#187	78		94		40-140	19		30
Cl6-BZ#128	80		95		40-140	17		30
Cl7-BZ#180	80		92		40-140	14		30
Cl7-BZ#170	81		98		40-140	19		30
Cl8-BZ#195	78		98		40-140	23		30
Cl9-BZ#206	89		109		40-140	20		30
Cl10-BZ#209	82		99		40-140	19		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG431395-2		WG431395-3			
DBOB	78		88		30-150			
BZ 198	91		98		30-150			

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG431395-2		WG431395-3			
Cl6-BZ#153	81		95		40-140	16		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	78		88		30-150
BZ 198	91		98		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

SAMPLE RESULTS

Lab ID: L1013379-01
Client ID: S-10G-T001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 08/26/10 13:30
Date Received: 08/28/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.01		%	0.010	--	1	-	09/03/10 08:00	1,9060	ES
Total Organic Carbon (Rep2)	5.00		%	0.010	--	1	-	09/03/10 08:00	1,9060	ES
General Chemistry - Mansfield Lab										
Solids, Total	94.0		%	0.100	--	1	-	09/01/10 15:50	30,2540G	KB
Solids, Total (Pre-Dried)	24.7		%	0.100	NA	1	-	08/31/10 17:57	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

SAMPLE RESULTS

Lab ID: L1013379-02
Client ID: S-10G-T002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 08/26/10 14:00
Date Received: 08/28/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.95		%	0.010	--	1	-	09/03/10 08:00	1,9060	ES
Total Organic Carbon (Rep2)	4.00		%	0.010	--	1	-	09/03/10 08:00	1,9060	ES
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.500		%	0.100	NA	1	-	09/03/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	3.80		%	0.100	NA	1	-	09/03/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	3.70		%	0.100	NA	1	-	09/03/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	3.10		%	0.100	NA	1	-	09/03/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	2.70		%	0.100	NA	1	-	09/03/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	15.4		%	0.100	NA	1	-	09/03/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	52.5		%	0.100	NA	1	-	09/03/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	18.2		%	0.100	NA	1	-	09/03/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	84.9		%	0.100	--	1	-	09/01/10 15:50	30,2540G	KB
Solids, Total (Pre-Dried)	33.6		%	0.100	NA	1	-	08/31/10 17:57	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

SAMPLE RESULTS

Lab ID: L1013379-03
Client ID: S-10G-T003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 08/26/10 14:30
Date Received: 08/28/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.17		%	0.010	--	1	-	09/03/10 08:00	1,9060	ES
Total Organic Carbon (Rep2)	4.11		%	0.010	--	1	-	09/03/10 08:00	1,9060	ES
General Chemistry - Mansfield Lab										
Solids, Total	96.1		%	0.100	--	1	-	09/01/10 15:50	30,2540G	KB
Solids, Total (Pre-Dried)	35.3		%	0.100	NA	1	-	08/31/10 17:57	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1013379

Project Number: TO-0010-03 **Report Date:** 09/20/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-03 Batch: WG430978-1									
Total Organic Carbon (Rep1)	ND		%	0.010	1	-	09/03/10 08:00	1,9060	ES
Total Organic Carbon (Rep2)	ND		%	0.010	1	-	09/03/10 08:00	1,9060	ES

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013379
Report Date: 09/20/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG430771-1 QC Sample: L1013379-02 Client ID: S-10G-T002-0-0						
Solids, Total	84.9	85.3	%	0		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1013379
Report Date: 09/20/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG430978-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	116		75-125
Total Organic Carbon (Rep2)	100		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1013379
Report Date: 09/20/10

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(*)
L1013379-01A	Glass 500ml unpreserved	A	N/A	4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1013379-02A	Glass 500ml unpreserved	A	N/A	4	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)
L1013379-03A	Glass 250ml unpreserved	A	N/A	4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013379
Project Number:	TO-0010-03	**Report Date:**	09/20/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1013379
Project Number:	TO-0010-03	**Report Date:**	09/20/10

Data Qualifiers

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	**Lab Number:**	L1013379
Project Number:	TO-0010-03	**Report Date:**	09/20/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

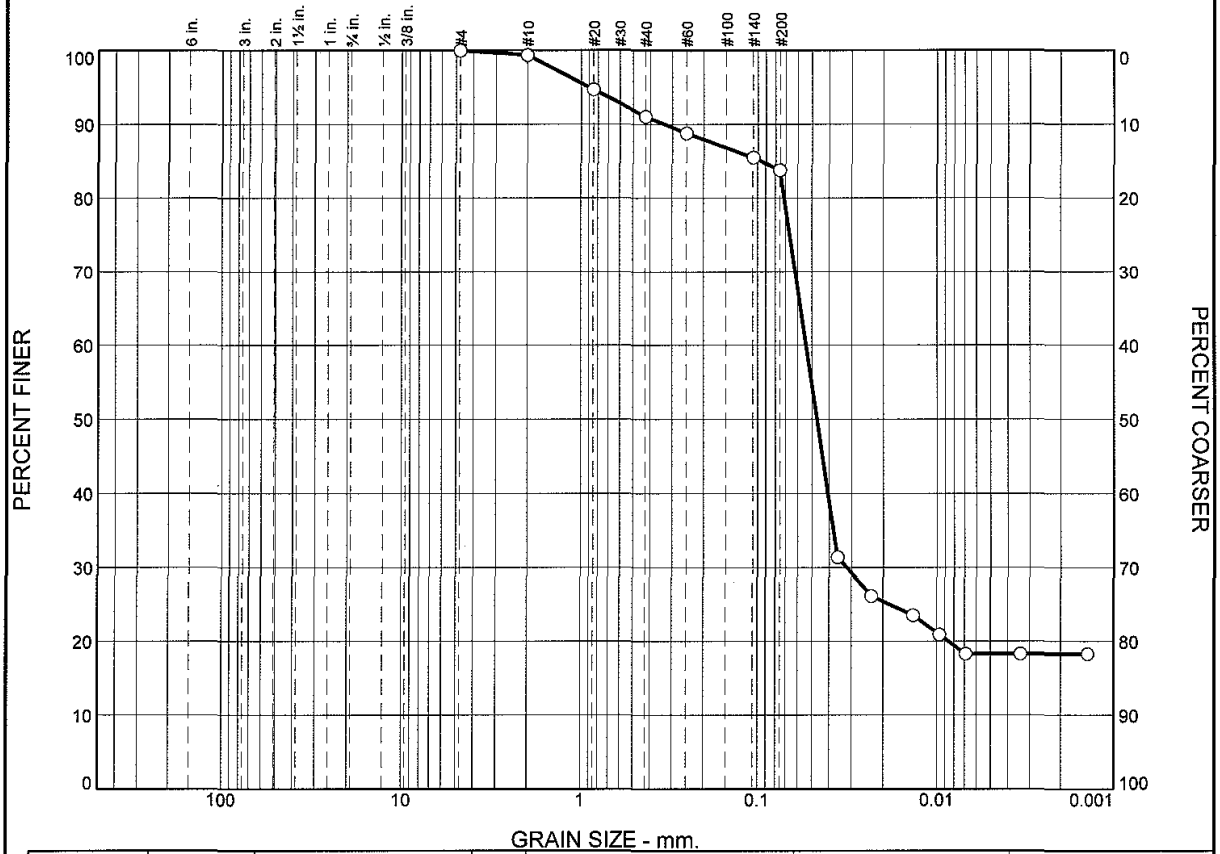
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○				0.5	3.8	3.7	3.1	2.7	15.4	41.1	5.4	5.0	1.0	18.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0966	0.0538	0.0467	0.0321				

	Material Description	USCS	AASHTO
○			

Project No. L1013379 **Client:** Woods Hole Group

Project: NBH Environmental Monitoring

○ **Source of Sample:** S-10G-T002-0-0 **Sample Number:** L1013379-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/20/2010

Client: Woods Hole Group
Project: NBH Environmental Monitoring
Project Number: L1013379
Location: S-10G-T002-0-0
Sample Number: L1013379-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 16.82
Tare Wt. = 7.63
Minus #200 from wash = 82.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
51.16	0.00	#4	528.06	528.05	100.0	0.0
		#10	493.67	493.36	99.4	0.6
		#20	420.32	417.93	94.7	5.3
		#40	378.37	376.49	91.0	9.0
		#60	367.03	365.88	88.8	11.2
		#140	344.70	343.00	85.5	14.5
		#200	338.29	337.42	83.8	16.2

Hydrometer Test Data

Hydrometer test uses material passing #200
Percent passing #200 based upon complete sample = 83.8
Weight of hydrometer sample =51.16
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0120	1.0119	0.0136	9.0	13.9	0.0360	31.4	68.6
5.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0232	26.1	73.9
15.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0135	23.5	76.5
30.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0096	20.9	79.1
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	18.2	81.8
250.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0034	18.2	81.8
1440.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0014	18.2	81.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
			0.5	3.8	3.7	3.1	2.7	15.4	28.7	41.1	5.4	5.0	1.0	52.5	18.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0086	0.0321	0.0467	0.0538	0.0712	0.0966	0.3334	0.8975

Fineness Modulus
0.35

Alpha Analytical

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial No: 09201009:56

ESI

EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: L1013379

CHAIN OF CUSTODY DOCUMENTATION

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: NBH Environ. Monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Drive	Project Number: TØ-ØØ1Ø-Ø3	
Invoice to: Cathy Morey	Address: E. Falmouth, MA 02536	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax: 508-540-1001	email: DWALSH@WHGRP.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
L1013379-1	S-1ØG-TØØ1-Ø-Ø	8/26/10	1330	JL	C	16 oz	G	4°C	S	N	GrainSize, TOC, PCB congeners
-2	S-1ØG-TØØ2-Ø-Ø	8/26/10	1400	JL	C	16 oz	G	4°C	S	N	GrainSize, TOC, PCB congeners
-3	S-1ØG-TØØ3-Ø-Ø	8/26/10	1430	JL	C	9 oz	G	4°C	S	N	GrainSize, TOC, PCB congeners

Relinquished By: [signature]	Date: 8/27/10	Time: 1335	Received By: [signature]	Date: 8/27/10	Time: 1335
Relinquished By: [signature]	Date: 8/27/10	Time: 1715	Received at Lab By: [signature]	Date: 8/27/10	Time: 1715

Comments: To Alpha

Rel: 8/27/10 - Thelma Fleming [signature] 8-27 1810
[signature] 8-27 1900

COC Doc No: 3898

Sample Delivery Group No: Page of

Rec: [signature] 8/28/10 9:30

ANALYTICAL REPORT

Lab Number:	L1015314
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-0010-03
Report Date:	10/21/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015314
Report Date: 10/21/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1015314-01	S-10S-G001-0-0	NEW BEDFORD, MA	09/30/10 12:05
L1015314-02	S-10S-G002-0-0	NEW BEDFORD, MA	09/30/10 11:15
L1015314-03	S-10S-G002-0-0 REP	NEW BEDFORD, MA	09/30/10 11:15
L1015314-04	S-10S-G003-0-0	NEW BEDFORD, MA	09/30/10 10:06

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015314
Project Number: TO-0010-03 **Report Date:** 10/21/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on September 30, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage on October 4 until October 7, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015314
Project Number:	TO-0010-03	**Report Date:**	10/21/10

Case Narrative (continued)

whether it was the higher or lower value.

L1015314-01 through 04 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1015314-01 through 04 were re-analyzed on further dilution in order to quantitate the samples within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compounds that exceeded the calibration range.

The WG436233-4/-5 MS/MSD recoveries, performed on L1015314-02, were above the acceptance criteria for Cl3-BZ#28 (226%)/(159%), Cl3-BZ#18 (829%)/(199%), Cl4-BZ#52 (446%)/(261%), Cl4-BZ#66 (282%)/(221%), Cl3-BZ#28 (242%)/(148%), Cl4-BZ#44 (MS 145%); these results are due to the high concentrations detected in the native sample. In addition, the %RPD was above the criteria for Cl3-BZ#18 (33%).

Grain Size

The WG436945-1 Laboratory Duplicate RPD, performed on L1015314-02, is outside the acceptance criteria for % Very Coarse Sand (80%), % Coarse Sand (42%), % Medium Sand (25%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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

Authorized Signature: Cynthia McQueen

Title: Technical Director/Representative Date: 10/21/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015314

Project Number: TO-0010-03 **Report Date:** 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-01	Date Collected:	09/30/10 12:05
Client ID:	S-10S-G001-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 18:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2170		ug/kg	347	--	100
Cl3-BZ#18	3860		ug/kg	347	--	100
Cl4-BZ#52	9810	E	ug/kg	347	--	100
Cl4-BZ#66	2980		ug/kg	347	--	100
Cl5-BZ#118	1440		ug/kg	347	--	100
Cl6-BZ#138	1340		ug/kg	347	--	100
Cl6-BZ#128	355		ug/kg	347	--	100
Cl7-BZ#180	ND		ug/kg	347	--	100
Cl7-BZ#170	ND		ug/kg	347	--	100
Cl8-BZ#195	ND		ug/kg	347	--	100
Cl9-BZ#206	ND		ug/kg	347	--	100
Cl10-BZ#209	ND		ug/kg	347	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	121		30-150
BZ 198	110		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015314

Project Number: TO-0010-03 **Report Date:** 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-01	Date Collected:	09/30/10 12:05
Client ID:	S-10S-G001-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 18:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6730		ug/kg	347	--	100
Cl4-BZ#44	2650		ug/kg	347	--	100
Cl5-BZ#101	1950		ug/kg	347	--	100
Cl6-BZ#153	1830		ug/kg	347	--	100
Cl5-BZ#105	ND		ug/kg	347	--	100
Cl7-BZ#187	444		ug/kg	347	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	121		30-150
BZ 198	110		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-01 D	Date Collected:	09/30/10 12:05
Client ID:	S-10S-G001-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 13:43	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	15900		ug/kg	3470	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015314

Project Number: TO-0010-03 **Report Date:** 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-02	Date Collected:	09/30/10 11:15
Client ID:	S-10S-G002-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 19:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	7260	E	ug/kg	356	--	100
Cl3-BZ#18	17700	E	ug/kg	356	--	100
Cl4-BZ#52	27200	E	ug/kg	356	--	100
Cl4-BZ#66	7660	E	ug/kg	356	--	100
Cl5-BZ#118	4020		ug/kg	356	--	100
Cl6-BZ#138	3350		ug/kg	356	--	100
Cl7-BZ#187	1060		ug/kg	356	--	100
Cl6-BZ#128	710		ug/kg	356	--	100
Cl7-BZ#180	888		ug/kg	356	--	100
Cl7-BZ#170	642		ug/kg	356	--	100
Cl8-BZ#195	ND		ug/kg	356	--	100
Cl9-BZ#206	ND		ug/kg	356	--	100
Cl10-BZ#209	ND		ug/kg	356	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	99		30-150
BZ 198	92		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-02	Date Collected:	09/30/10 11:15
Client ID:	S-10S-G002-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 19:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	19200	E	ug/kg	356	--	100
Cl4-BZ#44	6950		ug/kg	356	--	100
Cl5-BZ#101	5670		ug/kg	356	--	100
Cl6-BZ#153	5140		ug/kg	356	--	100
Cl5-BZ#105	624		ug/kg	356	--	100

DBOB	99	30-150
BZ 198	92	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015314
Project Number: TO-0010-03
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-02 D	Date Collected:	09/30/10 11:15
Client ID:	S-10S-G002-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 14:24	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	12000		ug/kg	3560	--	1000
Cl3-BZ#18	24600		ug/kg	3560	--	1000
Cl4-BZ#52	46000		ug/kg	3560	--	1000
Cl4-BZ#66	12400		ug/kg	3560	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015314
Project Number: TO-0010-03
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-02 D	Date Collected:	09/30/10 11:15
Client ID:	S-10S-G002-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 14:24	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	92%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	38100		ug/kg	3560	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015314

Project Number: TO-0010-03 **Report Date:** 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-03	Date Collected:	09/30/10 11:15
Client ID:	S-10S-G002-0-0 REP	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 21:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	11500	E	ug/kg	358	--	100
Cl3-BZ#18	27200	E	ug/kg	358	--	100
Cl4-BZ#52	36300	E	ug/kg	358	--	100
Cl4-BZ#44	9680	E	ug/kg	358	--	100
Cl4-BZ#66	10300	E	ug/kg	358	--	100
Cl5-BZ#118	5050		ug/kg	358	--	100
Cl6-BZ#138	4130		ug/kg	358	--	100
Cl7-BZ#187	1290		ug/kg	358	--	100
Cl6-BZ#128	860		ug/kg	358	--	100
Cl7-BZ#180	1070		ug/kg	358	--	100
Cl7-BZ#170	776		ug/kg	358	--	100
Cl8-BZ#195	ND		ug/kg	358	--	100
Cl9-BZ#206	ND		ug/kg	358	--	100
Cl10-BZ#209	ND		ug/kg	358	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	109		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-03	Date Collected:	09/30/10 11:15
Client ID:	S-10S-G002-0-0 REP	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 21:15	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	23300	E	ug/kg	358	--	100
Cl5-BZ#101	6850		ug/kg	358	--	100
Cl6-BZ#153	6010		ug/kg	358	--	100
Cl5-BZ#105	744		ug/kg	358	--	100

DBOB	104	30-150
BZ 198	109	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015314
Project Number: TO-0010-03
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-03 D	Date Collected:	09/30/10 11:15
Client ID:	S-10S-G002-0-0 REP	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 16:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	18300		ug/kg	3580	--	1000
Cl3-BZ#18	43500		ug/kg	3580	--	1000
Cl4-BZ#52	58600		ug/kg	3580	--	1000
Cl4-BZ#66	16100		ug/kg	3580	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015314
Project Number: TO-0010-03
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-03 D	Date Collected:	09/30/10 11:15
Client ID:	S-10S-G002-0-0 REP	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 16:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	91%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	50100		ug/kg	3580	--	1000
Cl4-BZ#44	17600		ug/kg	3580	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015314

Project Number: TO-0010-03 **Report Date:** 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-04	Date Collected:	09/30/10 10:06
Client ID:	S-10S-G003-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 21:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	462		ug/kg	340	--	100
Cl3-BZ#18	1170		ug/kg	340	--	100
Cl4-BZ#52	3020		ug/kg	340	--	100
Cl4-BZ#66	2360		ug/kg	340	--	100
Cl5-BZ#118	1920		ug/kg	340	--	100
Cl6-BZ#138	1290		ug/kg	340	--	100
Cl6-BZ#128	352		ug/kg	340	--	100
Cl7-BZ#180	ND		ug/kg	340	--	100
Cl8-BZ#195	ND		ug/kg	340	--	100
Cl9-BZ#206	ND		ug/kg	340	--	100
Cl10-BZ#209	ND		ug/kg	340	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	125		30-150
BZ 198	111		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID:	L1015314-04	Date Collected:	09/30/10 10:06
Client ID:	S-10S-G003-0-0	Date Received:	09/30/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/07/10 16:36
Analytical Date:	10/19/10 21:56	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/15/10
Percent Solids:	96%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3100		ug/kg	340	--	100
Cl4-BZ#44	1280		ug/kg	340	--	100
Cl5-BZ#101	1870		ug/kg	340	--	100
Cl6-BZ#153	1580		ug/kg	340	--	100
Cl5-BZ#105	500		ug/kg	340	--	100
Cl7-BZ#187	ND		ug/kg	340	--	100
Cl7-BZ#170	ND		ug/kg	340	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	125		30-150
BZ 198	111		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 10/19/10 10:59
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 10/07/10 16:36
Cleanup Method1: EPA 3630
Cleanup Date1: 10/15/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-04 Batch: WG436233-1					
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	81		30-150
BZ 198	87		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 10/19/10 10:59
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 10/07/10 16:36
Cleanup Method1: EPA 3630
Cleanup Date1: 10/15/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-04 Batch: WG436233-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	81		30-150
BZ 198	87		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015314
Report Date: 10/21/10

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): 01-04 QC Batch ID: WG436233-4 WG436233-5 QC Sample: L1015314-02 Client ID: S-10S-G002-0-0												
Cl2-BZ#8	12000	1770	16000	**226**	Q	14800	**159**	Q	40-140	8		30
Cl3-BZ#18	24600	1770	39300	**829**	Q	28100	**199**	Q	40-140	**33**	Q	30
Cl4-BZ#52	46000	1770	53900	**446**	Q	50600	**261**	Q	40-140	6		30
Cl4-BZ#66	12400	1770	17400	**282**	Q	16300	**221**	Q	40-140	7		30
Cl5-BZ#118	4020	1770	6340	131		6230	125		40-140	2		30
Cl6-BZ#138	3350	1770	5380	114		5340	113		40-140	1		30
Cl7-BZ#187	1060	1770	2730	94		2700	93		40-140	1		30
Cl6-BZ#128	710	1770	2500	101		2470	100		40-140	1		30
Cl7-BZ#180	888	1770	2620	98		2600	97		40-140	1		30
Cl7-BZ#170	642	1770	2360	97		2340	96		40-140	1		30
Cl8-BZ#195	ND	1770	1900	107		1880	107		40-140	1		30
Cl9-BZ#206	ND	1770	2080	117		2020	115		40-140	3		30
Cl10-BZ#209	ND	1770	1730	98		1700	97		40-140	2		30
Cl3-BZ#28	38100	1770	42400	**242**	Q	40700	**148**	Q	40-140	4		30
Cl4-BZ#44	6950	1770	9520	**145**	Q	9130	124		40-140	4		30
Cl5-BZ#101	5670	1770	8040	134		7770	119		40-140	3		30
Cl6-BZ#153	5140	1770	7300	122		7050	108		40-140	3		30
Cl5-BZ#105	624	1770	2310	95		2230	91		40-140	4		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015314
Report Date: 10/21/10

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): 01-04 QC Batch ID: WG436233-4 WG436233-5 QC Sample: L1015314-02 Client ID: S-10S-G002-0-0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	103		101		30-150
DBOB	96		110		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04 Batch: WG436233-2 WG436233-3							
Cl2-BZ#8	66		57		40-140	15		30
Cl3-BZ#18	65		57		40-140	13		30
Cl3-BZ#28	71		64		40-140	10		30
Cl4-BZ#52	71		67		40-140	6		30
Cl4-BZ#44	70		64		40-140	9		30
Cl4-BZ#66	76		69		40-140	10		30
Cl5-BZ#101	74		67		40-140	10		30
Cl5-BZ#118	78		72		40-140	8		30
Cl5-BZ#105	73		68		40-140	7		30
Cl6-BZ#138	77		71		40-140	8		30
Cl7-BZ#187	75		65		40-140	14		30
Cl6-BZ#128	81		73		40-140	10		30
Cl7-BZ#180	79		74		40-140	7		30
Cl7-BZ#170	78		73		40-140	7		30
Cl8-BZ#195	76		70		40-140	8		30
Cl9-BZ#206	84		79		40-140	6		30
Cl10-BZ#209	77		73		40-140	5		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG436233-2		WG436233-3			
DBOB	72		69		30-150			
BZ 198	81		78		30-150			
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG436233-2		WG436233-3			
Cl6-BZ#153	76		75		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	72		69		30-150
BZ 198	81		78		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID: L1015314-01
Client ID: S-10S-G001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/30/10 12:05
Date Received: 09/30/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.70		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	4.00		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.200		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	0.900		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	2.40		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	18.0		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	13.9		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	8.80		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	48.5		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	7.30		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	94.1		%	0.100	--	1	-	10/08/10 10:40	30,2540G	KB
Solids, Total (Pre-Dried)	29.8		%	0.100	NA	1	-	10/01/10 09:00	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID: L1015314-02
Client ID: S-10S-G002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/30/10 11:15
Date Received: 09/30/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.70		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	4.86		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	ND		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	0.700		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	3.20		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	4.90		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	4.10		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	7.10		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	69.6		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	10.4		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	92.3		%	0.100	--	1	-	10/08/10 10:40	30,2540G	KB
Solids, Total (Pre-Dried)	29.2		%	0.100	NA	1	-	10/01/10 09:00	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID: L1015314-03
Client ID: S-10S-G002-0-0 REP
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/30/10 11:15
Date Received: 09/30/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.02		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	4.06		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.300		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	0.600		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	2.00		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	18.1		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	13.7		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	9.00		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	47.1		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	9.10		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	91.3		%	0.100	--	1	-	10/08/10 10:40	30,2540G	KB
Solids, Total (Pre-Dried)	29.9		%	0.100	NA	1	-	10/01/10 09:00	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015314
Report Date: 10/21/10

SAMPLE RESULTS

Lab ID: L1015314-04
Client ID: S-10S-G003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 09/30/10 10:06
Date Received: 09/30/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.29		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	3.25		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	1.50		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	3.90		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	3.70		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	4.10		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	6.90		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	8.70		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	60.2		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	9.00		%	0.100	NA	1	-	10/12/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	95.7		%	0.100	--	1	-	10/08/10 10:40	30,2540G	KB
Solids, Total (Pre-Dried)	33.0		%	0.100	NA	1	-	10/01/10 09:00	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015314

Project Number: TO-0010-03 **Report Date:** 10/21/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-04 Batch: WG436946-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	10/12/10 07:00	1,9060	NR

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015314
Report Date: 10/21/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG436946-4 QC Sample: L1015314-02 Client ID: S-10S-G002-0-0												
Total Organic Carbon (Rep1)	4.70	1.86	6.69	106		-	-		75-125	-		25
Total Organic Carbon (Rep2)	4.86	2.41	7.52	117		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015314
Report Date: 10/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG436432-1 QC Sample: L1015314-01 Client ID: S-10S-G001-0-0						
Solids, Total	94.1	94.4	%	0		20
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG436945-1 QC Sample: L1015314-02 Client ID: S-10S-G002-0-0						
Gravel (>2.00mm)	ND	0.100	%	NC		20
Very Coarse Sand (1.00-2.00 mm)	0.7	0.300	%	**80**	Q	20
Coarse Sand (0.50-1.00 mm)	3.2	2.10	%	**42**	Q	20
Medium Sand (0.25-0.50 mm)	4.9	3.80	%	**25**	Q	20
Fine Sand (0.125-0.25 mm)	4.1	3.60	%	13		20
Very Fine Sand (0.063-0.125 mm)	7.1	6.60	%	7		20
Silt - (1.95-62.5 um)	69.6	72.6	%	4		20
Clay - (<1.95 um)	10.4	10.9	%	5		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG436946-3 QC Sample: L1015314-02 Client ID: S-10S-G002-0-0						
Total Organic Carbon (Rep1)	4.70	4.84	%	3		25
Total Organic Carbon (Rep2)	4.86	4.77	%	2		25

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015314
Project Number:	TO-0010-03	**Report Date:**	10/21/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG436946-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	101		75-125
Total Organic Carbon (Rep2)	117		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015314
Report Date: 10/21/10

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(*)
L1015314-01A	Glass 500ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-01B	Glass 500ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-01C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-01D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1015314-02A	Glass 500ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-02B	Glass 500ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015314
Report Date: 10/21/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1015314-02C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-02D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1015314-02E	Glass 500ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-03A	Glass 500ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-03B	Glass 500ml unpreserved	A	N/A	3	Y	Absent	-
L1015314-03C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-03D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1015314-04A	Glass 500ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015314
Report Date: 10/21/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1015314-04B	Glass 500ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-04C	Glass 100ml unpreserved	A	N/A	3	Y	Absent	A2-HYDROMETER(),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1015314-04D	Bag	A	N/A	3	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015314
Project Number:	TO-0010-03	**Report Date:**	10/21/10

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.
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.

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.
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.
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.
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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015314
Project Number:	TO-0010-03	**Report Date:**	10/21/10

Data Qualifiers

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	**Lab Number:**	L1015314
Project Number:	TO-0010-03	**Report Date:**	10/21/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

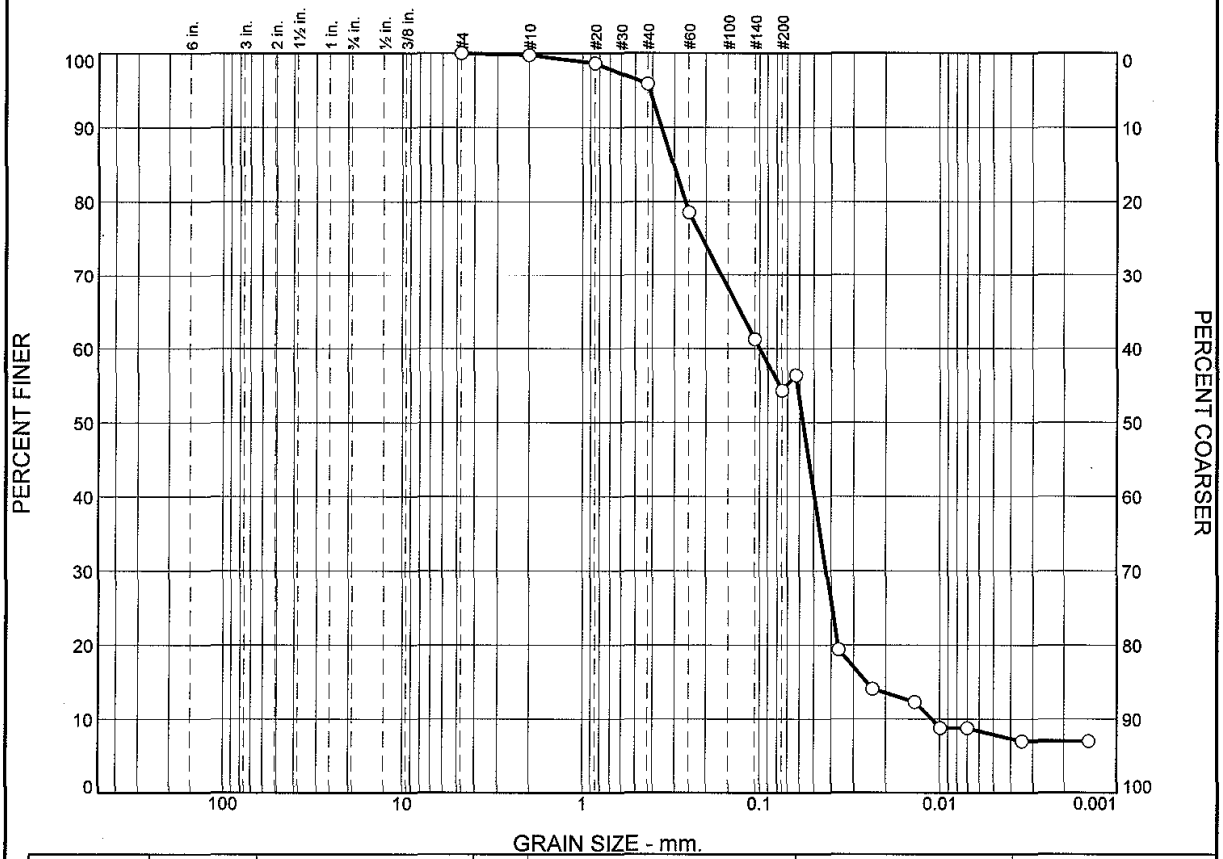
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.2	0.9	2.4	18.0	13.9	8.8	38.4	4.7	4.0	1.4	7.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3046	0.0996	0.0573	0.0425	0.0255	0.0111	1.64	8.96

	Material Description	USCS	AASHTO
○			

Project No. L1015314 **Client:** Woods Hole Group
Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-G001-0-0 **Sample Number:** L1015314-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015314
Location: S-10S-G001-0-0
Sample Number: L1015314-01

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 30.65
Tare Wt. = 7.31
Minus #200 from wash = 54.3%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
51.07	0.00	#4	527.82	527.82	100.0	0.0
		#10	493.10	492.98	99.8	0.2
		#20	418.18	417.61	98.6	1.4
		#40	377.54	376.13	95.9	4.1
		#60	374.65	365.79	78.5	21.5
		#140	351.59	342.76	61.2	38.8
		#230	322.20	319.71	56.4	43.6

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 56.4
Weight of hydrometer sample =51.07
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0363	19.4	80.6
5.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0236	14.1	85.9
15.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0138	12.3	87.7
30.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0099	8.7	91.3
60.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0070	8.7	91.3
250.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0035	7.0	93.0
1440.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0014	7.0	93.0

Fractional Components

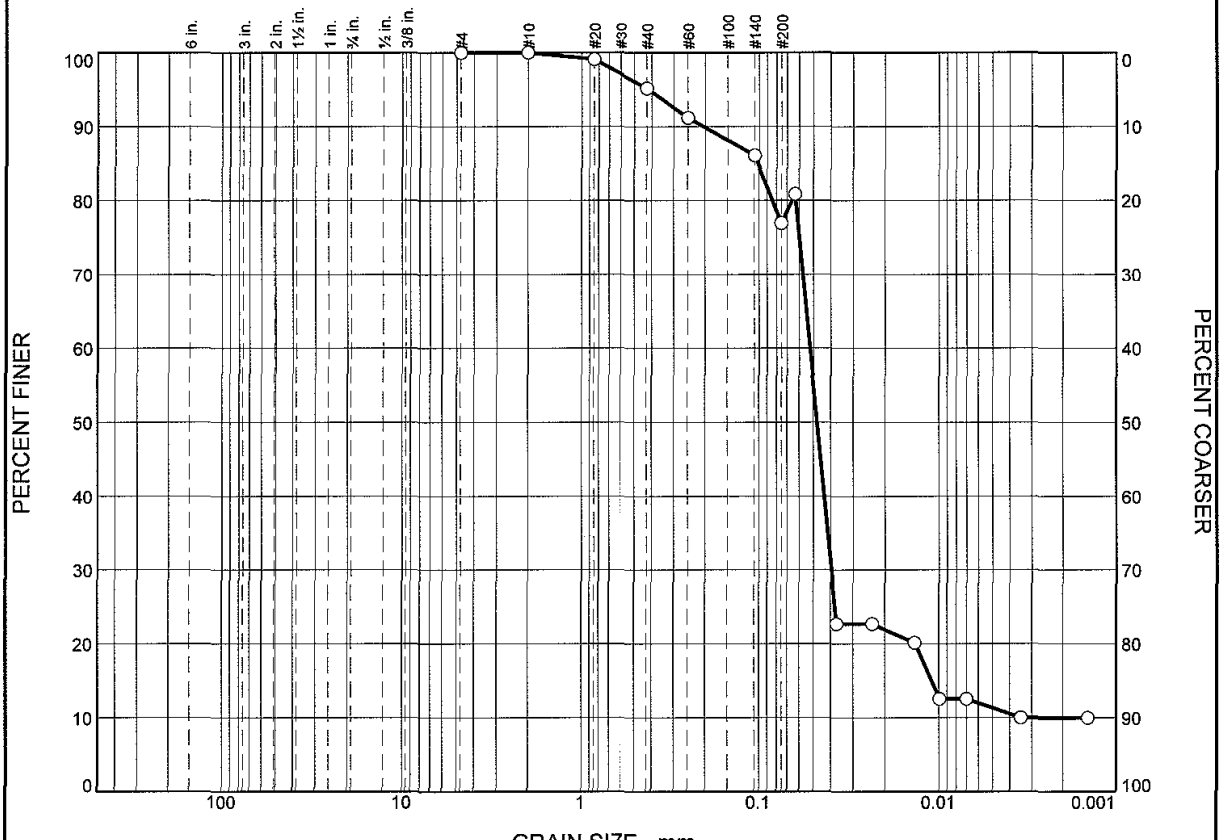
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.2	0.9	2.4	18.0	13.9	8.8	44.0	38.4	4.7	4.0	1.4	48.5	7.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0111	0.0255	0.0367	0.0425	0.0573	0.0996	0.2614	0.3046	0.3550	0.4136

Fineness Modulus	C_u	C_c
0.51	8.96	1.64

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.7	3.2	4.9	4.1	7.1	57.4	1.9	8.2	2.1	10.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1018	0.0521	0.0475	0.0396	0.0110	0.0035	8.64	14.95

	Material Description	USCS	AASHTO
○			

Project No. L1015314 **Client:** Woods Hole Group
Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-G002-0-0 **Sample Number:** L1015314-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015314
Location: S-10S-G002-0-0
Sample Number: L1015314-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 19.15
Tare Wt. = 7.32
Minus #200 from wash = 76.9%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
51.22	0.00	#4	527.28	527.28	100.0	0.0
		#10	493.24	493.24	100.0	0.0
		#20	423.56	423.10	99.1	0.9
		#40	376.42	374.41	95.2	4.8
		#60	362.65	360.60	91.2	8.8
		#140	339.70	337.09	86.1	13.9
		#230	321.95	319.27	80.8	19.2

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 80.8
Weight of hydrometer sample =51.22
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0370	22.6	77.4
5.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0234	22.6	77.4
15.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0136	20.1	79.9
30.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0099	12.5	87.5
60.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0070	12.5	87.5
250.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0035	10.0	90.0
1440.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0014	10.0	90.0

Fractional Components

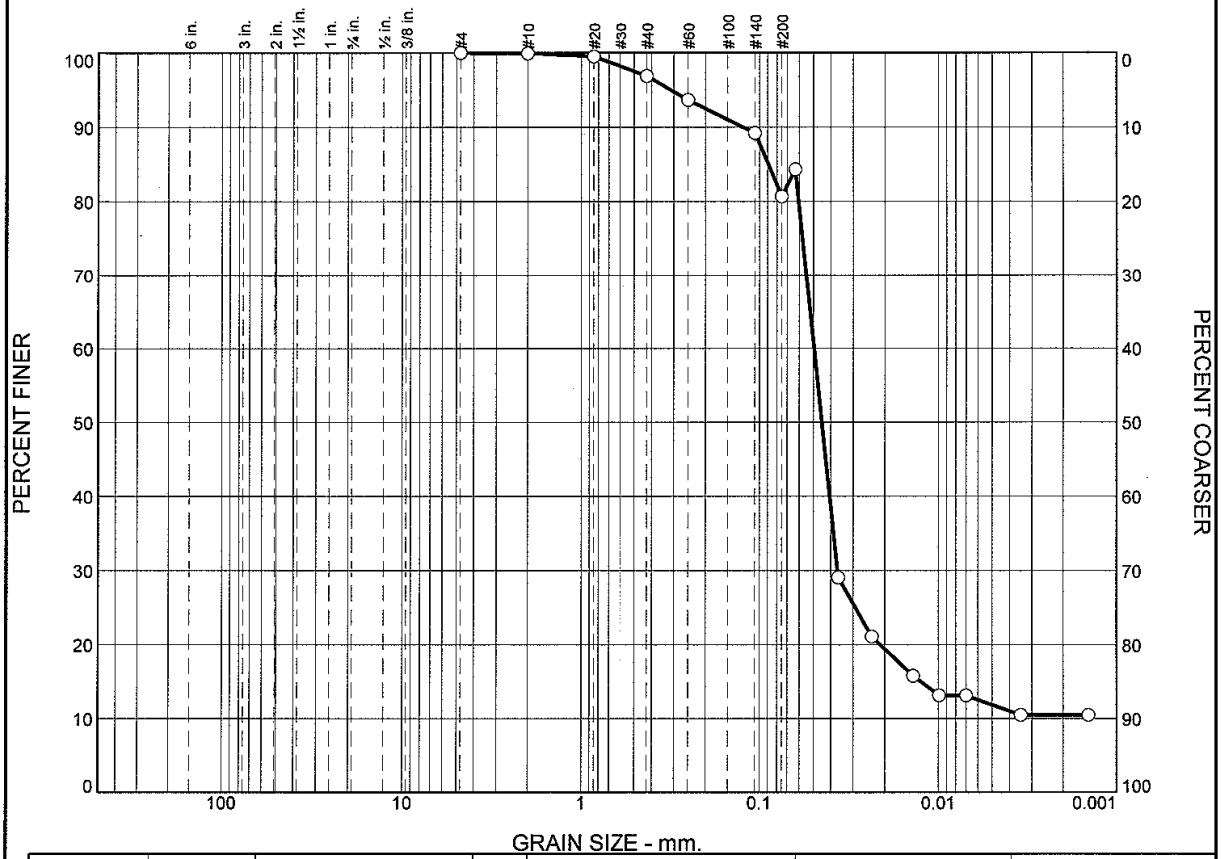
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.7	3.2	4.9	4.1	7.1	20.0	57.4	1.9	8.2	2.1	69.6	10.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0035	0.0110	0.0136	0.0396	0.0475	0.0521	0.0625	0.1018	0.2051	0.4151

Fineness Modulus	C_u	C_c
0.23	14.95	8.64

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.1	0.3	2.1	3.8	3.6	6.6	57.4	9.2	3.8	2.2	10.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0894	0.0495	0.0448	0.0367	0.0126			

	Material Description	USCS	AASHTO
○			

Project No. L1015314 **Client:** Woods Hole Group
Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-G002-0-0 **Sample Number:** WG436945-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015314
Location: S-10S-G002-0-0
Sample Number: WG436945-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 17.30
Tare Wt. = 7.44
Minus #200 from wash = 80.6%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
50.95	0.00	#4	527.28	527.28	100.0	0.0
		#10	493.27	493.24	99.9	0.1
		#20	423.32	423.10	99.5	0.5
		#40	375.74	374.41	96.9	3.1
		#60	362.25	360.60	93.7	6.3
		#140	339.35	337.09	89.2	10.8
		#230	321.78	319.27	84.3	15.7

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 84.3
Weight of hydrometer sample =50.95
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0110	1.0109	0.0136	8.0	14.2	0.0363	29.1	70.9
5.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0236	21.1	78.9
15.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0139	15.8	84.2
30.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0099	13.1	86.9
60.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0070	13.1	86.9
250.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0035	10.5	89.5
1440.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0014	10.5	89.5

Fractional Components

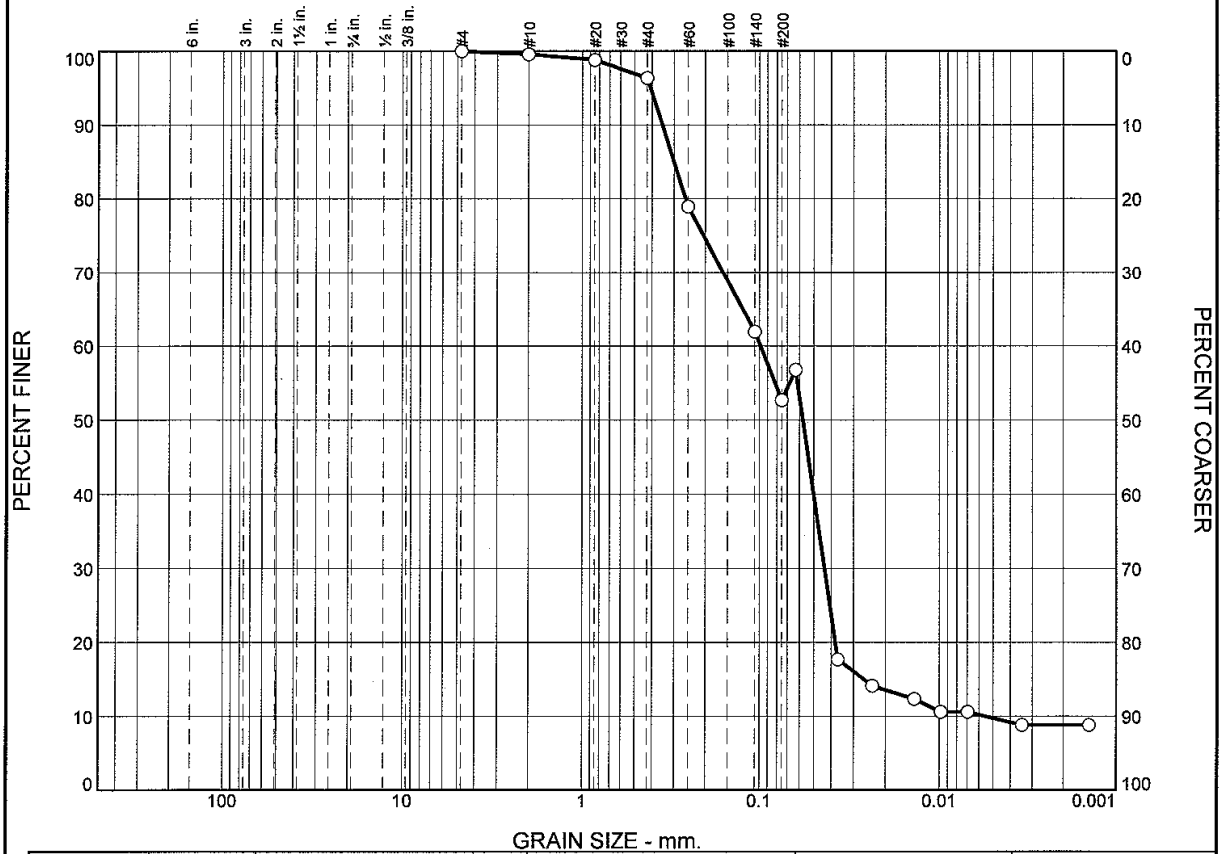
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.1	0.3	2.1	3.8	3.6	6.6	16.4	57.4	9.2	3.8	2.2	72.6	10.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0126	0.0212	0.0367	0.0448	0.0495	0.0604	0.0894	0.1231	0.3114

Fineness Modulus
0.16

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.1	0.3	0.6	2.0	18.1	13.7	9.0	39.9	3.5	2.2	1.5	9.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3007	0.0987	0.0574	0.0435	0.0263	0.0056	3.45	17.77

Material Description	USCS	AASHTO
○		

Project No. L1015314 **Client:** Woods Hole Group
Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-G003-0-0REP **Sample Number:** L1015314-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015314
Location: S-10S-G003-0-0REP
Sample Number: L1015314-03

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 31.60
Tare Wt. = 7.34
Minus #200 from wash = 52.6%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
51.23	0.00	#4	527.82	527.82	100.0	0.0
		#10	493.19	492.98	99.6	0.4
		#20	418.00	417.61	98.8	1.2
		#40	377.38	376.13	96.4	3.6
		#60	374.74	365.79	78.9	21.1
		#140	351.48	342.76	61.9	38.1
		#230	322.34	319.71	56.8	43.2

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 56.8
Weight of hydrometer sample =51.23
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0100	1.0099	0.0136	7.0	14.4	0.0367	17.7	82.3
5.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0236	14.1	85.9
15.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0138	12.3	87.7
30.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0098	10.6	89.4
60.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0069	10.6	89.4
250.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0034	8.8	91.2
1440.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0014	8.8	91.2

Fractional Components

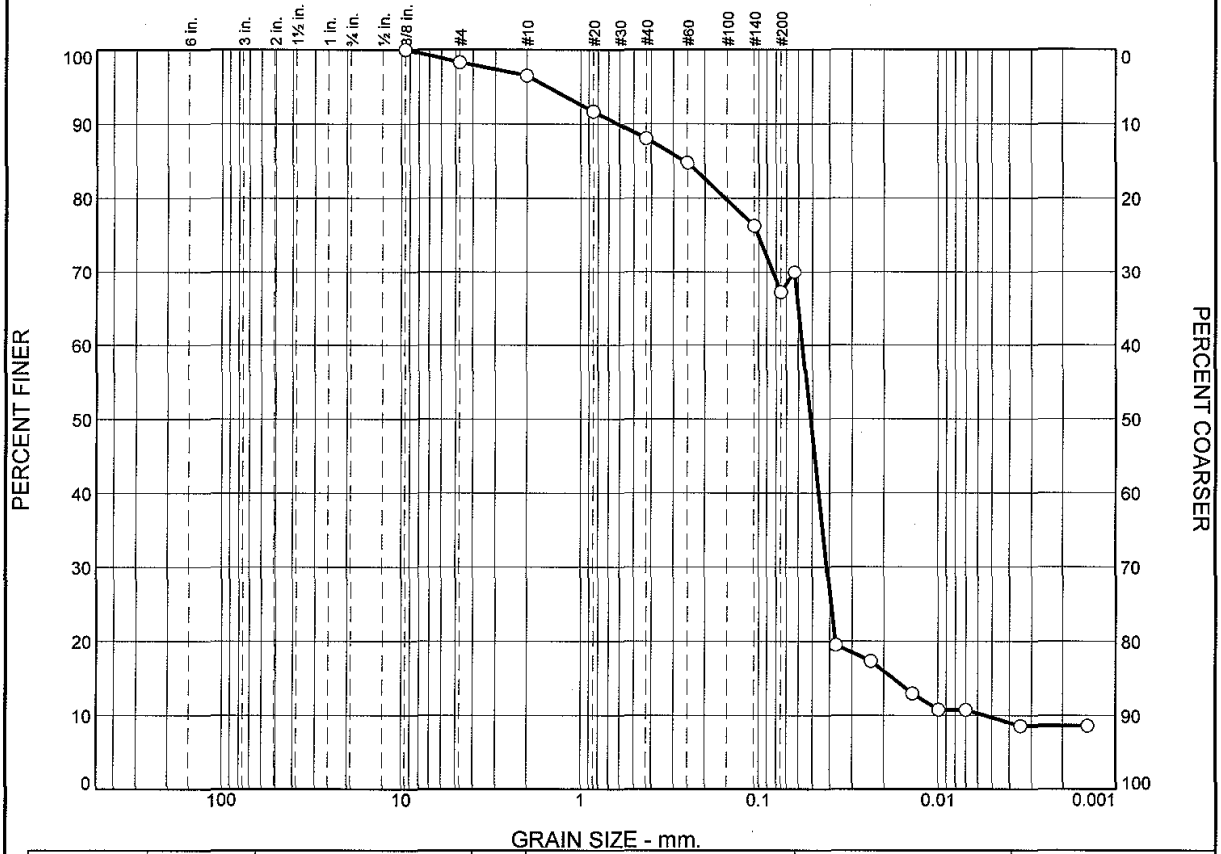
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.1	0.3	0.6	2.0	18.1	13.7	9.0	43.4	39.9	3.5	2.2	1.5	47.1	9.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0056	0.0263	0.0379	0.0435	0.0574	0.0987	0.2583	0.3007	0.3500	0.4074

Fineness Modulus	C_u	C_c
0.50	17.77	3.45

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	2.0	1.5	3.9	3.7	4.1	6.9	8.7	50.6	4.7	3.1	1.8	9.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2589	0.0567	0.0510	0.0413	0.0178	0.0055	5.52	10.40

	Material Description	USCS	AASHTO
○			

Project No. L1015314 **Client:** Woods Hole Group

Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-G003-0-0 **Sample Number:** L1015314-04

Alpha Analytical

Mansfield, MA

Remarks:

○ ONE SHELL ON SIEVE #4

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015314
Location: S-10S-G003-0-0
Sample Number: L1015314-04
Testing Remarks: ONE SHELL ON SIEVE #4

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 24.28
Tare Wt. = 7.38
Minus #200 from wash = 67.2%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
51.46	0.00	0.375	565.10	565.10	100.0	0.0
		#4	528.69	527.82	98.3	1.7
		#10	493.90	492.98	96.5	3.5
		#20	420.10	417.61	91.7	8.3
		#40	378.00	376.13	88.0	12.0
		#60	367.47	365.79	84.8	15.2
		#140	347.14	342.76	76.3	23.7
		#230	322.97	319.71	69.9	30.1

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 69.9
Weight of hydrometer sample =51.46
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0370	19.5	80.5
5.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0236	17.3	82.7
15.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0139	13.0	87.0
30.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0099	10.8	89.2
60.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0070	10.8	89.2
250.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0035	8.6	91.4
1440.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0014	8.6	91.4

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	2.0	1.5	3.9	3.7	4.1	6.9	8.7	27.3	50.6	4.7	3.1	1.8	60.2	9.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0055	0.0178	0.0372	0.0413	0.0510	0.0567	0.1543	0.2589	0.6166	1.5282

Fineness Modulus	C_u	C_c
0.56	10.40	5.52

Alpha Analytical

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial No:10211015:33

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab:

ALPHA Job #: L1015314

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

Client Information

Client: Woods Hole Group
Address: 81 Technology Park Drive
E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environ-Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report and project specific EDD.
Please homogenize each sample before analysis

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NOAA 18 PCB Cong.	TOC	grainsize (wentworth w/hydro)	Sample Specific Comments	TOTAL # BOTTLES
L1015314-1	S-10S-~~E00~~ KM G001-0-0	9/30/10	12:05	SE	KGM	X			high PCBs (50ppm)	2
	S-10S-G001-0-0		12:05				X			1
	S-10S-G001-0-0		12:05					X		1
-2	S-10S-G002-0-0		11:15			X			very high PCBs (>100ppm)	2
	S-10S-G002-0-0		11:15				X			1
	S-10S-G002-0-0		11:15					X		1
-3	S-10S-G002-0-0REP		11:15			X				1
	S-10S-G002-0-0REP		11:15				X			1
	S-10S-G002-0-0REP		11:15					X		1
-2	S-10S-G002-0-0MSMSD		11:15			X			MS/MSD sample	1

	NOAA 18 PCB Cong.	TOC	grainsize
Container Type	G	G	O
Preservative	A	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/30/2010 1430	[signature]	9/30/10 14:30

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

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

CHAIN OF CUSTODY

PAGE 2 OF 2

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

Serial No:10211015:33

Client Information

Client: Woods Hole Grup
Address: 81 Technology Park Dr. E. Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environ. Monitoring
Project Location: New Bedford, MA
Project #: TO-0010-03
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:
Level III data report and project specific EDD
please homogenize each sample before analysis

Date Rec'd in Lab:

Report Information - Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

ALPHA Job #: L1015314

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB cong.	TOC	grainsize (w/ hydro)	SAMPLE HANDLING	Sample Specific Comments	TOTAL # BOTTLES
L1015314-4	S-10S-G003-0-0	9/30/10	10:06	SE	KGM	X				lower PCBs (0<x<50ppm)	2
	S-10S-G003-0-0	9/30/10	10:06	SE	KGM		X			"	1
	S-10S-G003-0-0	9/30/10	10:06	SE	KGM			X		"	1

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

Container Type	G	G	O
Preservative	A	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/30/2010 1430	[signature]	9/30/10 14:36

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

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

Delivery Order-0010-03
April 2011
C-333
Sediment Trap Study Summary Report
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1015903
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-0010-03
Report Date:	11/04/10

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015903
Report Date: 11/04/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1015903-01	S-10S-T001-0-0	NEW BEDFORD, MA	10/01/10 10:50
L1015903-02	S-10S-T002-0-0	NEW BEDFORD, MA	10/01/10 11:30
L1015903-03	S-10S-T003-0-0	NEW BEDFORD, MA	10/01/10 13:10

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015903
Project Number:	TO-0010-03	**Report Date:**	11/04/10

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on October 8, 2010. Aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage on October 11 until October 20, 2010 when they were removed to extract samples for PCB Congener analysis.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015903
Project Number:	TO-0010-03	**Report Date:**	11/04/10

Case Narrative (continued)

whether it was the higher or lower value.

L1015903-01, 02, 03 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1015903-01, 02 were re-analyzed on additional dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

Grain Size

The WG440952-1 Laboratory Duplicate RPD, performed on L1015903-03, is outside the acceptance criteria for % Medium Sand (133%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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

Authorized Signature: Cynthia McQueen

Title: Technical Director/Representative Date: 11/04/10

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-01	Date Collected:	10/01/10 10:50
Client ID:	S-10S-T001-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 14:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	7210	E	ug/kg	348	--	100
Cl4-BZ#52	15200	E	ug/kg	348	--	100
Cl4-BZ#66	4320		ug/kg	348	--	100
Cl5-BZ#118	2080		ug/kg	348	--	100
Cl6-BZ#138	2240		ug/kg	348	--	100
Cl7-BZ#170	397		ug/kg	348	--	100
Cl8-BZ#195	ND		ug/kg	348	--	100
Cl9-BZ#206	ND		ug/kg	348	--	100
Cl10-BZ#209	ND		ug/kg	348	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	89		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015903
Project Number: TO-0010-03
Report Date: 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-01	Date Collected:	10/01/10 10:50
Client ID:	S-10S-T001-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 14:30	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3560		ug/kg	348	--	100
Cl3-BZ#28	10200	E	ug/kg	348	--	100
Cl4-BZ#44	3820		ug/kg	348	--	100
Cl5-BZ#101	2580		ug/kg	348	--	100
Cl6-BZ#153	3060		ug/kg	348	--	100
Cl5-BZ#105	387		ug/kg	348	--	100
Cl7-BZ#187	904		ug/kg	348	--	100
Cl6-BZ#128	508		ug/kg	348	--	100
Cl7-BZ#180	552		ug/kg	348	--	100

DBOB	88	30-150
BZ 198	89	30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-01 D	Date Collected:	10/01/10 10:50
Client ID:	S-10S-T001-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 11:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	9060		ug/kg	3480	--	1000
Cl4-BZ#52	16100		ug/kg	3480	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-01 D	Date Collected:	10/01/10 10:50
Client ID:	S-10S-T001-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 11:46	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	94%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	10800		ug/kg	3480	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-02	Date Collected:	10/01/10 11:30
Client ID:	S-10S-T002-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 15:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	4530		ug/kg	340	--	100
Cl3-BZ#18	9920	E	ug/kg	340	--	100
Cl4-BZ#52	19500	E	ug/kg	340	--	100
Cl4-BZ#66	5760		ug/kg	340	--	100
Cl5-BZ#118	2950		ug/kg	340	--	100
Cl6-BZ#138	2590		ug/kg	340	--	100
Cl7-BZ#180	667		ug/kg	340	--	100
Cl7-BZ#170	491		ug/kg	340	--	100
Cl8-BZ#195	ND		ug/kg	340	--	100
Cl9-BZ#206	ND		ug/kg	340	--	100
Cl10-BZ#209	ND		ug/kg	340	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	75		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-02	Date Collected:	10/01/10 11:30
Client ID:	S-10S-T002-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 15:11	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	15100	E	ug/kg	340	--	100
Cl4-BZ#44	5440		ug/kg	340	--	100
Cl5-BZ#101	4340		ug/kg	340	--	100
Cl6-BZ#153	4000		ug/kg	340	--	100
Cl5-BZ#105	500		ug/kg	340	--	100
Cl7-BZ#187	868		ug/kg	340	--	100
Cl6-BZ#128	394		ug/kg	340	--	100

DBOB	85	30-150
BZ 198	75	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1015903
Project Number: TO-0010-03
Report Date: 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-02 D	Date Collected:	10/01/10 11:30
Client ID:	S-10S-T002-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 12:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	13600		ug/kg	3400	--	1000
Cl4-BZ#52	22400		ug/kg	3400	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-02 D	Date Collected:	10/01/10 11:30
Client ID:	S-10S-T002-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 12:27	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	17400		ug/kg	3400	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-03	Date Collected:	10/01/10 13:10
Client ID:	S-10S-T003-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 15:52	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	88%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	859		ug/kg	374	--	100
Cl4-BZ#52	2330		ug/kg	374	--	100
Cl4-BZ#66	1680		ug/kg	374	--	100
Cl5-BZ#118	1360		ug/kg	374	--	100
Cl6-BZ#138	993		ug/kg	374	--	100
Cl7-BZ#180	ND		ug/kg	374	--	100
Cl7-BZ#170	ND		ug/kg	374	--	100
Cl8-BZ#195	ND		ug/kg	374	--	100
Cl9-BZ#206	ND		ug/kg	374	--	100
Cl10-BZ#209	ND		ug/kg	374	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	76		30-150
BZ 198	72		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

SAMPLE RESULTS

Lab ID:	L1015903-03	Date Collected:	10/01/10 13:10
Client ID:	S-10S-T003-0-0	Date Received:	10/08/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	10/20/10 10:53
Analytical Date:	10/27/10 15:52	Cleanup Method1:	EPA 3630
Analyst:	JS	Cleanup Date1:	10/25/10
Percent Solids:	88%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	740		ug/kg	374	--	100
Cl3-BZ#28	2050		ug/kg	374	--	100
Cl4-BZ#44	887		ug/kg	374	--	100
Cl5-BZ#101	1250		ug/kg	374	--	100
Cl6-BZ#153	1160		ug/kg	374	--	100
Cl5-BZ#105	ND		ug/kg	374	--	100
Cl7-BZ#187	ND		ug/kg	374	--	100
Cl6-BZ#128	ND		ug/kg	374	--	100

DBOB	76	30-150
BZ 198	72	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015903
Report Date: 11/04/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 10/27/10 09:43
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 10/20/10 10:53
Cleanup Method1: EPA 3630
Cleanup Date1: 10/25/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG438391-1					
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	68		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015903
Report Date: 11/04/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 10/27/10 09:43
Analyst: JS

Extraction Method: EPA 3540C
Extraction Date: 10/20/10 10:53
Cleanup Method1: EPA 3630
Cleanup Date1: 10/25/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG438391-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	68		30-150
BZ 198	79		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015903
Report Date: 11/04/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG438391-2		WG438391-3			
Cl2-BZ#8	61		70		40-140	14		30
Cl3-BZ#18	71		70		40-140	1		30
Cl3-BZ#28	74		76		40-140	3		30
Cl4-BZ#52	72		70		40-140	3		30
Cl4-BZ#44	74		73		40-140	1		30
Cl4-BZ#66	79		75		40-140	5		30
Cl5-BZ#101	79		75		40-140	5		30
Cl5-BZ#118	78		80		40-140	3		30
Cl5-BZ#105	79		78		40-140	1		30
Cl6-BZ#138	80		80		40-140	0		30
Cl7-BZ#187	76		74		40-140	3		30
Cl6-BZ#128	79		79		40-140	0		30
Cl7-BZ#180	80		80		40-140	0		30
Cl7-BZ#170	79		80		40-140	1		30
Cl8-BZ#195	75		77		40-140	3		30
Cl9-BZ#206	85		87		40-140	2		30
Cl10-BZ#209	80		80		40-140	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015903
Report Date: 11/04/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG438391-2		WG438391-3			

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	70		71		30-150
BZ 198	80		80		30-150

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG438391-2		WG438391-3			
Cl6-BZ#153	75		73		40-140	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	70		71		30-150
BZ 198	80		80		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015903
Report Date: 11/04/10

SAMPLE RESULTS

Lab ID: L1015903-01
Client ID: S-10S-T001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/01/10 10:50
Date Received: 10/08/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.72		%	0.010	--	1	-	10/20/10 09:54	1,9060	NR
Total Organic Carbon (Rep2)	4.70		%	0.010	--	1	-	10/20/10 09:54	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	ND		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	ND		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	5.20		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	23.1		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	18.9		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	10.7		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	25.4		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	16.7		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	93.9		%	0.100	--	1	-	10/20/10 16:10	30,2540G	KB
Solids, Total (Pre-Dried)	26.8		%	0.100	NA	1	-	10/11/10 18:56	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015903
Report Date: 11/04/10

SAMPLE RESULTS

Lab ID: L1015903-02
Client ID: S-10S-T002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/01/10 11:30
Date Received: 10/08/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.93		%	0.010	--	1	-	10/20/10 09:54	1,9060	NR
Total Organic Carbon (Rep2)	4.49		%	0.010	--	1	-	10/20/10 09:54	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	ND		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	0.100		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	ND		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	28.9		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	0.600		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	9.00		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	36.1		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	25.3		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	96.6		%	0.100	--	1	-	10/20/10 16:10	30,2540G	KB
Solids, Total (Pre-Dried)	33.8		%	0.100	NA	1	-	10/11/10 18:56	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1015903
Report Date: 11/04/10

SAMPLE RESULTS

Lab ID: L1015903-03
Client ID: S-10S-T003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 10/01/10 13:10
Date Received: 10/08/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.71		%	0.010	--	1	-	10/20/10 09:54	1,9060	NR
Total Organic Carbon (Rep2)	3.85		%	0.010	--	1	-	10/20/10 09:54	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	ND		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	ND		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	0.400		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	0.500		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	0.500		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	13.8		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	63.1		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	21.7		%	0.100	NA	1	-	11/03/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	88.2		%	0.100	--	1	-	10/20/10 16:10	30,2540G	KB
Solids, Total (Pre-Dried)	33.2		%	0.100	NA	1	-	10/11/10 18:56	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1015903

Project Number: TO-0010-03 **Report Date:** 11/04/10

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-03 Batch: WG437374-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	10/20/10 09:54	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	10/20/10 09:54	1,9060	NR

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015903
Report Date: 11/04/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG437374-4 QC Sample: L1015903-01 Client ID: S-10S-T001-0-0												
Total Organic Carbon (Rep1)	4.72	2.69	7.70	110		-	-		75-125	-		25
Total Organic Carbon (Rep2)	4.70	1.65	6.26	95		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015903
Report Date: 11/04/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG437374-3 QC Sample: L1015903-01 Client ID: S-10S-T001-0-0						
Total Organic Carbon (Rep1)	4.72	4.74	%	0		25
Total Organic Carbon (Rep2)	4.70	4.82	%	3		25
General Chemistry - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG438469-1 QC Sample: L1015903-03 Client ID: S-10S-T003-0-0						
Solids, Total	88.2	87.5	%	1		20
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG440952-1 QC Sample: L1015903-03 Client ID: S-10S-T003-0-0						
Gravel (>2.00mm)	ND	ND	%	NC		20
Very Coarse Sand (1.00-2.00 mm)	ND	ND	%	NC		20
Coarse Sand (0.50-1.00 mm)	0.4	ND	%	NC		20
Medium Sand (0.25-0.50 mm)	0.5	0.100	%	**133**	Q	20
Fine Sand (0.125-0.25 mm)	0.5	ND	%	NC		20
Very Fine Sand (0.063-0.125 mm)	13.8	14.7	%	6		20
Silt - (1.95-62.5 um)	63.1	62.1	%	2		20
Clay - (<1.95 um)	21.7	23.1	%	6		20

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015903
Project Number:	TO-0010-03	**Report Date:**	11/04/10

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG437374-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	100		75-125
Total Organic Carbon (Rep2)	100		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015903
Report Date: 11/04/10

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(*)
L1015903-01A	Glass 250ml unpreserved	A	N/A	5	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)
L1015903-02A	Glass 500ml unpreserved	A	N/A	5	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1015903
Report Date: 11/04/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1015903-03A	Glass 1000ml unpreserved	A	N/A	5	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015903
Project Number:	TO-0010-03	**Report Date:**	11/04/10

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1015903
Project Number:	TO-0010-03	**Report Date:**	11/04/10

Data Qualifiers

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	**Lab Number:**	L1015903
Project Number:	TO-0010-03	**Report Date:**	11/04/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

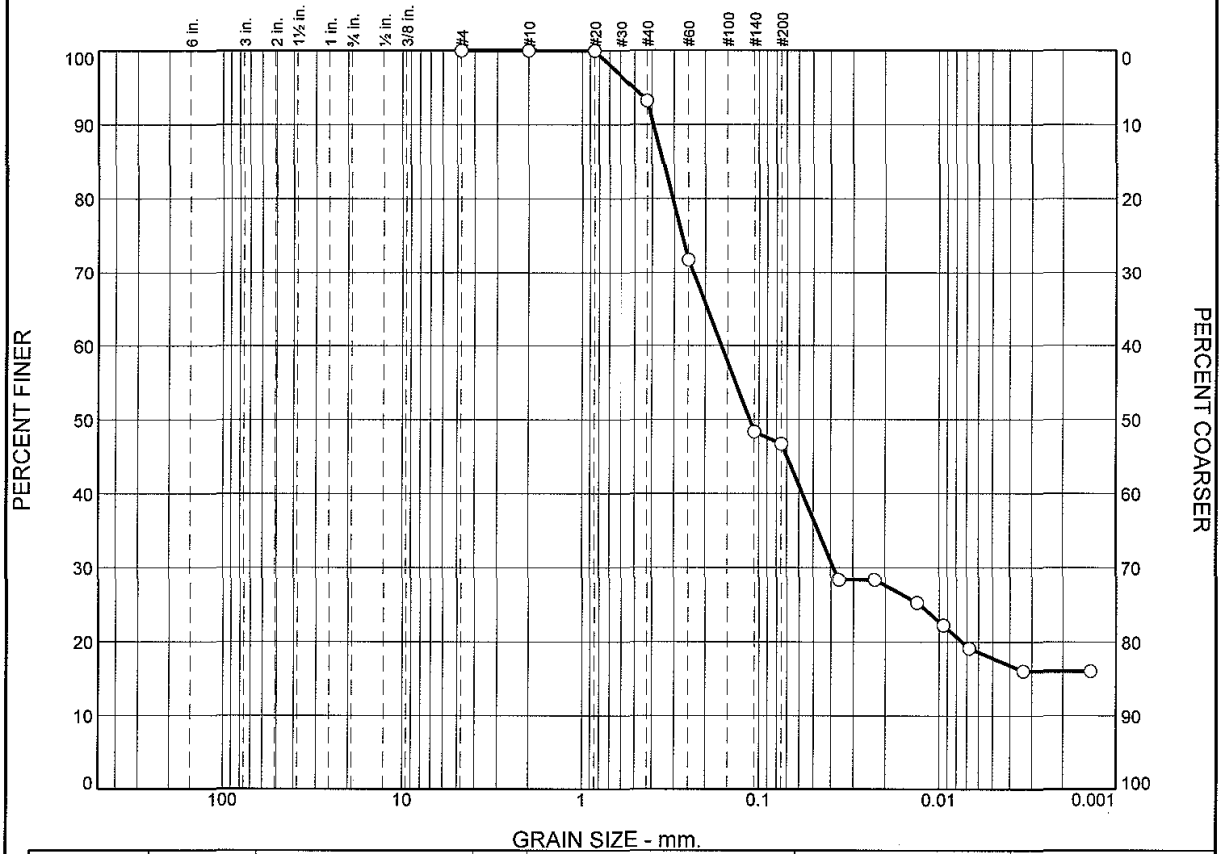
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.0	5.2	23.1	18.9	10.7	13.7	2.2	5.8	3.7	16.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3469	0.1627	0.1127	0.0385				

Material Description	USCS	AASHTO
○		

Project No. L1015903 **Client:** Woods Hole Group

Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-T001-0-0 **Sample Number:** L1015903-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015903
Location: S-10S-T001-0-0
Sample Number: L1015903-01

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 8.31
Tare Wt. = 7.41
Minus #200 from wash = 96.3%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
24.36	0.00	#4	527.18	527.18	100.0	0.0
		#10	493.17	493.17	100.0	0.0
		#20	423.11	423.10	100.0	0.0
		#40	376.10	374.46	93.2	6.8
		#60	365.75	360.51	71.7	28.3
		#140	342.73	337.03	48.3	51.7
		#200	319.70	319.30	46.7	53.3

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 46.7
Weight of hydrometer sample =24.36
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0090	1.0092	0.0133	6.0	14.7	0.0361	28.4	71.6
5.00	22.0	1.0090	1.0092	0.0133	6.0	14.7	0.0228	28.4	71.6
15.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0133	25.3	74.7
30.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0095	22.2	77.8
60.00	22.0	1.0060	1.0062	0.0133	3.0	15.5	0.0068	19.1	80.9
250.00	22.0	1.0050	1.0052	0.0133	2.0	15.8	0.0033	16.0	84.0
1440.00	22.0	1.0050	1.0052	0.0133	2.0	15.8	0.0014	16.0	84.0

Fractional Components

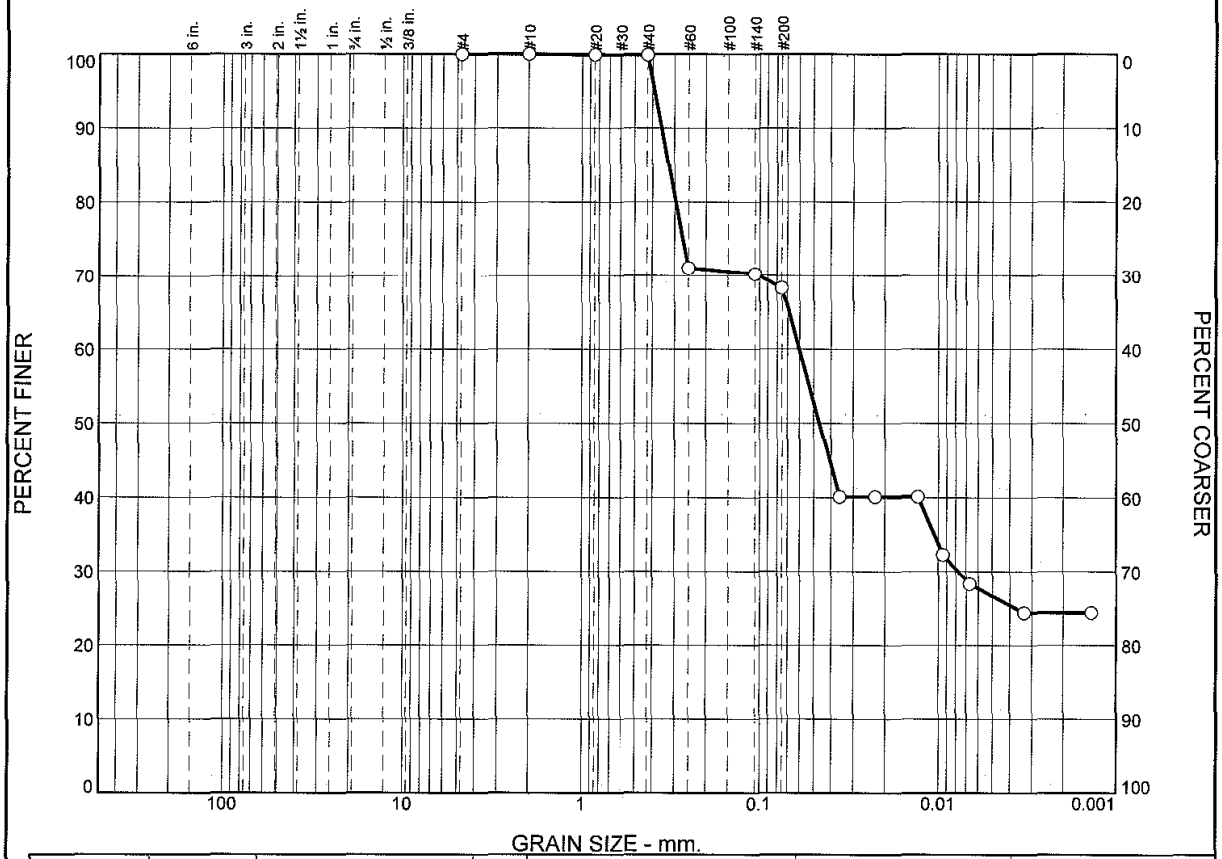
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.0	5.2	23.1	18.9	10.7	57.9	13.7	2.2	5.8	3.7	25.4	16.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0074	0.0385	0.1127	0.1627	0.3067	0.3469	0.3925	0.5101

Fineness Modulus
0.67

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.1	0.0	28.9	0.6	9.0	21.3	0.0	10.0	4.8	25.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3232	0.0603	0.0464	0.0077				

	Material Description	USCS	AASHTO
○			

Project No. L1015903 **Client:** Woods Hole Group
Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-T002-0-0 **Sample Number:** L1015903-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015903
Location: S-10S-T002-0-0
Sample Number: L1015903-02

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 8.52
Tare Wt. = 7.49
Minus #200 from wash = 96.3%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
27.92	0.00	#4	527.65	527.65	100.0	0.0
		#10	492.94	492.94	100.0	0.0
		#20	423.12	423.10	99.9	0.1
		#40	374.48	374.47	99.9	0.1
		#60	368.65	360.59	71.0	29.0
		#140	337.52	337.30	70.2	29.8
		#200	320.16	319.62	68.3	31.7

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 68.3
Weight of hydrometer sample =27.92
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0100	1.0102	0.0133	7.0	14.4	0.0358	40.1	59.9
5.00	22.0	1.0100	1.0102	0.0133	7.0	14.4	0.0226	40.1	59.9
15.00	22.0	1.0100	1.0102	0.0133	7.0	14.4	0.0131	40.1	59.9
30.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0094	32.3	67.7
60.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0067	28.3	71.7
250.00	22.0	1.0060	1.0062	0.0133	3.0	15.5	0.0033	24.4	75.6
1440.00	22.0	1.0060	1.0062	0.0133	3.0	15.5	0.0014	24.4	75.6

Fractional Components

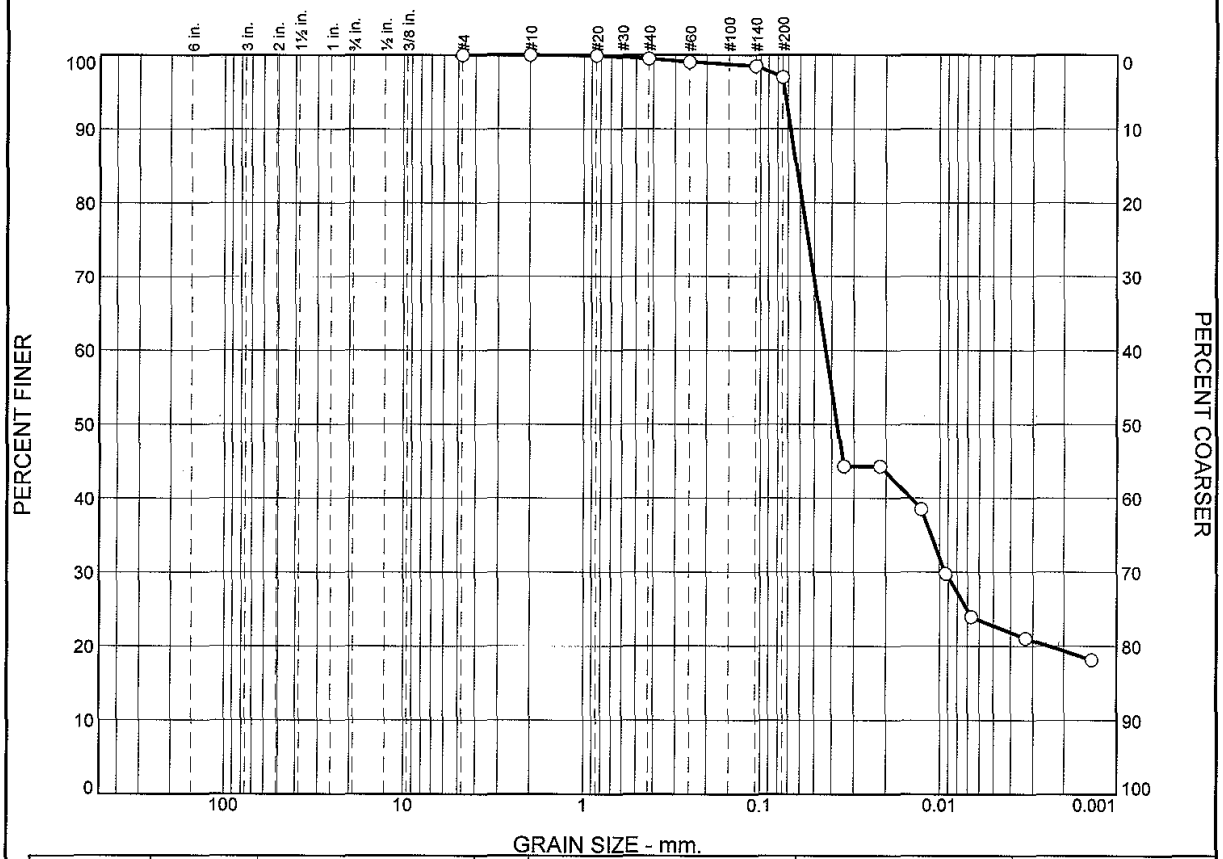
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.1	0.0	28.9	0.6	9.0	38.6	21.3	0.0	10.0	4.8	36.1	25.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0077	0.0464	0.0603	0.2948	0.3232	0.3543	0.3884

Fineness Modulus
0.49

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.5	13.8	40.5	3.6	14.0	5.0	21.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0627	0.0431	0.0371	0.0093				

	Material Description	USCS	AASHTO
○			

Project No. L1015903 **Client:** Woods Hole Group
Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-T003-0-0 **Sample Number:** L1015903-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015903
Location: S-10S-T003-0-0
Sample Number: L1015903-03

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 9.23
Tare Wt. = 7.48
Minus #200 from wash = 96.7%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
53.49	0.00	#4	527.14	527.14	100.0	0.0
		#10	493.11	493.11	100.0	0.0
		#20	423.07	423.04	99.9	0.1
		#40	374.68	374.45	99.5	0.5
		#60	360.79	360.56	99.1	0.9
		#140	337.33	337.03	98.5	1.5
		#200	320.15	319.33	97.0	3.0

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 97.0
Weight of hydrometer sample =53.49
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0150	1.0152	0.0133	12.0	13.1	0.0341	44.3	55.7
5.00	22.0	1.0150	1.0152	0.0133	12.0	13.1	0.0216	44.3	55.7
15.00	22.0	1.0130	1.0132	0.0133	10.0	13.6	0.0127	38.5	61.5
30.00	22.0	1.0100	1.0102	0.0133	7.0	14.4	0.0092	29.7	70.3
60.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0067	23.9	76.1
250.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0033	21.0	79.0
1440.00	22.0	1.0060	1.0062	0.0133	3.0	15.5	0.0014	18.1	81.9

Fractional Components

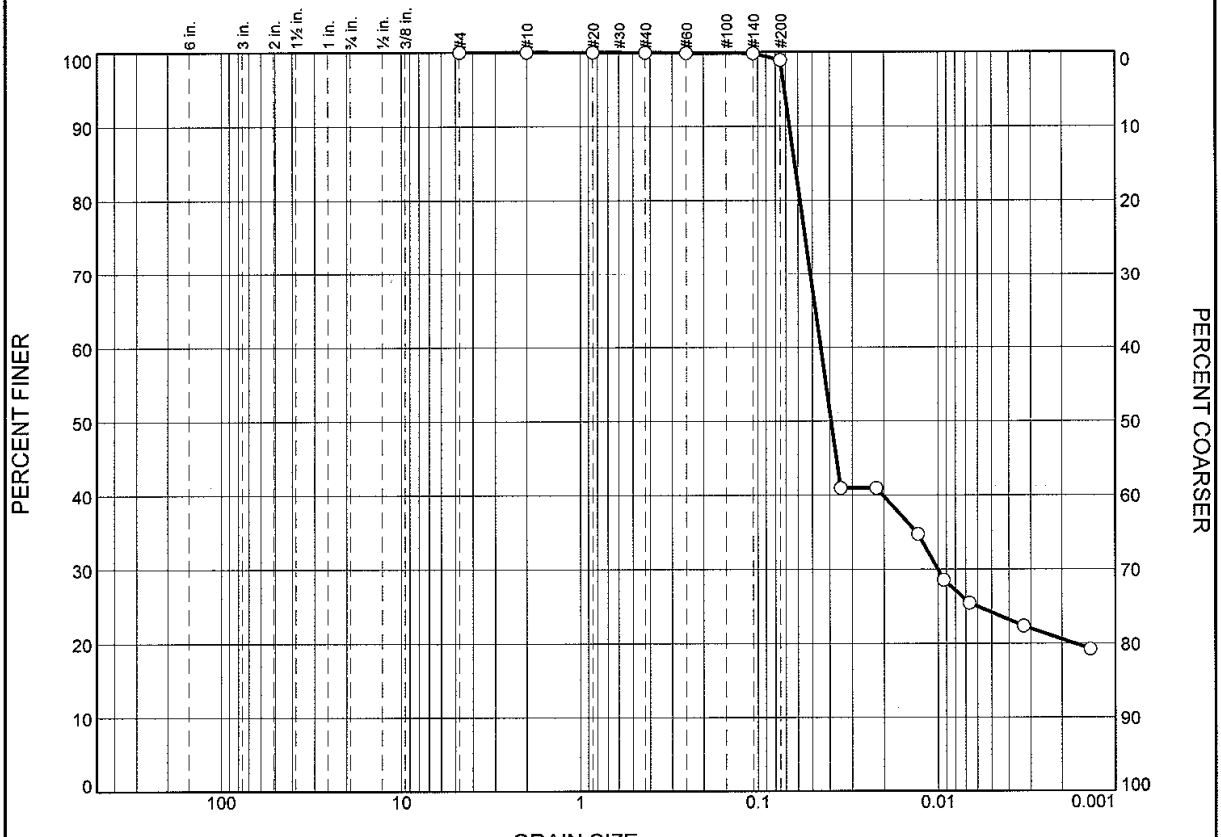
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.5	13.8	15.2	40.5	3.6	14.0	5.0	63.1	21.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0024	0.0093	0.0371	0.0431	0.0582	0.0627	0.0676	0.0728

Fineness Modulus
0.02

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	14.7	44.3	4.0	10.0	3.8	23.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0624	0.0448	0.0392	0.0101				

Material Description	USCS	AASHTO
○		

Project No. L1015903 **Client:** Woods Hole Group
Project: NBH Environ-Monitoring

○ **Source of Sample:** S-10S-T003-0-0 **Sample Number:** WG440952-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2010

Client: Woods Hole Group
Project: NBH Environ-Monitoring
Project Number: L1015903
Location: S-10S-T003-0-0
Sample Number: WG440952-1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 8.53
Tare Wt. = 7.62
Minus #200 from wash = 98.2%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
51.26	0.00	#4	527.27	527.27	100.0	0.0
		#10	493.25	493.25	100.0	0.0
		#20	423.16	423.15	100.0	0.0
		#40	374.53	374.51	99.9	0.1
		#60	360.68	360.65	99.9	0.1
		#140	337.20	337.18	99.8	0.2
		#200	319.90	319.42	98.9	1.1

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 98.9
Weight of hydrometer sample =51.26
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0130	1.0132	0.0133	10.0	13.6	0.0348	40.9	59.1
5.00	22.0	1.0130	1.0132	0.0133	10.0	13.6	0.0220	40.9	59.1
15.00	22.0	1.0110	1.0112	0.0133	8.0	14.2	0.0129	34.7	65.3
30.00	22.0	1.0090	1.0092	0.0133	6.0	14.7	0.0093	28.5	71.5
60.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0067	25.4	74.6
250.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0033	22.3	77.7
1440.00	22.0	1.0060	1.0062	0.0133	3.0	15.5	0.0014	19.2	80.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	14.7	14.8	44.3	4.0	10.0	3.8	62.1	23.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0017	0.0101	0.0392	0.0448	0.0584	0.0624	0.0666	0.0712

Fineness Modulus
0.00

Alpha Analytical

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

ESI
EnviroSystems, Inc.
1 Lafayette Road
P.O. Box 778
Hampton, N.H. 03843
Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: L1015903

CHAIN OF CUSTODY DOCUMENTATION

Serial No:11041018-09

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: NBH Environmental monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Dr.	Project Number: T0-0010-03	
Invoice to: Cathy Morey	Address: E. Falmouth, MA 02536	Project Manager: Dave Walsh	
Voice: 508.540-8080	Fax: 508-540-1001	email: DWALSH@WHGRP.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
-1	S-10S-T001-0-0	10/1/10	1050	JL	C	9oz	G	4°C	S	N	Grain Size, TOC, PCB congeners
-2	S-10S-T002-0-0	10/1/10	1130	JL	C	16oz	G	4°C	S	N	Grain Size, TOC, PCB congeners
-3	S-10S-T003-0-0	10/1/10	1310	JL	C	32oz	G	4°C	S	N	Grain Size, TOC, PCB congeners

Relinquished By:	Date: 10/8/10 Time: 1035	Received By:	Date: 10/8/10 Time: 10:55
Relinquished By:	Date: 10/8/10 Time: 12:00	Received at Lab By:	Date: 10/8/10 Time: 12:00

Comments: To Alpha cc: TFry 10/

P. Gilbert 10/8/10 18:55
Rel: P. Gilbert 10/8/10 19:25 Rec'd Sullivan 10/8/10 1925

Sample Delivery Group No:	Page of

COC Doc No: 3915

Delivery Order-0010-03
April 2011
C-378
Sediment Trap Study Summary Report
W912WJ-09-D-0001

ANALYTICAL REPORT

Lab Number:	L1018719
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-0010-03
Report Date:	01/03/11

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Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018719
Report Date: 01/03/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1018719-01	S-10N-G001-0-0	NEW BEDFORD, MA	11/22/10 09:10
L1018719-02	S-10N-G002-0-0	NEW BEDFORD, MA	11/22/10 10:00
L1018719-03	S-10N-G002-0-0 REP	NEW BEDFORD, MA	11/22/10 10:00
L1018719-04	S-10N-G003-0-0	NEW BEDFORD, MA	11/22/10 11:05

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719
Project Number: TO-0010-03 **Report Date:** 01/03/11

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on November 22, 2010 and placed in frozen storage until December 06, 2010 when aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage until they were removed December 15, 2010 to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1018719
Project Number:	TO-0010-03	**Report Date:**	01/03/11

Case Narrative (continued)

whether it was the higher or lower value.

L1018719-01 through -03 were re-analyzed on dilution in order to quantitate the sample within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

The WG447894-4/-5 MS/MSD recoveries for several congeners, performed on L1018719-02, are invalid because the sample concentration is greater than four times the spike amount added.

Grain Size

The WG445681-1 Laboratory Duplicate RPD, performed on L1018719-01, is outside the acceptance criteria for % Very Coarse Sand (59%), % Coarse Sand (27%) and Clay(24%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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

Authorized Signature: Cynthia McQueen

Title: Technical Director/Representative Date: 01/03/11

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-01	Date Collected:	11/22/10 09:10
Client ID:	S-10N-G001-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 17:19	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1600		ug/kg	168	--	50
Cl3-BZ#18	2710		ug/kg	168	--	50
Cl4-BZ#52	6270	E	ug/kg	168	--	50
Cl4-BZ#66	1980		ug/kg	168	--	50
Cl5-BZ#118	1100		ug/kg	168	--	50
Cl6-BZ#138	905		ug/kg	168	--	50
Cl7-BZ#187	264		ug/kg	168	--	50
Cl7-BZ#180	191		ug/kg	168	--	50
Cl7-BZ#170	ND		ug/kg	168	--	50
Cl8-BZ#195	ND		ug/kg	168	--	50
Cl9-BZ#206	ND		ug/kg	168	--	50
Cl10-BZ#209	ND		ug/kg	168	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	100		30-150
BZ 198	69		30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1018719
Project Number: TO-0010-03
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-01	Date Collected:	11/22/10 09:10
Client ID:	S-10N-G001-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 17:19	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5520	E	ug/kg	168	--	50
Cl4-BZ#44	1800		ug/kg	168	--	50
Cl5-BZ#101	1340		ug/kg	168	--	50
Cl6-BZ#153	1210		ug/kg	168	--	50
Cl5-BZ#105	222		ug/kg	168	--	50
Cl6-BZ#128	ND		ug/kg	168	--	50

DBOB	100	30-150
BZ 198	69	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1018719
Project Number: TO-0010-03
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-01 D	Date Collected:	11/22/10 09:10
Client ID:	S-10N-G001-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/30/10 13:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl4-BZ#52	6960		ug/kg	674	--	200

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-01 D	Date Collected:	11/22/10 09:10
Client ID:	S-10N-G001-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/30/10 13:07	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5820		ug/kg	674	--	200

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-02	Date Collected:	11/22/10 10:00
Client ID:	S-10N-G002-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 19:22	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	10300	E	ug/kg	168	--	50
Cl3-BZ#18	20200	E	ug/kg	168	--	50
Cl4-BZ#52	35600	E	ug/kg	168	--	50
Cl4-BZ#44	9830	E	ug/kg	168	--	50
Cl4-BZ#66	12200	E	ug/kg	168	--	50
Cl5-BZ#118	6660	E	ug/kg	168	--	50
Cl6-BZ#138	4490	E	ug/kg	168	--	50
Cl7-BZ#187	1450		ug/kg	168	--	50
Cl6-BZ#128	796		ug/kg	168	--	50
Cl7-BZ#180	1100		ug/kg	168	--	50
Cl7-BZ#170	791		ug/kg	168	--	50
Cl8-BZ#195	ND		ug/kg	168	--	50
Cl9-BZ#206	202		ug/kg	168	--	50
Cl10-BZ#209	ND		ug/kg	168	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	79		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-02	Date Collected:	11/22/10 10:00
Client ID:	S-10N-G002-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 19:22	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	16800	E	ug/kg	168	--	50
Cl5-BZ#101	7400	E	ug/kg	168	--	50
Cl6-BZ#153	5980	E	ug/kg	168	--	50
Cl5-BZ#105	617		ug/kg	168	--	50

DBOB	92	30-150
BZ 198	79	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-02	Date Collected:	11/22/10 10:00
Client ID:	S-10N-G002-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/31/10 14:06	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	17000		ug/kg	3370	--	1000
Cl3-BZ#18	38200		ug/kg	3370	--	1000
Cl4-BZ#52	53400		ug/kg	3370	--	1000
Cl4-BZ#66	17300		ug/kg	3370	--	1000
Cl5-BZ#118	9470		ug/kg	3370	--	1000
Cl6-BZ#138	6170		ug/kg	3370	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1018719
Project Number: TO-0010-03
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-02	Date Collected:	11/22/10 10:00
Client ID:	S-10N-G002-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/31/10 14:06	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	53900		ug/kg	3370	--	1000
Cl4-BZ#44	16400		ug/kg	3370	--	1000
Cl5-BZ#101	14000		ug/kg	3370	--	1000
Cl6-BZ#153	11200		ug/kg	3370	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-03	Date Collected:	11/22/10 10:00
Client ID:	S-10N-G002-0-0 REP	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 20:03	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	8130	E	ug/kg	169	--	50
Cl3-BZ#18	20300	E	ug/kg	169	--	50
Cl4-BZ#52	27000	E	ug/kg	169	--	50
Cl4-BZ#44	7350	E	ug/kg	169	--	50
Cl4-BZ#66	9000	E	ug/kg	169	--	50
Cl5-BZ#118	4810	E	ug/kg	169	--	50
Cl6-BZ#138	3260		ug/kg	169	--	50
Cl7-BZ#187	1050		ug/kg	169	--	50
Cl6-BZ#128	613		ug/kg	169	--	50
Cl7-BZ#180	786		ug/kg	169	--	50
Cl7-BZ#170	567		ug/kg	169	--	50
Cl8-BZ#195	ND		ug/kg	169	--	50
Cl9-BZ#206	ND		ug/kg	169	--	50
Cl10-BZ#209	ND		ug/kg	169	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	89		30-150
BZ 198	72		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-03	Date Collected:	11/22/10 10:00
Client ID:	S-10N-G002-0-0 REP	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 20:03	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	16700	E	ug/kg	169	--	50
Cl5-BZ#101	5900	E	ug/kg	169	--	50
Cl6-BZ#153	4670	E	ug/kg	169	--	50
Cl5-BZ#105	486		ug/kg	169	--	50

DBOB	89	30-150
BZ 198	72	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1018719
Project Number: TO-0010-03
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-03	Date Collected:	11/22/10 10:00
Client ID:	S-10N-G002-0-0 REP	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/31/10 16:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	10900		ug/kg	3380	--	1000
Cl3-BZ#18	27100		ug/kg	3380	--	1000
Cl4-BZ#52	35000		ug/kg	3380	--	1000
Cl4-BZ#66	11100		ug/kg	3380	--	1000
Cl5-BZ#118	5940		ug/kg	3380	--	1000

Project Name: NEW BEDFORD HARBOR
Lab Number: L1018719
Project Number: TO-0010-03
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-03	Date Collected:	11/22/10 10:00
Client ID:	S-10N-G002-0-0 REP	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/31/10 16:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	30100		ug/kg	3380	--	1000
Cl4-BZ#44	10700		ug/kg	3380	--	1000
Cl5-BZ#101	9180		ug/kg	3380	--	1000
Cl6-BZ#153	7340		ug/kg	3380	--	1000

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-04	Date Collected:	11/22/10 11:05
Client ID:	S-10N-G003-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 20:44	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	576		ug/kg	168	--	50
Cl3-BZ#18	1070		ug/kg	168	--	50
Cl4-BZ#52	3320		ug/kg	168	--	50
Cl4-BZ#66	2440		ug/kg	168	--	50
Cl5-BZ#118	2060		ug/kg	168	--	50
Cl6-BZ#138	1420		ug/kg	168	--	50
Cl7-BZ#180	281		ug/kg	168	--	50
Cl7-BZ#170	216		ug/kg	168	--	50
Cl8-BZ#195	ND		ug/kg	168	--	50
Cl9-BZ#206	ND		ug/kg	168	--	50
Cl10-BZ#209	ND		ug/kg	168	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	131		30-150
BZ 198	96		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018719-04	Date Collected:	11/22/10 11:05
Client ID:	S-10N-G003-0-0	Date Received:	11/22/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 20:44	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	98%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2900		ug/kg	168	--	50
Cl4-BZ#44	1180		ug/kg	168	--	50
Cl5-BZ#101	1740		ug/kg	168	--	50
Cl6-BZ#153	1450		ug/kg	168	--	50
Cl5-BZ#105	489		ug/kg	168	--	50
Cl7-BZ#187	278		ug/kg	168	--	50
Cl6-BZ#128	226		ug/kg	168	--	50

DBOB	131	30-150
BZ 198	96	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/29/10 13:13
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 12/15/10 16:36
Cleanup Method1: EPA 3630
Cleanup Date1: 12/18/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-04 Batch: WG447894-1					
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	104		30-150
BZ 198	82		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/29/10 13:13
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 12/15/10 16:36
Cleanup Method1: EPA 3630
Cleanup Date1: 12/18/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-04 Batch: WG447894-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	82		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018719
Report Date: 01/03/11

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): 01-04 QC Batch ID: WG447894-4 WG447894-5 QC Sample: L1018719-02 Client ID: S-10N-G002-0-0												
Cl2-BZ#8	17000	1690	12900	**0**	Q	12700	**142**	Q	40-140	2		30
Cl3-BZ#18	38200	1690	24400	**0**	Q	20700	**30**	Q	40-140	16		30
Cl4-BZ#52	53400	1690	40800	**0**	Q	41600	**354**	Q	40-140	2		30
Cl4-BZ#66	17300	1690	14200	**0**	Q	14100	112		40-140	1		30
Cl5-BZ#118	9470	1690	8450	**0**	Q	8350	100		40-140	1		30
Cl6-BZ#138	6170	1690	5950	**0**	Q	6250	104		40-140	5		30
Cl7-BZ#187	1450	1690	2360	54		2380	55		40-140	1		30
Cl6-BZ#128	796	1690	1780	58		1920	66		40-140	8		30
Cl7-BZ#180	1100	1690	1980	52		2070	57		40-140	4		30
Cl7-BZ#170	791	1690	1770	58		1870	64		40-140	5		30
Cl8-BZ#195	ND	1690	1270	75		1320	78		40-140	4		30
Cl9-BZ#206	202	1690	1420	72		1490	76		40-140	5		30
Cl10-BZ#209	ND	1690	1140	67		1200	71		40-140	5		30
Cl3-BZ#28	53900	1690	39200	**0**	Q	35000	**1070**	Q	40-140	11		30
Cl4-BZ#44	16400	1690	13400	**0**	Q	13700	**335**	Q	40-140	2		30
Cl5-BZ#101	14000	1690	12100	**0**	Q	12000	**272**	Q	40-140	1		30
Cl6-BZ#153	11200	1690	9760	**0**	Q	10000	**237**	Q	40-140	2		30
Cl5-BZ#105	617	1690	1490	52		1570	56		40-140	5		30

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018719
Report Date: 01/03/11

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): 01-04 QC Batch ID: WG447894-4 WG447894-5 QC Sample: L1018719-02 Client ID: S-10N-G002-0-0												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	67		69		30-150
DBOB	80		63		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04 Batch: WG447894-2 WG447894-3							
Cl2-BZ#8	89		70		40-140	24		30
Cl3-BZ#18	91		78		40-140	15		30
Cl3-BZ#28	97		85		40-140	13		30
Cl4-BZ#52	92		84		40-140	9		30
Cl4-BZ#44	93		96		40-140	3		30
Cl4-BZ#66	96		92		40-140	4		30
Cl5-BZ#101	94		91		40-140	3		30
Cl5-BZ#118	100		98		40-140	2		30
Cl5-BZ#105	92		92		40-140	0		30
Cl6-BZ#138	95		93		40-140	2		30
Cl7-BZ#187	90		89		40-140	1		30
Cl6-BZ#128	90		88		40-140	2		30
Cl7-BZ#180	87		86		40-140	1		30
Cl7-BZ#170	87		85		40-140	2		30
Cl8-BZ#195	83		80		40-140	4		30
Cl9-BZ#206	98		92		40-140	6		30
Cl10-BZ#209	87		82		40-140	6		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG447894-2		WG447894-3			
DBOB	93		76		30-150			
BZ 198	83		79		30-150			

PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-04		Batch: WG447894-2		WG447894-3		
Cl6-BZ#153	87		85		40-140	2	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	93		76		30-150
BZ 198	83		79		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID: L1018719-01
Client ID: S-10N-G001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/22/10 09:10
Date Received: 11/22/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.47		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	3.50		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.100		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	1.10		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	2.50		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	11.7		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	24.7		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	13.9		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	40.9		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	5.10		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	97.0		%	0.100	--	1	-	12/15/10 13:30	30,2540G	KB
Solids, Total (Pre-Dried)	33.6		%	0.100	NA	1	-	12/07/10 14:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID: L1018719-02
Client ID: S-10N-G002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/22/10 10:00
Date Received: 11/22/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.80		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	5.05		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.100		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	0.900		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	2.80		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	3.40		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	4.60		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	7.10		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	59.3		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	21.8		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	97.3		%	0.100	--	1	-	12/15/10 13:30	30,2540G	KB
Solids, Total (Pre-Dried)	28.9		%	0.100	NA	1	-	12/07/10 14:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID: L1018719-03
Client ID: S-10N-G002-0-0 REP
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/22/10 10:00
Date Received: 11/22/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.12		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	5.10		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.200		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	0.400		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	1.70		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	3.10		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	4.00		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	6.80		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	64.7		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	19.0		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	97.2		%	0.100	--	1	-	12/15/10 13:30	30,2540G	KB
Solids, Total (Pre-Dried)	30.0		%	0.100	NA	1	-	12/07/10 14:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID: L1018719-04
Client ID: S-10N-G003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/22/10 11:05
Date Received: 11/22/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.94		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	3.15		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	0.300		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	2.90		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	4.70		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	4.30		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	5.20		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	7.00		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	57.7		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	17.8		%	0.100	NA	1	-	12/01/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	98.1		%	0.100	--	1	-	12/15/10 13:30	30,2540G	KB
Solids, Total (Pre-Dried)	30.0		%	0.100	NA	1	-	12/07/10 14:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018719

Project Number: TO-0010-03 **Report Date:** 01/03/11

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-04 Batch: WG446281-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	12/14/10 07:00	1,9060	NR

Matrix Spike Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018719
Report Date: 01/03/11

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG446281-4 QC Sample: L1018719-02 Client ID: S-10N-G002-0-0												
Total Organic Carbon (Rep1)	4.80	1.83	6.52	94		-	-		75-125	-		25
Total Organic Carbon (Rep2)	5.05	1.86	7.09	123		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018719
Report Date: 01/03/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG445681-1 QC Sample: L1018719-01 Client ID: S-10N-G001-0-0						
Gravel (>2.00mm)	0.1	ND	%	NC		20
Very Coarse Sand (1.00-2.00 mm)	1.1	0.600	%	**59**	Q	20
Coarse Sand (0.50-1.00 mm)	2.5	1.90	%	**27**	Q	20
Medium Sand (0.25-0.50 mm)	11.7	10.4	%	12		20
Fine Sand (0.125-0.25 mm)	24.7	24.4	%	1		20
Very Fine Sand (0.063-0.125 mm)	13.9	14.5	%	4		20
Silt - (1.95-62.5 um)	40.9	41.7	%	2		20
Clay - (<1.95 um)	5.1	6.50	%	**24**	Q	20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG446281-3 QC Sample: L1018719-02 Client ID: S-10N-G002-0-0						
Total Organic Carbon (Rep1)	4.80	4.76	%	1		25
Total Organic Carbon (Rep2)	5.05	4.80	%	5		25
General Chemistry - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG447965-1 QC Sample: L1018963-03 Client ID: DUP Sample						
Solids, Total	97.1	96.9	%	0		20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018719
Report Date: 01/03/11

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG446281-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	114		75-125
Total Organic Carbon (Rep2)	101		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018719
Report Date: 01/03/11

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(*)
L1018719-01A	Glass 250ml unpreserved	A	N/A	4.4	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1018719-01B	Glass 250ml unpreserved	A	N/A	4.4	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1018719-01C	Bag	A	N/A	4.4	Y	Absent	A2-HYDROMETER(),A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-SIEVE_#140(7),A2-SIEVE_#20(W)(7),A2-SIEVE_#60(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#20(7),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)
L1018719-01D	Bag	A	N/A	4.4	Y	Absent	-
L1018719-02A	Glass 250ml unpreserved	A	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1018719-02B	Glass 250ml unpreserved	A	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018719
Report Date: 01/03/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018719-02C	Bag	A	N/A	4.4	Y	Absent	A2-HYDROMETER(),A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#140(7),A2-SIEVE_#20(W)(7),A2-SIEVE_#60(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#20(7),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1018719-02D	Bag	A	N/A	4.4	Y	Absent	A2-PCBCONG-8082-NOAA(14)
L1018719-02E	Glass 250ml unpreserved	A	N/A	4.4	Y	Absent	-
L1018719-03A	Glass 250ml unpreserved	A	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1018719-03C	Glass 100ml unpreserved	A	N/A	4.4	Y	Absent	A2-HYDROMETER(),A2-SIEVE_#140(7),A2-SIEVE_#60(7),A2-SIEVE_#20(7)
L1018719-03D	Bag	A	N/A	4.4	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1018719-04A	Glass 250ml unpreserved	A	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)
L1018719-04B	Glass 250ml unpreserved	A	N/A	4.4	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018719
Report Date: 01/03/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018719-04C	Bag	A	N/A	4.4	Y	Absent	A2-HYDROMETER(),A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-SIEVE_#140(7),A2-SIEVE_#20(W)(7),A2-SIEVE_#60(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#20(7),A2-SIEVE_#60(W)(7),A2-SIEVE_#4(W)(7)
L1018719-04D	Bag	A	N/A	4.4	Y	Absent	-

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1018719
Project Number:	TO-0010-03	**Report Date:**	01/03/11

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1018719
Project Number:	TO-0010-03	**Report Date:**	01/03/11

Data Qualifiers

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	**Lab Number:**	L1018719
Project Number:	TO-0010-03	**Report Date:**	01/03/11

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

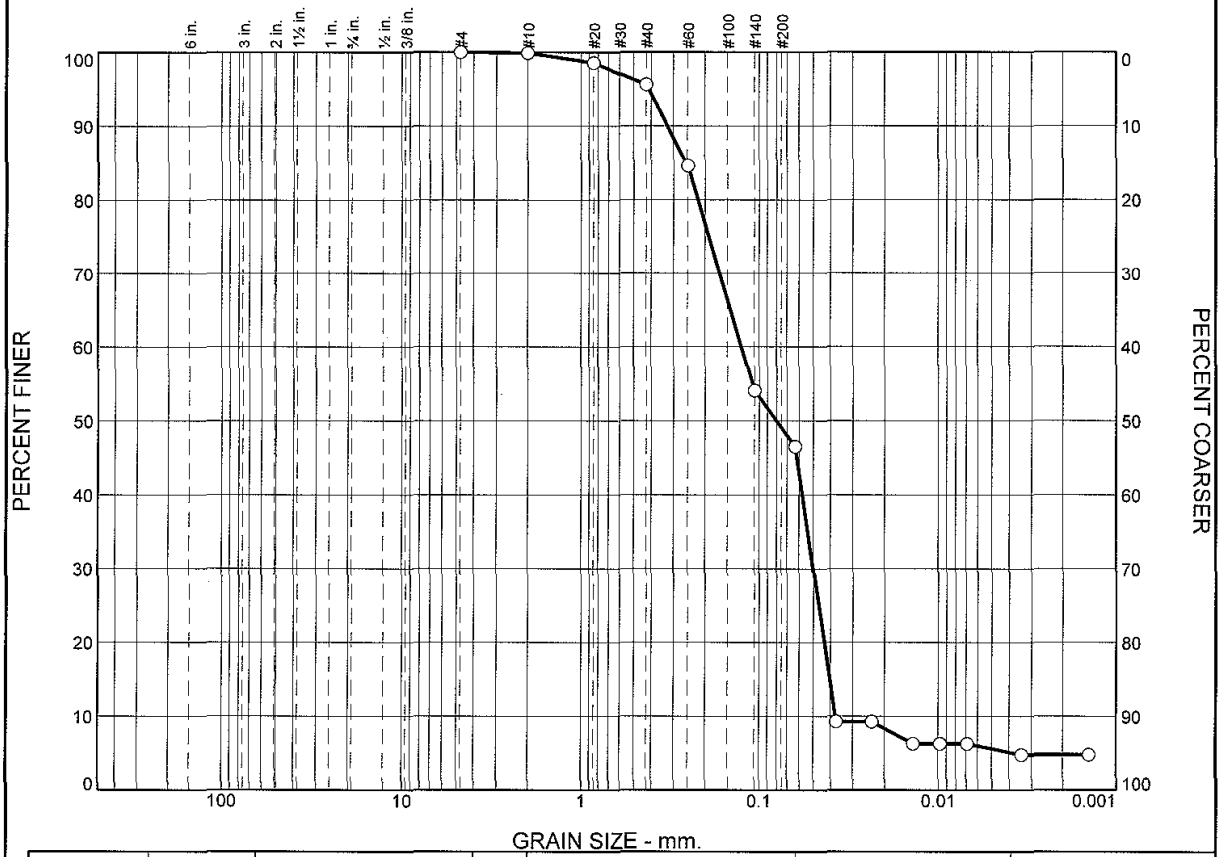
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer Analysis

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.1	1.1	2.5	11.7	24.7	13.9	36.8	2.2	0.7	1.2	5.1

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.2547	0.1252	0.0801	0.0498	0.0402	0.0375	0.53	3.34

Material Description	USCS	AASHTO
○		

Project No. L1018719 **Client:** Woods Hole Group

Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10N-G001-0-0 **Sample Number:** L1018719-01

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1018719
Location: S-10N-G001-0-0
Sample Number: L1018719-01

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
50.31	0.00	#4	527.08	527.08	100.0	0.0
		#10	493.12	493.07	99.9	0.1
		#20	423.67	423.00	98.6	1.4
		#40	375.83	374.34	95.6	4.4
		#60	366.02	360.49	84.6	15.4
		#140	352.33	336.96	54.1	45.9
		#230	323.35	319.55	46.5	53.5

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 46.5
Weight of hydrometer sample =50.31
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0060	1.0062	0.0133	3.0	15.5	0.0371	9.2	90.8
5.00	22.0	1.0060	1.0062	0.0133	3.0	15.5	0.0234	9.2	90.8
15.00	22.0	1.0040	1.0042	0.0133	1.0	16.0	0.0138	6.3	93.7
30.00	22.0	1.0040	1.0042	0.0133	1.0	16.0	0.0097	6.3	93.7
60.00	22.0	1.0040	1.0042	0.0133	1.0	16.0	0.0069	6.3	93.7
250.00	22.0	1.0030	1.0032	0.0133	0.0	16.3	0.0034	4.8	95.2
1440.00	22.0	1.0030	1.0032	0.0133	0.0	16.3	0.0014	4.8	95.2

Fractional Components

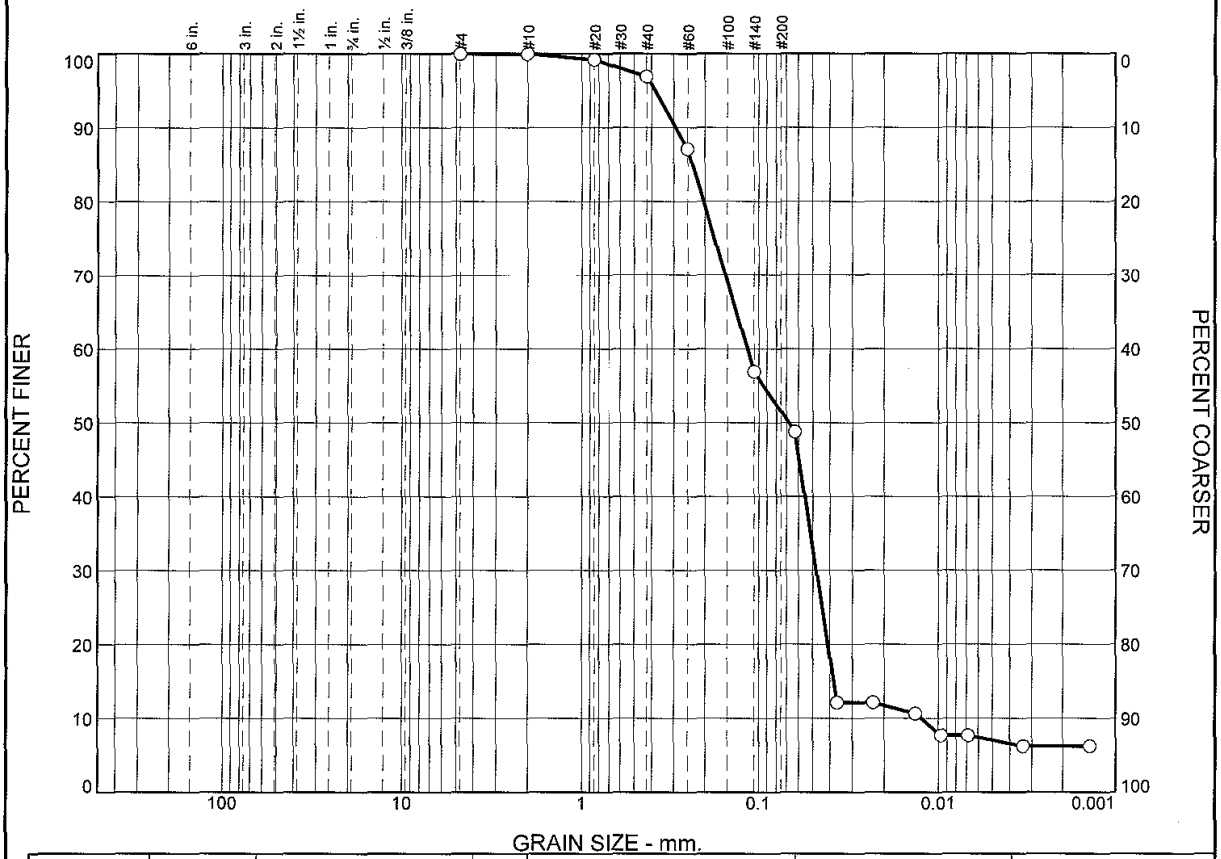
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.1	1.1	2.5	11.7	24.7	13.9	53.9	36.8	2.2	0.7	1.2	40.9	5.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0375	0.0402	0.0432	0.0498	0.0801	0.1252	0.2196	0.2547	0.3242	0.4127

Fineness Modulus	C_u	C_c
0.49	3.34	0.53

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○				0.0	0.6	1.9	10.4	24.4	14.5	36.1	1.1	3.3	1.2	6.5

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.2355	0.1157	0.0682	0.0476	0.0380	0.0125	1.56	9.24

	Material Description	USCS	AASHTO
○			

Project No. L1018719 **Client:** Woods Hole Group

Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10N-G001-0-0 **Sample Number:** WG445681-1

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1018719
Location: S-10N-G001-0-0
Sample Number: WG445681-1

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
53.19	0.00	#4	527.59	527.58	100.0	0.0
		#10	492.80	492.79	100.0	0.0
		#20	417.90	417.50	99.2	0.8
		#40	377.20	375.98	96.9	3.1
		#60	370.92	365.70	87.1	12.9
		#140	358.76	342.70	56.9	43.1
		#230	324.06	319.72	48.7	51.3

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 48.7
Weight of hydrometer sample =53.19
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0364	12.1	87.9
5.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0230	12.1	87.9
15.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0134	10.6	89.4
30.00	22.0	1.0050	1.0052	0.0133	2.0	15.8	0.0097	7.7	92.3
60.00	22.0	1.0050	1.0052	0.0133	2.0	15.8	0.0068	7.7	92.3
250.00	22.0	1.0040	1.0042	0.0133	1.0	16.0	0.0034	6.2	93.8
1440.00	22.0	1.0040	1.0042	0.0133	1.0	16.0	0.0014	6.2	93.8

Fractional Components

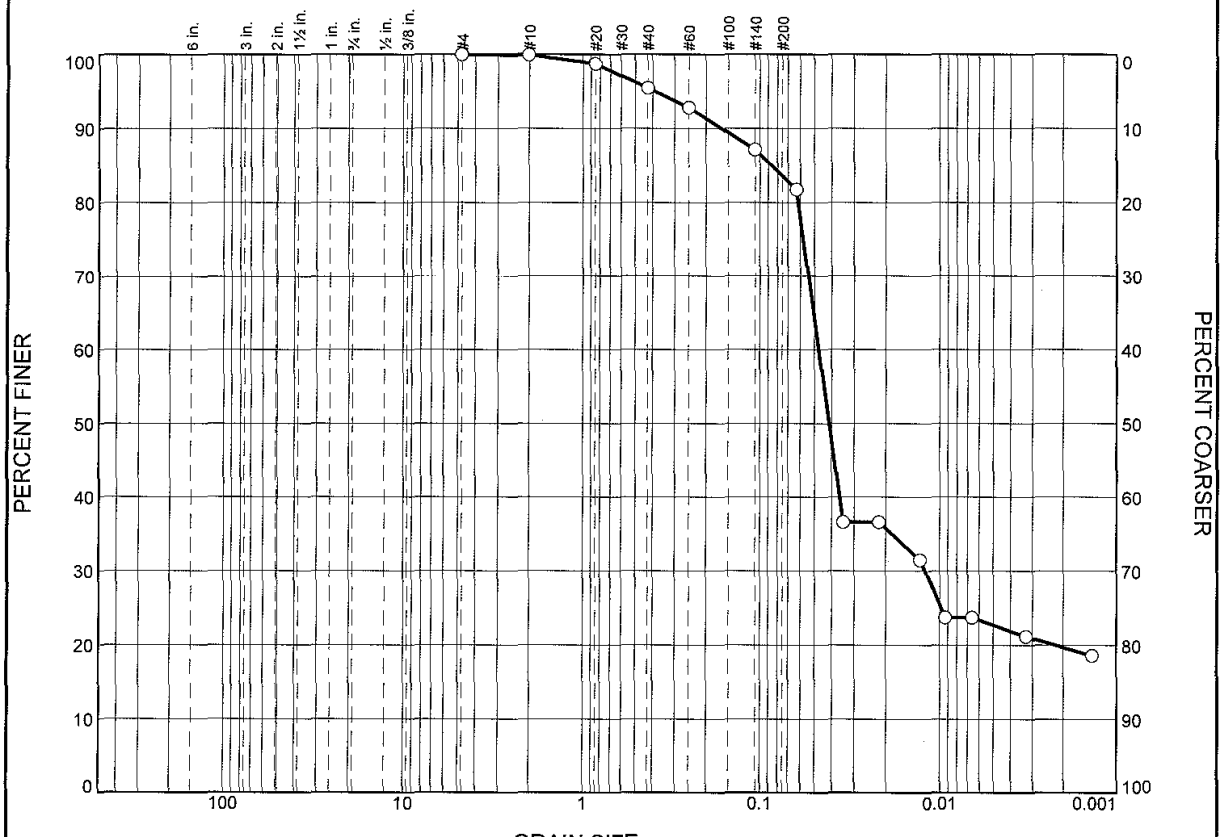
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
			0.0	0.6	1.9	10.4	24.4	14.5	51.8	36.1	1.1	3.3	1.2	41.7	6.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0125	0.0380	0.0410	0.0476	0.0682	0.1157	0.2043	0.2355	0.2924	0.3832

Fineness Modulus	C_u	C_c
0.43	9.24	1.56

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.1	0.9	2.8	3.4	4.6	7.1	44.5	3.3	9.6	1.9	21.8

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.0863	0.0471	0.0412	0.0121				

Material Description	USCS	AASHTO
○		

Project No. L1018719 **Client:** Woods Hole Group

Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10N-G002-0-0 **Sample Number:** L1018719-02

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1018719
Location: S-10N-G002-0-0
Sample Number: L1018719-02

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
50.99	0.00	#4	527.01	527.01	100.0	0.0
		#10	493.04	493.00	99.9	0.1
		#20	423.50	422.90	98.7	1.3
		#40	375.90	374.23	95.5	4.5
		#60	361.80	360.45	92.8	7.2
		#140	339.77	336.87	87.1	12.9
		#230	322.02	319.27	81.7	18.3

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 81.7
Weight of hydrometer sample =50.99
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0140	1.0142	0.0133	11.0	13.4	0.0344	36.6	63.4
5.00	22.0	1.0140	1.0142	0.0133	11.0	13.4	0.0218	36.6	63.4
15.00	22.0	1.0120	1.0122	0.0133	9.0	13.9	0.0128	31.4	68.6
30.00	22.0	1.0090	1.0092	0.0133	6.0	14.7	0.0093	23.7	76.3
60.00	22.0	1.0090	1.0092	0.0133	6.0	14.7	0.0066	23.7	76.3
250.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0033	21.1	78.9
1440.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0014	18.6	81.4

Fractional Components

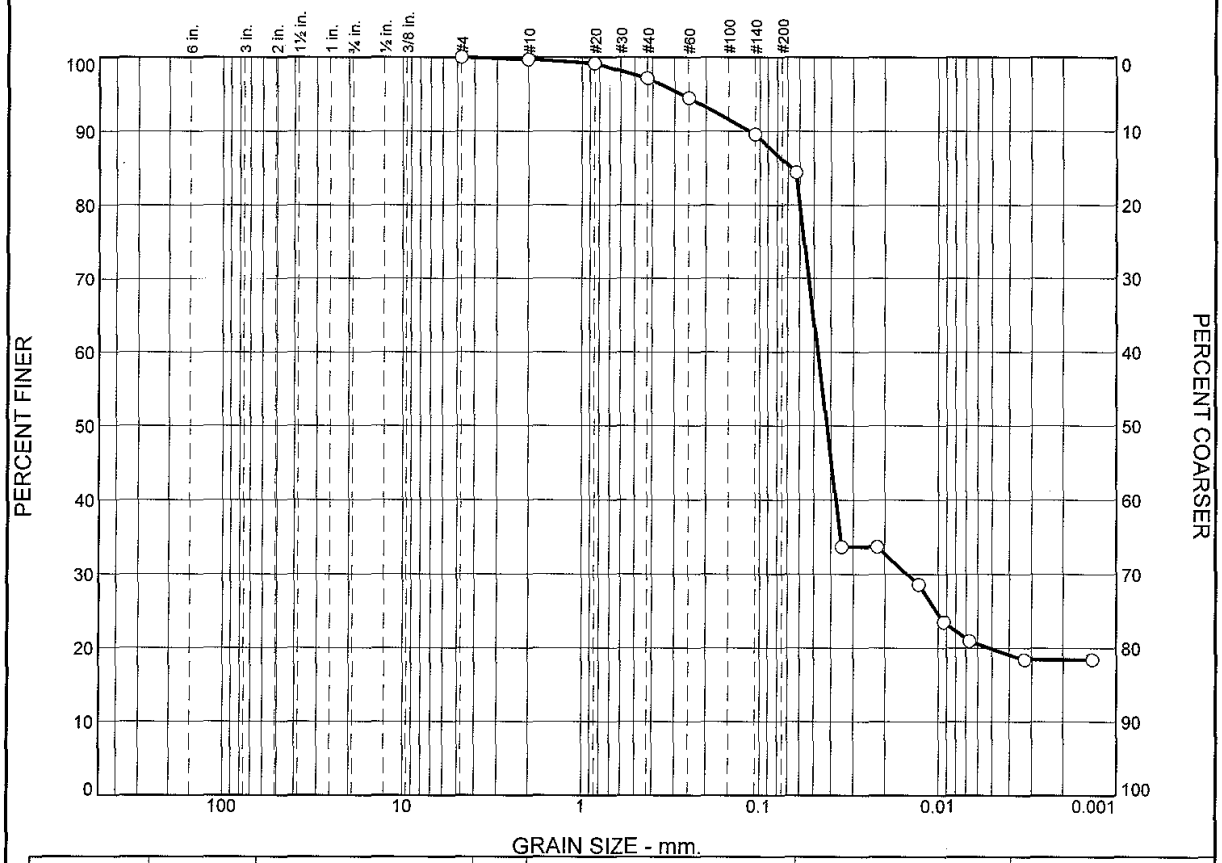
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.1	0.9	2.8	3.4	4.6	7.1	18.8	44.5	3.3	9.6	1.9	59.3	21.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0022	0.0121	0.0412	0.0471	0.0615	0.0863	0.1633	0.3868

Fineness Modulus
0.21

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.1	0.2	0.4	1.7	3.1	4.0	6.8	50.0	3.3	8.3	3.1	19.0

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.0668	0.0473	0.0421	0.0150				

Material Description	USCS	AASHTO
○		

Project No. L1018719 **Client:** Woods Hole Group

Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10N-G002-0-0 Rep **Sample Number:** L1018719-03

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1018719
Location: S-10N-G002-0-0 Rep
Sample Number: L1018719-03

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
53.20	0.00	#4	527.40	527.40	100.0	0.0
		#10	492.76	492.61	99.7	0.3
		#20	417.55	417.26	99.2	0.8
		#40	376.93	375.86	97.2	2.8
		#60	366.90	365.50	94.5	5.5
		#140	345.20	342.57	89.6	10.4
		#230	322.30	319.55	84.4	15.6

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 84.4
Weight of hydrometer sample =53.20
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0130	1.0132	0.0133	10.0	13.6	0.0348	33.7	66.3
5.00	22.0	1.0130	1.0132	0.0133	10.0	13.6	0.0220	33.7	66.3
15.00	22.0	1.0110	1.0112	0.0133	8.0	14.2	0.0129	28.6	71.4
30.00	22.0	1.0090	1.0092	0.0133	6.0	14.7	0.0093	23.5	76.5
60.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0067	20.9	79.1
250.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0033	18.4	81.6
1440.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0014	18.4	81.6

Fractional Components

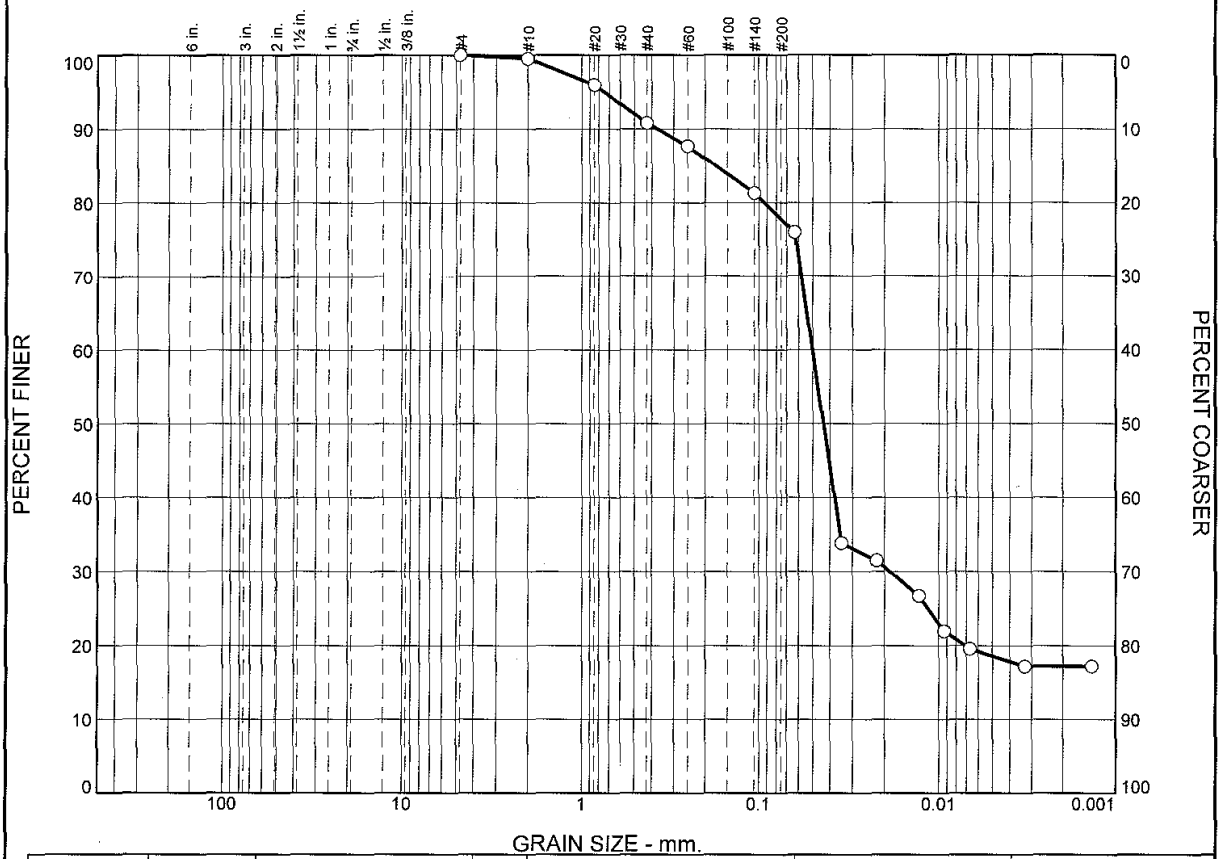
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.1	0.2	0.4	1.7	3.1	4.0	6.8	16.0	50.0	3.3	8.3	3.1	64.7	19.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0051	0.0150	0.0421	0.0473	0.0598	0.0668	0.1139	0.2748

Fineness Modulus
0.16

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.1	0.3	2.9	4.7	4.3	5.2	7.0	42.2	4.9	7.7	2.9	17.8

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.1743	0.0501	0.0434	0.0187				

Material Description	USCS	AASHTO
○		

Project No. L1018719 **Client:** Woods Hole Group

Project: NBH Enviromental Monitoring

○ **Source of Sample:** S-10N-G003-0-0 **Sample Number:** L1018719-04

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

12/15/2010

Client: Woods Hole Group
Project: NBH Enviromental Monitoring
Project Number: L1018719
Location: S-10N-G003-0-0
Sample Number: L1018719-04

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
51.24	0.00	#4	527.05	527.05	100.0	0.0
		#10	493.29	493.06	99.6	0.4
		#20	424.84	423.01	96.0	4.0
		#40	376.98	374.33	90.8	9.2
		#60	362.08	360.47	87.7	12.3
		#140	340.15	336.90	81.3	18.7
		#230	322.03	319.31	76.0	24.0

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 76.0
Weight of hydrometer sample =51.24
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	22.0	1.0140	1.0142	0.0133	11.0	13.4	0.0344	33.9	66.1
5.00	22.0	1.0130	1.0132	0.0133	10.0	13.6	0.0220	31.5	68.5
15.00	22.0	1.0110	1.0112	0.0133	8.0	14.2	0.0129	26.7	73.3
30.00	22.0	1.0090	1.0092	0.0133	6.0	14.7	0.0093	21.9	78.1
60.00	22.0	1.0080	1.0082	0.0133	5.0	15.0	0.0067	19.6	80.4
250.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0033	17.2	82.8
1440.00	22.0	1.0070	1.0072	0.0133	4.0	15.2	0.0014	17.2	82.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.1	0.3	2.9	4.7	4.3	5.2	7.0	24.1	42.2	4.9	7.7	2.9	57.7	17.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0071	0.0187	0.0434	0.0501	0.0931	0.1743	0.3708	0.7454

Fineness Modulus
0.37

Alpha Analytical

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial_No:01031114:07

MANSFIELD CHAIN OF CUSTODY

PAGE 1 OF 1

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

Date Rec'd in Lab:

ALPHA Job #: L1018719

Client Information

Client: Woods Hole Grup
Address: 81 Technology Park Dr. E Falmouth, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: dwalsh@whgrp.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NBH Environ. Monitoring
Project Location: New Bedford, MA
Project #: TD-0010-03
Project Manager: Dave Walsh
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:
Level III data report & project specific EDDs

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: NOAA 18 PCB Cong.	TOC	Cyanide (Hydrolyzable/Weak Acid Dissociable)	SAMPLE HANDLING	TOTAL # BOTTLES
1	S-1ΦN-GΦΦ1-Φ-Φ	11/22/10	09:10	SE	KGM	X	X			2
↓	S-1ΦN-GΦΦ1-Φ-Φ		09:10					X		1
2	S-1ΦN-GΦΦ2-Φ-Φ		10:00			X	X			2
↓	S-1ΦN-GΦΦ2-Φ-Φ		10:00					X		1
-3	S-1ΦN-GΦΦ2-Φ-ΦREP		10:00			X	X			1
↓	S-1ΦN-GΦΦ2-Φ-ΦREP		10:00					X		1
-2	S-1ΦN-GΦΦ2-Φ-ΦMSMSD		10:00			X				1
-4	S-1ΦN-GΦΦ3-Φ-Φ		11:05			X	X			2
↓	S-1ΦN-GΦΦ3-Φ-Φ	↓	11:05	↓	↓			X		1

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

| | | | | |

ANALYTICAL REPORT

Lab Number:	L1018963
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-0010-03
Report Date:	01/03/11

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

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018963
Report Date: 01/03/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1018963-01	S-10N-T001-0-0	NEW BEDFORD, MA	11/23/10 11:20
L1018963-02	S-10N-T002-0-0	NEW BEDFORD, MA	11/23/10 12:20
L1018963-03	S-10N-T003-0-0	NEW BEDFORD, MA	11/23/10 13:30

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1018963
Project Number:	TO-0010-03	**Report Date:**	01/03/11

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on November 24, 2010 and placed in frozen storage on November 29, 2010 until December 07, 2010 when aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in frozen storage until they were removed December 15, 2010 to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

PCB Congeners by 8082

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

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1018963
Project Number:	TO-0010-03	**Report Date:**	01/03/11

Case Narrative (continued)

interference was observed on one column, the value from the opposite column was reported regardless of whether it was the higher or lower value.

L1018963-01 and -02 were re-analyzed on dilution in order to quantitate the samples within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compound that exceeded the calibration on the initial analyses. The re-analyses were performed only for the compounds that exceeded the calibration range.

Grain Size

The WG449668-1 Laboratory Duplicate RPD, performed on L1018963-03, is outside the acceptance criteria for % Coarse Sand (40%), % Medium Sand (52%), % Fine Sand (22%), % Very Fine Sand (35%), Clay (48%) and Sand (35%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

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

Authorized Signature: Cynthia McQueen

Title: Technical Director/Representative Date: 01/03/11

ORGANICS

PCBS

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018963

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-01	Date Collected:	11/23/10 11:20
Client ID:	S-10N-T001-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 15:16	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1710		ug/kg	170	--	50
Cl3-BZ#18	4420	E	ug/kg	170	--	50
Cl4-BZ#52	9810	E	ug/kg	170	--	50
Cl4-BZ#66	2800		ug/kg	170	--	50
Cl5-BZ#118	1530		ug/kg	170	--	50
Cl6-BZ#138	1500		ug/kg	170	--	50
Cl6-BZ#128	314		ug/kg	170	--	50
Cl7-BZ#180	309		ug/kg	170	--	50
Cl7-BZ#170	241		ug/kg	170	--	50
Cl8-BZ#195	ND		ug/kg	170	--	50
Cl9-BZ#206	ND		ug/kg	170	--	50
Cl10-BZ#209	ND		ug/kg	170	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	92		30-150
BZ 198	67		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-01	Date Collected:	11/23/10 11:20
Client ID:	S-10N-T001-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 15:16	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	6710	E	ug/kg	170	--	50
Cl4-BZ#44	2440		ug/kg	170	--	50
Cl5-BZ#101	1800		ug/kg	170	--	50
Cl6-BZ#153	2080		ug/kg	170	--	50
Cl5-BZ#105	292		ug/kg	170	--	50
Cl7-BZ#187	513		ug/kg	170	--	50

DBOB	92	30-150
BZ 198	67	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1018963
Project Number: TO-0010-03
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-01 D	Date Collected:	11/23/10 11:20
Client ID:	S-10N-T001-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/30/10 11:45	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4630		ug/kg	1700	--	500
Cl4-BZ#52	12000		ug/kg	1700	--	500

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018963

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-01 D	Date Collected:	11/23/10 11:20
Client ID:	S-10N-T001-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/30/10 11:45	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	9070		ug/kg	1700	--	500

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018963

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-02	Date Collected:	11/23/10 12:20
Client ID:	S-10N-T002-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 15:57	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3740	E	ug/kg	174	--	50
Cl3-BZ#18	10400	E	ug/kg	174	--	50
Cl4-BZ#52	20600	E	ug/kg	174	--	50
Cl4-BZ#44	5260	E	ug/kg	174	--	50
Cl4-BZ#66	6450	E	ug/kg	174	--	50
Cl5-BZ#118	3650	E	ug/kg	174	--	50
Cl6-BZ#138	2960		ug/kg	174	--	50
Cl7-BZ#187	876		ug/kg	174	--	50
Cl6-BZ#128	672		ug/kg	174	--	50
Cl7-BZ#180	681		ug/kg	174	--	50
Cl7-BZ#170	509		ug/kg	174	--	50
Cl8-BZ#195	ND		ug/kg	174	--	50
Cl9-BZ#206	ND		ug/kg	174	--	50
Cl10-BZ#209	ND		ug/kg	174	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	73		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018963

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-02	Date Collected:	11/23/10 12:20
Client ID:	S-10N-T002-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 15:57	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	11900	E	ug/kg	174	--	50
Cl5-BZ#101	4050	E	ug/kg	174	--	50
Cl6-BZ#153	3520	E	ug/kg	174	--	50
Cl5-BZ#105	497		ug/kg	174	--	50

DBOB	104	30-150
BZ 198	73	30-150

Project Name: NEW BEDFORD HARBOR
Lab Number: L1018963
Project Number: TO-0010-03
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-02 D	Date Collected:	11/23/10 12:20
Client ID:	S-10N-T002-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/30/10 12:26	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	5420		ug/kg	1740	--	500
Cl3-BZ#18	14900		ug/kg	1740	--	500
Cl4-BZ#52	25800		ug/kg	1740	--	500
Cl4-BZ#66	8010		ug/kg	1740	--	500
Cl5-BZ#118	4590		ug/kg	1740	--	500

Project Name: NEW BEDFORD HARBOR
Lab Number: L1018963
Project Number: TO-0010-03
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-02 D	Date Collected:	11/23/10 12:20
Client ID:	S-10N-T002-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/30/10 12:26	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	95%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	22700		ug/kg	1740	--	500
Cl4-BZ#44	7970		ug/kg	1740	--	500
Cl5-BZ#101	6580		ug/kg	1740	--	500
Cl6-BZ#153	5840		ug/kg	1740	--	500

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018963

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-03	Date Collected:	11/23/10 13:30
Client ID:	S-10N-T003-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 16:38	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	465		ug/kg	169	--	50
Cl3-BZ#18	717		ug/kg	169	--	50
Cl4-BZ#52	2940		ug/kg	169	--	50
Cl4-BZ#66	2260		ug/kg	169	--	50
Cl5-BZ#118	1940		ug/kg	169	--	50
Cl6-BZ#138	1310		ug/kg	169	--	50
Cl6-BZ#128	350		ug/kg	169	--	50
Cl7-BZ#180	269		ug/kg	169	--	50
Cl7-BZ#170	202		ug/kg	169	--	50
Cl8-BZ#195	ND		ug/kg	169	--	50
Cl9-BZ#206	ND		ug/kg	169	--	50
Cl10-BZ#209	ND		ug/kg	169	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	123		30-150
BZ 198	86		30-150

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018963

Project Number: TO-0010-03 **Report Date:** 01/03/11

SAMPLE RESULTS

Lab ID:	L1018963-03	Date Collected:	11/23/10 13:30
Client ID:	S-10N-T003-0-0	Date Received:	11/24/10
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	12/15/10 16:36
Analytical Date:	12/29/10 16:38	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	12/18/10
Percent Solids:	97%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2530		ug/kg	169	--	50
Cl4-BZ#44	1050		ug/kg	169	--	50
Cl5-BZ#101	1550		ug/kg	169	--	50
Cl6-BZ#153	1320		ug/kg	169	--	50
Cl5-BZ#105	452		ug/kg	169	--	50
Cl7-BZ#187	252		ug/kg	169	--	50

DBOB	123	30-150
BZ 198	86	30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/29/10 13:13
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 12/15/10 16:36
Cleanup Method1: EPA 3630
Cleanup Date1: 12/18/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG447894-1					
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	104		30-150
BZ 198	82		30-150

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 12/29/10 13:13
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 12/15/10 16:36
Cleanup Method1: EPA 3630
Cleanup Date1: 12/18/10
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-03 Batch: WG447894-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	82		30-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03 Batch: WG447894-2 WG447894-3							
Cl2-BZ#8	89		70		40-140	24		30
Cl3-BZ#18	91		78		40-140	15		30
Cl3-BZ#28	97		85		40-140	13		30
Cl4-BZ#52	92		84		40-140	9		30
Cl4-BZ#44	93		96		40-140	3		30
Cl4-BZ#66	96		92		40-140	4		30
Cl5-BZ#101	94		91		40-140	3		30
Cl5-BZ#118	100		98		40-140	2		30
Cl5-BZ#105	92		92		40-140	0		30
Cl6-BZ#138	95		93		40-140	2		30
Cl7-BZ#187	90		89		40-140	1		30
Cl6-BZ#128	90		88		40-140	2		30
Cl7-BZ#180	87		86		40-140	1		30
Cl7-BZ#170	87		85		40-140	2		30
Cl8-BZ#195	83		80		40-140	4		30
Cl9-BZ#206	98		92		40-140	6		30
Cl10-BZ#209	87		82		40-140	6		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG447894-2		WG447894-3			
DBOB	93		76		30-150			
BZ 198	83		79		30-150			

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 01-03		Batch: WG447894-2		WG447894-3			
Cl6-BZ#153	87		85		40-140	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	93		76		30-150
BZ 198	83		79		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID: L1018963-01
Client ID: S-10N-T001-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/23/10 11:20
Date Received: 11/24/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	6.34		%	0.010	--	1	-	12/14/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	5.97		%	0.010	--	1	-	12/14/10 12:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	ND		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	0.100		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	0.100		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	0.500		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	1.60		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	4.20		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	73.2		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	20.3		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	97.2		%	0.100	--	1	-	12/15/10 13:30	30,2540G	KB
Solids, Total (Pre-Dried)	33.7		%	0.100	NA	1	-	12/07/10 14:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID: L1018963-02
Client ID: S-10N-T002-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/23/10 12:20
Date Received: 11/24/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	5.52		%	0.010	--	1	-	12/14/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	5.31		%	0.010	--	1	-	12/14/10 12:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	ND		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	0.200		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	1.00		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	2.00		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	2.60		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	2.90		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	80.4		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	10.9		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	94.5		%	0.100	--	1	-	12/15/10 13:30	30,2540G	KB
Solids, Total (Pre-Dried)	33.4		%	0.100	NA	1	-	12/07/10 14:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

SAMPLE RESULTS

Lab ID: L1018963-03
Client ID: S-10N-T003-0-0
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 11/23/10 13:30
Date Received: 11/24/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	4.27		%	0.010	--	1	-	12/14/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	4.57		%	0.010	--	1	-	12/14/10 12:00	1,9060	NR
Grain Size (Wentworth Method) - Mansfield Lab										
Gravel (>2.00mm)	ND		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Very Coarse Sand (1.00-2.00 mm)	ND		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Coarse Sand (0.50-1.00 mm)	0.400		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Medium Sand (0.25-0.50 mm)	1.00		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Fine Sand (0.125-0.25 mm)	1.60		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Very Fine Sand (0.063-0.125 mm)	3.30		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Silt - (1.95-62.5 um)	81.1		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
Clay - (<1.95 um)	12.6		%	0.100	NA	1	-	12/29/10 00:00	12,D422(M)	SE
General Chemistry - Mansfield Lab										
Solids, Total	97.1		%	0.100	--	1	-	12/15/10 13:30	30,2540G	KB
Solids, Total (Pre-Dried)	34.7		%	0.100	NA	1	-	12/07/10 14:45	30,2540G	KB

Project Name: NEW BEDFORD HARBOR **Lab Number:** L1018963

Project Number: TO-0010-03 **Report Date:** 01/03/11

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-03 Batch: WG446282-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	12/14/10 12:00	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	12/14/10 12:00	1,9060	NR

Lab Duplicate Analysis
Batch Quality Control

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018963
Report Date: 01/03/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG447965-1 QC Sample: L1018963-03 Client ID: S-10N-T003-0-0						
Solids, Total	97.1	96.9	%	0		20
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG449668-1 QC Sample: L1018963-03 Client ID: S-10N-T003-0-0						
Gravel (>2.00mm)	ND	ND	%	NC		20
Very Coarse Sand (1.00-2.00 mm)	ND	ND	%	NC		20
Coarse Sand (0.50-1.00 mm)	0.4	0.600	%	**40**	Q	20
Medium Sand (0.25-0.50 mm)	1.0	1.70	%	**52**	Q	20
Fine Sand (0.125-0.25 mm)	1.6	2.00	%	**22**	Q	20
Very Fine Sand (0.063-0.125 mm)	3.3	4.70	%	**35**	Q	20
Silt - (1.95-62.5 um)	81.1	70.5	%	14		20
Clay - (<1.95 um)	12.6	20.5	%	**48**	Q	20

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03
Lab Number: L1018963
Report Date: 01/03/11

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG446282-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	114		75-125
Total Organic Carbon (Rep2)	101		75-125

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018963
Report Date: 01/03/11

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(*)
L1018963-01A	Glass 500ml unpreserved	A	N/A	2.0	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)
L1018963-02A	Glass 500ml unpreserved	A	N/A	2.0	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name: NEW BEDFORD HARBOR
Project Number: TO-0010-03

Lab Number: L1018963
Report Date: 01/03/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1018963-03A	Glass 1000ml unpreserved	A	N/A	2.0	Y	Absent	A2-SIEVE_#140(W)(7),A2-SIEVE_#200(W)(7),A2-SIEVE_#10(W)(7),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-SIEVE_#40(W)(7),A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-SIEVE_#20(W)(7),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-GRAVEL(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-SIEVE_#60(W)(7),A2-TOC-9060-2REPS(28),A2-TS-PREDRIED(7),A2-SIEVE_#4(W)(7)

*Values in parentheses indicate holding time in days

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1018963
Project Number:	TO-0010-03	**Report Date:**	01/03/11

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.

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.

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.

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.

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.

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. 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.

Report Format: Data Usability Report

Project Name:	NEW BEDFORD HARBOR	**Lab Number:**	L1018963
Project Number:	TO-0010-03	**Report Date:**	01/03/11

Data Qualifiers

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	**Lab Number:**	L1018963
Project Number:	TO-0010-03	**Report Date:**	01/03/11

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

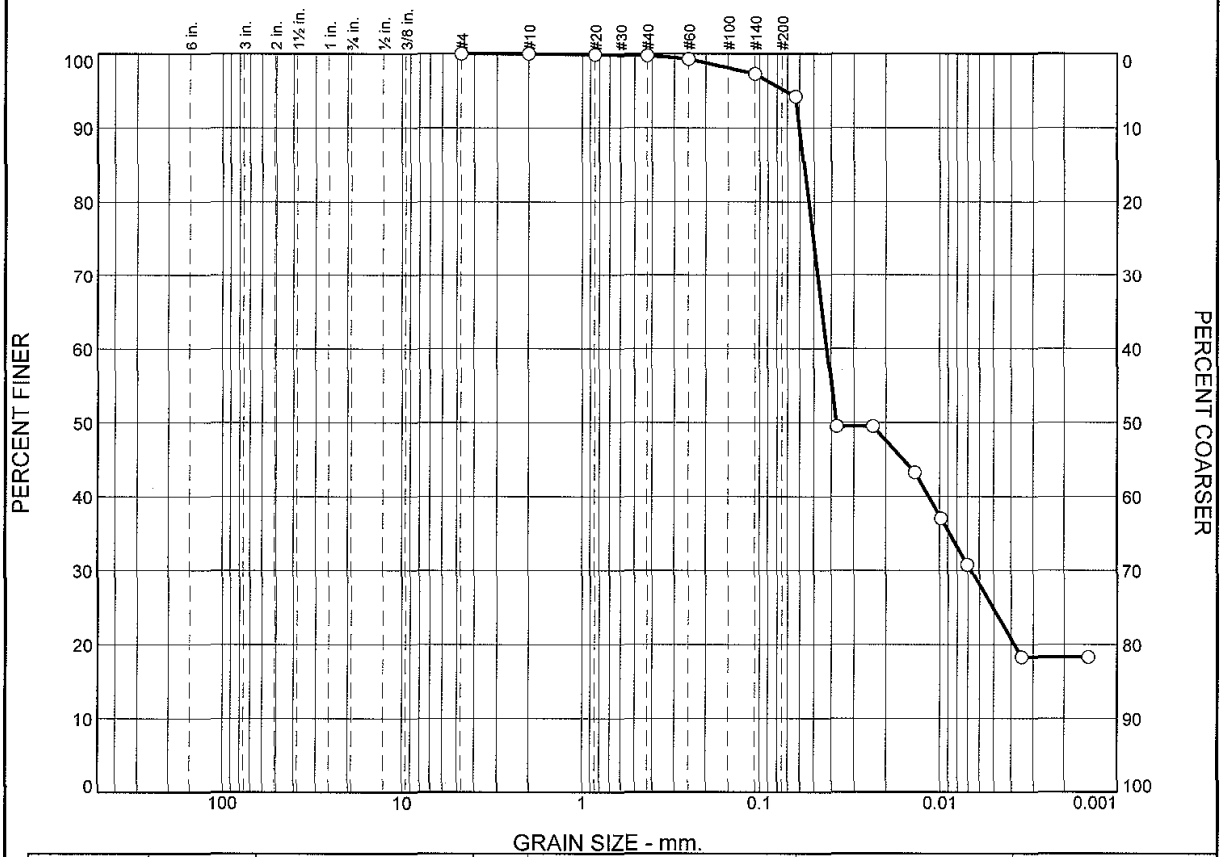
LIMITATION OF LIABILITIES

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.

ASTM D422-63
Wet Sieve Hydrometer Analysis

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.1	0.1	0.5	1.6	4.2	44.0	4.8	11.9	12.5	20.3

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.0566	0.0422	0.0376	0.0067				

Material Description	USCS	AASHTO
○		

Project No. T0-0010-03 **Client:** Woods Hole Group

Project: New Bedford Harbor Env. Monitoring

○ **Source of Sample:** S-10N-T001-0-0 **Sample Number:** L1018963-01

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/3/2011

Client: Woods Hole Group
Project: New Bedford Harbor Env. Monitoring
Project Number: T0-0010-03
Location: S-10N-T001-0-0
Sample Number: L1018963-01

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
24.26	0.00	#4	527.43	527.43	100.0	0.0
		#10	492.63	492.63	100.0	0.0
		#20	417.43	417.41	99.9	0.1
		#40	376.00	375.96	99.8	0.2
		#60	365.81	365.70	99.3	0.7
		#140	343.20	342.71	97.3	2.7
		#230	320.50	319.76	94.2	5.8

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 94.2
Weight of hydrometer sample =24.26
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -0.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0373	49.5	50.5
5.00	20.0	1.0080	1.0079	0.0136	5.0	15.0	0.0236	49.5	50.5
15.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0138	43.3	56.7
30.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0098	37.0	63.0
60.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0070	30.8	69.2
250.00	20.0	1.0030	1.0029	0.0136	0.0	16.3	0.0035	18.3	81.7
1440.00	20.0	1.0030	1.0029	0.0136	0.0	16.3	0.0015	18.3	81.7

Fractional Components

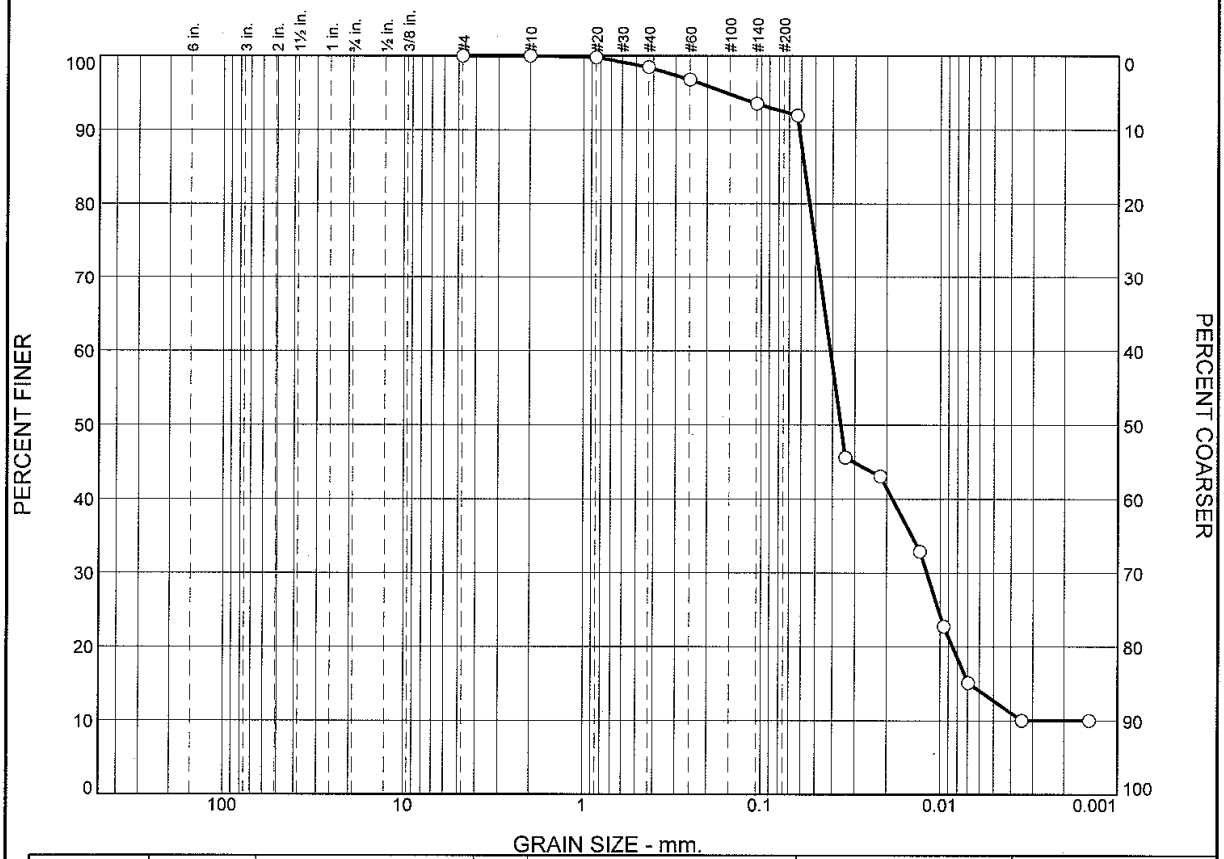
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.1	0.1	0.5	1.6	4.2	6.5	44.0	4.8	11.9	12.5	73.2	20.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0038	0.0067	0.0376	0.0422	0.0533	0.0566	0.0600	0.0719

Fineness Modulus
0.03

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.2	1.0	2.0	2.6	2.9	46.2	8.6	18.6	7.0	10.9

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.0574	0.0411	0.0359	0.0119	0.0069			

Material Description	USCS	AASHTO
○		

Project No. T0-0010-03 **Client:** Woods Hole Group

Project: New Bedford Harbor Env. Monitoring

○ **Source of Sample:** S-10N-T002-0-0 **Sample Number:** L1018963-02

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/3/2011

Client: Woods Hole Group
Project: New Bedford Harbor Env. Monitoring
Project Number: T0-0010-03
Location: S-10N-T002-0-0
Sample Number: L1018963-02

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
58.08	0.00	#4	527.00	527.00	100.0	0.0
		#10	492.99	492.99	100.0	0.0
		#20	423.05	422.94	99.8	0.2
		#40	375.15	374.37	98.5	1.5
		#60	361.45	360.48	96.8	3.2
		#140	338.88	336.98	93.5	6.5
		#230	321.82	320.90	91.9	8.1

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 91.9
Weight of hydrometer sample =58.08
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -0.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0180	1.0179	0.0136	15.0	12.3	0.0339	45.6	54.4
5.00	20.0	1.0170	1.0169	0.0136	14.0	12.6	0.0217	43.1	56.9
15.00	20.0	1.0130	1.0129	0.0136	10.0	13.6	0.0130	32.9	67.1
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	22.7	77.3
60.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0069	15.1	84.9
250.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0035	10.0	90.0
1440.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0014	10.0	90.0

Fractional Components

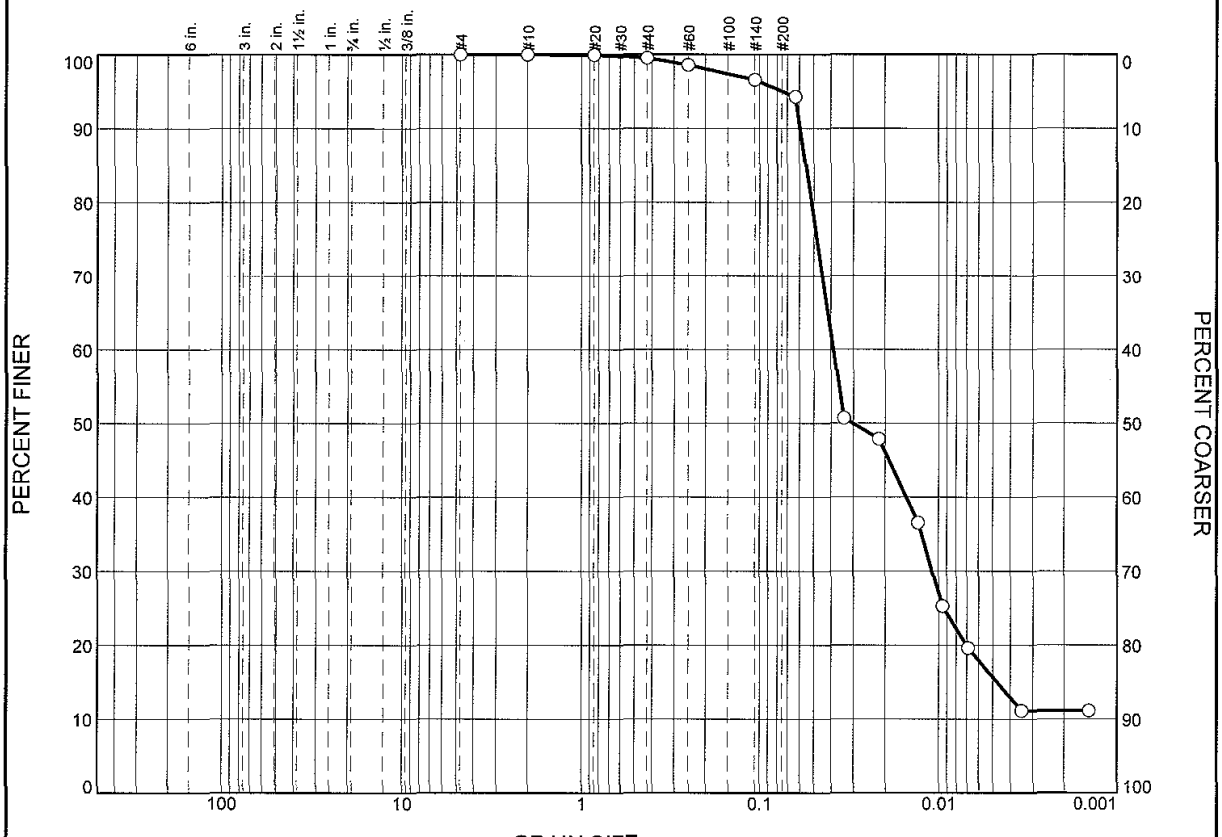
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.2	1.0	2.0	2.6	2.9	8.7	46.2	8.6	18.6	7.0	80.4	10.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0069	0.0085	0.0119	0.0359	0.0411	0.0537	0.0574	0.0614	0.1560

Fineness Modulus
0.09

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.0	0.4	1.0	1.6	3.3	43.6	9.5	18.8	9.2	12.6

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.0552	0.0387	0.0303	0.0109	0.0047			

Material Description	USCS	AASHTO
○		

Project No. T0-0010-03 **Client:** Woods Hole Group

Project: New Bedford Harbor Env. Monitoring

○ **Source of Sample:** S-10N-T003-0-0 **Sample Number:** L1018963-03

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/3/2011

Client: Woods Hole Group
Project: New Bedford Harbor Env. Monitoring
Project Number: T0-0010-03
Location: S-10N-T003-0-0
Sample Number: L1018963-03

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
53.57	0.00	#4	527.00	527.00	100.0	0.0
		#10	492.99	492.99	100.0	0.0
		#20	422.95	422.94	100.0	0.0
		#40	374.61	374.37	99.5	0.5
		#60	360.99	360.48	98.6	1.4
		#140	338.04	336.98	96.6	3.4
		#230	321.64	320.40	94.3	5.7

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 94.3
Weight of hydrometer sample =53.57
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -0.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0180	1.0179	0.0136	15.0	12.3	0.0339	50.7	49.3
5.00	20.0	1.0170	1.0169	0.0136	14.0	12.6	0.0217	47.9	52.1
15.00	20.0	1.0130	1.0129	0.0136	10.0	13.6	0.0130	36.6	63.4
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	25.3	74.7
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	19.6	80.4
250.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0035	11.1	88.9
1440.00	20.0	1.0040	1.0039	0.0136	1.0	16.0	0.0014	11.1	88.9

Fractional Components

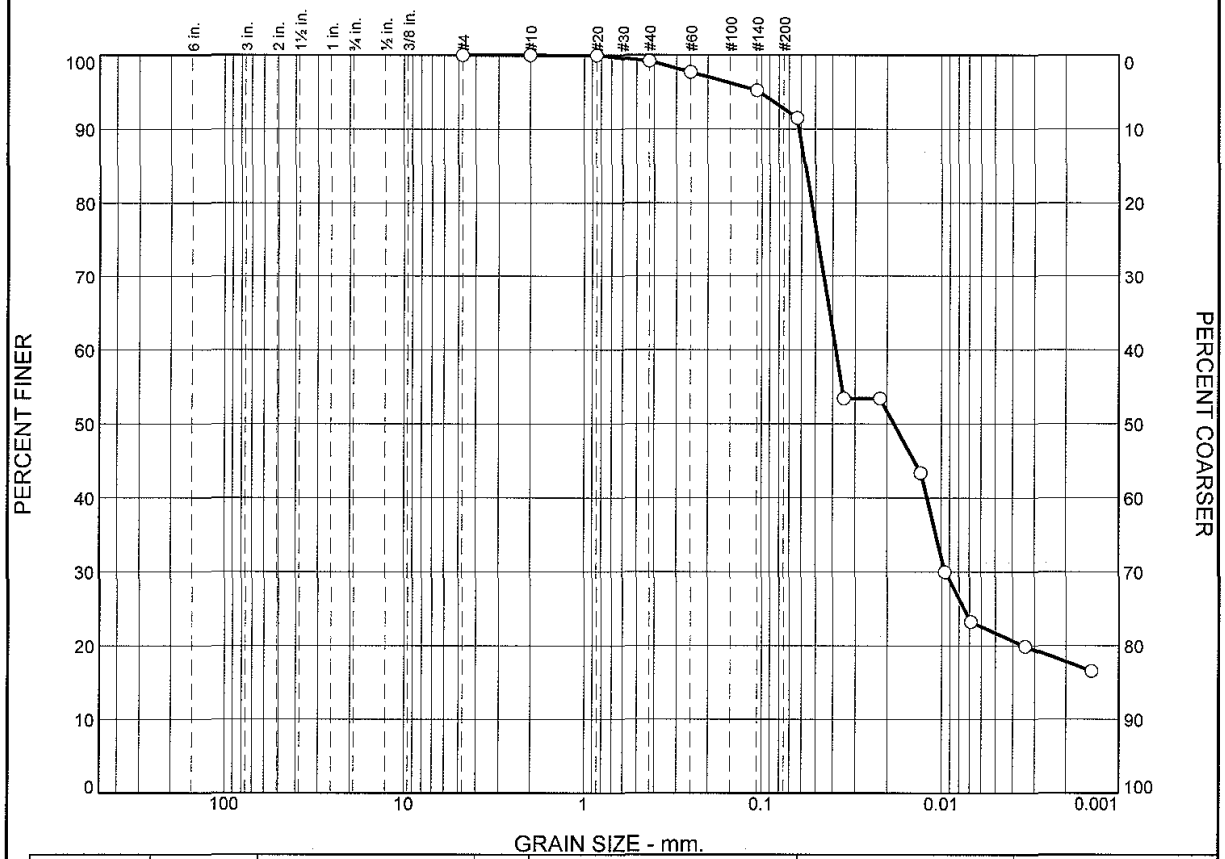
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.0	0.4	1.0	1.6	3.3	6.3	43.6	9.5	18.8	9.2	81.1	12.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0047	0.0070	0.0109	0.0303	0.0387	0.0514	0.0552	0.0593	0.0739

Fineness Modulus
0.04

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% Cobbles	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○	0.0	0.0	0.0	0.0	0.0	0.6	1.7	2.0	4.7	37.6	6.5	21.1	5.3	20.5

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.0569	0.0384	0.0183	0.0096				

Material Description	USCS	AASHTO
○		

Project No. T0-0010-03 **Client:** Woods Hole Group

Project: New Bedford Harbor Env. Monitoring

○ **Source of Sample:** S-10N-T003-0-0 **Sample Number:** WG449668-1

Date: ○

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/3/2011

Client: Woods Hole Group
Project: New Bedford Harbor Env. Monitoring
Project Number: T0-0010-03
Location: S-10N-T003-0-0
Sample Number: WG449668-1

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer	Percent Retained
43.84	0.00	#4	527.43	527.43	100.0	0.0
		#10	492.63	492.63	100.0	0.0
		#20	417.42	417.41	100.0	0.0
		#40	376.30	375.96	99.2	0.8
		#60	366.35	365.70	97.7	2.3
		#140	343.79	342.71	95.3	4.7
		#230	321.40	319.76	91.5	8.5

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 91.5
Weight of hydrometer sample =43.84
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -0.04
Meniscus correction only = -3.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Retained
2.00	20.0	1.0160	1.0159	0.0136	13.0	12.9	0.0346	53.4	46.6
5.00	20.0	1.0160	1.0159	0.0136	13.0	12.9	0.0219	53.4	46.6
15.00	20.0	1.0130	1.0129	0.0136	10.0	13.6	0.0130	43.4	56.6
30.00	20.0	1.0090	1.0089	0.0136	6.0	14.7	0.0096	30.0	70.0
60.00	20.0	1.0070	1.0069	0.0136	4.0	15.2	0.0069	23.2	76.8
250.00	20.0	1.0060	1.0059	0.0136	3.0	15.5	0.0034	19.9	80.1
1440.00	20.0	1.0050	1.0049	0.0136	2.0	15.8	0.0014	16.5	83.5

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
0.0	0.0	0.0	0.0	0.0	0.6	1.7	2.0	4.7	9.0	37.6	6.5	21.1	5.3	70.5	20.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0035	0.0096	0.0183	0.0384	0.0526	0.0569	0.0615	0.1023

Fineness Modulus
0.06

Alpha Analytical

Certificate/Approval Program Summary

Last revised July 19, 2010 – 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, EPA 120.1, SM2510B, EPA 245.1, EPA 150.1, EPA 160.2, SM2540D, EPA 335.2, SM2540G, EPA 180.1. Organic Parameters: EPA 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045, 9014. 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 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610B, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to MA-DEP Certificate for Non-Potable Water.

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, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

U.S. Army Corps of Engineers

Department of Defense Certificate/Lab ID: L2217.01.

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312,3051, 6020, 747A, 7474, 9045C,9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580, 3570, 3540C, 5035, 8260B, 8270C, 8270 Alk-PAH, 8082, 8081A, 8015 (SHC), 8015 (DRO).

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP
Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl.

Serial No:01031115:26

ESI

EnviroSystems, Inc.
1 Lafayette Road
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Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No: L1018963

CHAIN OF CUSTODY DOCUMENTATION

Client: Woods Hole Group	Contact: Dave Walsh	Project Name: New Bedford Harbor Env. Monitoring	Page 1 of 1
Report to: Dave Walsh	Address: 81 Technology Park Dr.	Project Number: TØ-ØØ1Ø-03	
Invoice to: Cathy Morey	Address: E. Falmouth, MA 02536	Project Manager: Dave Walsh	
Voice: 508-540-8080	Fax: 508-540-1001	email: DWalsh@WHGRP.com	P.O. No: Quote No:

Protocol: RCRA SDWA NPDES USCOE Other

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composit (G/C)	Container Size (ml.)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
L1018963-1	S-1ØN-TØØ1-Ø-Ø	11/23/10	1120	JEB	C	16oz	G	4°C	S	N	Grain Size, TOC, PCB congeners
-2	S-1ØN-TØØ2-Ø-Ø	11/23/10	1220	JEB	C	16oz	G	4°C	S	N	Grain Size, TOC, PCB congeners
-3	S-1ØN-TØØ3-Ø-Ø	11/23/10	1330	JEB	C	32oz	G	4°C	S	N	Grain Size, TOC, PCB congeners

Relinquished By: Jesti Bryan Date: 11/24/10 Time: 0909
Received By: [signature] Date: 11/24/10 Time: 09:10
Rec'd [signature] 11/24/10 1325
Relinquished By: [signature] Date: 11/24/10 Time: 1315
Received at Lab By: [signature] Date: 11/24/10 Time: 15:45
P. Gilbert 11/24/10 17:20
Comments: To Alpha Mansfield
Relig By [signature] 11-24-10 1545
Reli P. Gilbert 11/24/10 18:10 Rec: [signature] 11/24/10 18:10

Sample Delivery Group No: Page of

COC Doc No: 3897

APPENDIX D. NEW ENVIRONMENTAL HORIZONS, INC. SATA VALIDATION REPORTS (ON CD)

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APPENDIX D: NEW ENVIRONMENTAL HORIZONS, INC. DATA VALIDATION REPORTS

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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):	L1007001
Date(s) of Collection:	May 11, 2010
Number / Type Samples & Analyses	4 sediment grab 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:	August 24, 2010

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. 1.0, prepared by Woods Hole Group, Inc., October 2009 (NBH OU1 QAPP Addendum 2009); 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.

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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[1]	Sample Type
S-10Y-G001-0-0	L0910702-01	5/11/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10Y-G002-0-0	L0910702-02	5/11/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-10YG002-0-0REP	L0910702-03	5/11/10	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-10Y-G002-0-0
S-10Y-G003-0-0	L0910702-04	5/11/10	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.

[1] Total Organic Carbon (TOC) and Grain Size analyses were also performed on these samples; however, data validation for these parameters was not required.

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 2009 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, five results were rejected (R) in sample S-01Y-G002-0-0 due to severe exceedance of QC criteria, as follows: 2,3,3',4,4'-Pentachlorobiphenyl (BZ#105), 2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ#170), 2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ#195), 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ#206), and Decachlorobiphenyl (BZ#209).

All other results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2009 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 2009 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 Receipt and Holding Time

The sediment grab samples were received at the laboratory intact at 3.3°C on the day of collection, May 11, 2010. Aliquots of the "as received" samples were analyzed for TOC, Grain Size, and percent solids. All four samples had percent solids content of 24-33%; therefore, these sediment grab samples were air-dried, as required by the QAPP, prior to Congener analysis.

After air-drying, the percent solids content for all four samples was greater than 85%. These air-dried samples were extracted and analyzed within holding time.

Accuracy

The Method Blank was non-detect for all Congeners. There was no Equipment Blank required to be collected along with these grab samples.

The LCS and LCSD recovered all Congeners within criteria.

The MS/MSD analysis on sample S-10Y-G002-0-0 reported variable results. The spike level for the matrix spike was too low (i.e. unspiked sample contained the Congeners at a level over four times the matrix spike level) for several Congeners; therefore, for the affected Congeners, only MS/MSD precision was evaluated (see Precision section below). For other Congeners, the spike level was appropriate for the sample concentrations. Congeners 2,3,3',4,4'-Pentachlorobiphenyl (BZ#105), 2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ#170), 2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ#195), 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ#206), and Decachlorobiphenyl (BZ#209), were non-detect in the unspiked sample but were not recovered in the MS and MSD (0% recoveries). Therefore, these five Congener results were rejected (R) in the unspiked sample and are not usable for project objectives. Two other Congeners, 2,2',3,3',4,4'-Hexachlorobiphenyl (BZ128) and 2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ#180), which were also non-detect in the unspiked sample, recovered above criteria in the MS (> 140% recovery) but were not recovered in the MSD (0% recovery). Therefore, these two Congener results were estimated (DUJ) with indeterminate bias due to variable MS and MSD recoveries (shown as Low MS recovery + High MS recovery in the database), as shown in Table 2.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners indicating acceptable precision in the laboratory analysis of these samples.

MS/MSD precision was unacceptable for 2,4'-Dichlorobiphenyl (BZ#8), 2,2',3,5'-Tetrachlorobiphenyl (BZ#44), 2,2',5,5'-Tetrachlorobiphenyl (BZ#52), 2,3',4,4'-Tetrachlorobiphenyl (BZ#66), and 2,2',4,5,5'-Pentachlorobiphenyl (BZ#101) in the MS/MSD analysis of S-10Y-G002-0-0. The results for these five Congeners were estimated (DJ) with indeterminate bias due to the observed imprecision, as shown in Table 2.

The field duplicate (FD) samples in this SDG were: S-10Y-G002-0-0 and S-10Y-G002-0-0REP. FD relative percent differences (RPD) were acceptable for all 18 NOAA Congeners. These results are an indication of acceptable precision and representativeness of these sediment grab samples to the site location for PCB Congener analysis.

Sensitivity & Reporting

Samples were analyzed at various dilutions to report all Congeners within the instrument calibration range. All reporting limits (RLs) were increased as a consequence of the dilutions made (RLs were 50-250 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2009). However, Total PCBs (as the sum of all detected Congener results) 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 since all data were reported from analyses with DF > 1. 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-10Y-G002-0-0	2,3,3',4,4'-Pentachlorobiphenyl, 2,2',3,3',4,4',5-Heptachlorobiphenyl, 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-10Y-G002-0-0	2,4'-Dichlorobiphenyl, 2,2',3,5'-Tetrachlorobiphenyl, 2,2',5,5'-Tetrachlorobiphenyl, 2,3',4,4'-Tetrachlorobiphenyl, & 2,2',4,5,5'-Pentachlorobiphenyl	DJ	I	MS/MSD imprecision
S-10Y-G002-0-0	2,2',3,3',4,4'-Hexachlorobiphenyl & 2,2',3,4,4',5,5'-Heptachlorobiphenyl	DUJ	I	Low MS recovery + High 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; D = result reported from a dilution analysis (added by laboratory).

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): L1010588

Date(s) of Collection: July 14, 2010

Number / Type Samples & Analyses: 4 sediment grab 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: September 13, 2010
Revised: October 27, 2010

This report was revised since sample S-10L-G003-0-0 was re-extracted and re-analyzed by the laboratory, at the client's request, because the initial data reported by the laboratory for this sample did not compare to historical information on this location.

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. 1.0, prepared by Woods Hole Group, Inc., October 2009 (NBH OU1 QAPP Addendum 2009); 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[1]	Sample Type
S-10L-G001-0-0	L1010588-01	7/14/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10L-G002-0-0	L1010588-02	7/14/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-10L-G002-0-0REP	L1010588-03	7/14/10	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-10L-G002-0-0
S-10L-G003-0-0	L1010588-04	7/14/10	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.

[1] Total Organic Carbon (TOC) and Grain Size analyses were also performed on these samples; however, data validation for these parameters was not required.

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 2009 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 result for Decachlorobiphenyl (BZ#209) was rejected (R) in sample S-01L-G002-0-0 due to severe exceedance of QC criteria.

All other results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2009 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 2009 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 Receipt and Holding Time

The sediment grab samples were received at the laboratory intact at 3°C on the day of collection, July 14, 2010. Aliquots of the "as received" samples were analyzed for TOC, Grain Size, and percent solids. All four samples had percent solids content of 26-36%; therefore, these sediment grab samples were air-dried, as required by the QAPP, prior to Congener analysis.

After air-drying, the percent solids content for all four samples was greater than 85%. Samples were initially extracted on 7/22/10 and analyzed by 7/30/10. The air-dried aliquots of all samples were frozen after the initial extraction of the samples. Review of the results for sample S-10L-G003-0-0 suggested that the initial analysis may have been in error since the data did not compare to historical information for this location. The frozen sample of S-10L-G003-0-0 was thawed and re-extracted on 9/23/10 and re-analyzed on 10/7/10. Therefore, these air-dried samples were extracted and analyzed within holding time.

Accuracy

The Method Blanks were non-detect for all Congeners. There was no Equipment Blank required to be collected along with these grab samples.

Both sets of LCS and LCSD recovered all Congeners within criteria.

The MS/MSD analysis on sample S-10L-G002-0-0 reported variable results. The spike level for the matrix spike was too low (i.e. unspiked sample contained the Congeners at a level over four times the matrix spike level) for several Congeners; therefore, recovery results were not meaningful for these data. For other Congeners, the spike level was appropriate for the sample concentrations. Decachlorobiphenyl (BZ#209), was non-detect in the unspiked sample but was not recovered in the MS and MSD (0% recoveries). Therefore, this one Congener result was rejected (R) in the unspiked sample and is not usable for project objectives. One Congener, 2,2',3,3',4,4',5,5',6-Nonachloro-biphenyl (BZ#206), was recovered within criteria in the MSD but was not recovered in the MS; therefore, this Congener was estimated (DUJ) due to low MS recovery, as shown in Table 2.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA except for 2,4,4'-Trichlorobiphenyl (BZ#28) in the LCS/LCSD associated with the re-extraction of sample S-10L-G003-0-0. This Congener was estimated (DJ) in this sample as a consequence of the observed LCS/LCSD imprecision, as shown in Table 2.

MS/MSD precision was unacceptable for 2,2',4,5,5'-Pentachlorobiphenyl (BZ#101), 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ#138), and 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ#153) in the MS/MSD analysis of S-10L-G002-0-0. The results for these three Congeners were estimated (DJ) with indeterminate bias due to the observed imprecision, as shown in Table 2.

The field duplicate (FD) samples in this SDG were: S-10L-G002-0-0 and S-10L-G002-0-0REP. FD relative percent differences (RPD) were acceptable for all 18 NOAA Congeners. These results are an indication of acceptable precision and representativeness of these sediment grab samples to the site location for PCB Congener analysis. However, data users should note that the FD precision and

MS/MSD precision gave different indications of sample heterogeneity, which may be due to the complexity of these sediment samples.

Sensitivity & Reporting

All samples were analyzed at various dilutions to report all Congeners within the instrument calibration range. All reporting limits (RLs) were increased as a consequence of the dilutions made (RLs were 20-200 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2009). However, Total PCBs (as the sum of all detected Congener results) 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 since all data were reported from analyses with DF > 1. 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-10L-G002-0-0	DecaCB - Homologue	R		Unusable: < 0% MS Recovery
S-10L-G002-0-0	2,2',4,5,5'-Pentachlorobiphenyl, 2,2',3,4,4',5'-Hexachlorobiphenyl, & 2,2',4,4',5,5'-Hexachlorobiphenyl	DJ	I	MS/MSD imprecision
S-10L-G002-0-0	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	DUJ	L	Low MS recovery
S-10L-G003-0-0	2,4,4'-Trichlorobiphenyl	DJ	I	LCS/LCSD 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; D = result reported from a dilution analysis (added by laboratory).

Bias: L = Low; H = High; I = Indeterminate

Abbreviations used in Table 2:
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS= Laboratory Control Sample
LCSD = Laboratory Control Sample 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): L1013129

Date(s) of Collection: August 25, 2010

Number / Type Samples & Analyses 4 sediment grab 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: October 26, 2010

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. 1.0, prepared by Woods Hole Group, Inc., October 2009 (NBH OU1 QAPP Addendum 2009); 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[1]	Sample Type
S-10G-G001-0-0	L1013129-01	8/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10G-G002-0-0	L1013129-02	8/25/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-10G-G002-0-0REP	L1013129-03	8/25/10	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-10G-G002-0-0
S-10G-G003-0-0	L1013129-04	8/25/10	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.

[1] Total Organic Carbon (TOC) and Grain Size analyses were also performed on these samples; however, data validation for these parameters was not required.

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 2009 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.

All results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2009 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 2009 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 Receipt and Holding Time

The sediment grab samples were received at the laboratory intact at 3°C on the day of collection, August 25, 2010. Aliquots of the "as received" samples were analyzed for TOC, Grain Size, and percent solids. All four samples had percent solids content of 26-34%; therefore, these sediment grab samples were air-dried, as required by the QAPP, prior to Congener analysis.

After air-drying, the percent solids content for all four samples was greater than 90%. The air dried sediments were frozen to arrest holding time prior to extraction. Therefore, these air-dried samples were extracted and analyzed within holding time.

Accuracy

The Method Blank was non-detect for all Congeners. There was no Equipment Blank required to be collected along with these grab samples.

The LCS and LCSD recovered all Congeners within criteria

The MS/MSD analysis on sample S-10G-G002-0-0 reported variable results. The spike level for the matrix spike was too low (i.e. unspiked sample contained the Congeners at a level over four times the matrix spike level) for several Congeners; therefore, for the affected Congeners, only MS/MSD precision was evaluated (see Precision section below). For other Congeners, the spike level was appropriate for the sample concentrations. Three Congeners reported high MS recoveries; however, the unspiked sample was non-detect for these Congeners. Therefore, no action required.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners except 2,4'-Dichlorobiphenyl (BZ#8). The result for this Congener in all samples was estimated (DJ) due to the observed LCS/LCSD imprecision.

MS/MSD precision was unacceptable for all Congeners except 2,2',4,5,5'-Pentachlorobiphenyl (BZ#101) and 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ#153) in the MS/MSD analysis of S-10G-G002-0-0. The results for sixteen Congeners were estimated (DJ or DUJ) with indeterminate bias due to the observed imprecision, as shown in Table 2.

The field duplicate (FD) samples in this SDG were: S-10G-G002-0-0 and S-10G-G002-0-0REP. FD relative percent differences (RPD) were acceptable for all 18 NOAA Congeners. These results are an indication of acceptable precision and representativeness of these sediment grab samples to the site location for PCB Congener analysis. However, data users should note that the FD precision and MS/MSD precision gave different indications of sample heterogeneity, which may be due to the complexity of these sediment samples.

Sensitivity & Reporting

All samples were analyzed at various dilutions to report all Congeners within the instrument calibration range. All reporting limits (RLs) were increased as a consequence of the dilutions made (RLs were 20 to 1500 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2009). However, Total PCBs (as the sum of all detected Congener results) 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 since all data were reported from analyses with DF > 1. 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-10G-G002-0-0	2,2',5-Trichlorobiphenyl, 2,4,4'-Trichlorobiphenyl, 2,2',3,5'-Tetrachlorobiphenyl, 2,2',5,5'-Tetrachlorobiphenyl, 2,3',4,4'-Tetrachlorobiphenyl, 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',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-10G-G002-0-0	2,4'-Dichlorobiphenyl	DJ	I	LCS/LCSD imprecision + MS/MSD imprecision
S-10G-G001-0-0, S-10G-G002-0-0REP, & S-10G-G003-0-0	2,4'-Dichlorobiphenyl	DJ	I	LCS/LCSD 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; D = result reported from a dilution analysis (added by laboratory).

Bias: L = Low; H = High; I = Indeterminate

Abbreviations used in Table 2:
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Sample
LCSD = Laboratory Control Sample 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):	L1015314
Date(s) of Collection:	September 30, 2010
Number / Type: Samples & Analyses	4 sediment grab 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:	January 31, 2011

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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.

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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[1]	Sample Type
S-10S-G001-0-0	L1015314-01	9/30/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10S-G002-0-0	L1015314-02	9/30/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-10S-G002-0-0REP	L1015314-03	9/30/10	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-10S-G002-0-0
S-10S-G003-0-0	L1015314-04	9/30/10	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.

[1] Total Organic Carbon (TOC) and Grain Size analyses were also performed on these samples; however, data validation for these parameters was not required.

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 2010 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.

All results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2010 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.

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Sample Receipt and Holding Time

The sediment grab samples were received at the laboratory intact at 3°C on the day of collection, September 30, 2010. Aliquots of the "as received" samples were analyzed for TOC, Grain Size, and percent solids. All four samples had percent solids content of 29-33%; therefore, these sediment grab samples were air-dried, as required by the QAPP, prior to Congener analysis.

After air-drying, the percent solids content for all four samples was greater than 91%. The air-dried sediments were frozen to arrest holding time prior to extraction. Therefore, these air-dried samples were extracted and analyzed within holding time.

Accuracy

The Method Blank was non-detect for all Congeners. There was no Equipment Blank required to be collected along with these grab samples.

The LCS and LCSD recovered all Congeners within criteria.

The MS/MSD analysis on sample S-10S-G002-0-0 reported variable results. The spike level for the matrix spike was not appropriate for several Congeners (i.e., Congener concentrations in the field sample were greater than four times the matrix spike level); therefore, for the affected Congeners, only MS/MSD precision was evaluated (see Precision section below). For other Congeners, the spike level was appropriate for the sample concentrations and these Congeners were all recovered within criteria; therefore, no action was required. Further details are presented in the Data Validation Checklist.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners.

MS/MSD precision was acceptable for all Congeners except 2,2',5-Trichlorobiphenyl (BZ#18) in the MS/MSD analysis of S-10S-G002-0-0. The result for this one Congener in this sample was estimated (DJ) with indeterminate bias due to the observed imprecision, as shown in Table 2.

The field duplicate (FD) samples in this SDG were: S-10S-G002-0-0 and S-10S-G002-0-0REP. FD relative percent differences (RPD) were acceptable for all 18 NOAA Congeners except 2,2',5-Trichlorobiphenyl (BZ#18) and 2,2',3,5'-Tetrachlorobiphenyl (BZ#44). The results for these two Congeners were estimated (DJ) in samples S-10S-G002-0-0 and S-10S-G002-0-0REP with indeterminate bias due to FD imprecision. These results are an indication of variable precision and representativeness of these sediment grab samples to the site location for PCB Congener analysis.

Sensitivity & Reporting

All samples were analyzed at various dilutions to report all Congeners within the instrument calibration range. All reporting limits (RLs) were increased as a consequence of the dilutions made (RLs were 68 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010). However, Total PCBs (as the sum of all detected Congener results) 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 since all data were reported from analyses with DF > 1. 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-10S-G002-0-0	2,2',5-Trichlorobiphenyl	DJ	I	MS/MSD imprecision + FD imprecision
S-10S-G002-0-0	2,2',3,5'-Tetrachlorobiphenyl	DJ	I	FD imprecision
S-10S-G002-0-0REP	2,2',5-Trichlorobiphenyl & 2,2',3,5'-Tetrachlorobiphenyl	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; D = result reported from a dilution analysis (added by laboratory).

Bias: L = Low; H = High; I = Indeterminate

Abbreviations used in Table 2:
MS = Matrix Spike
MSD = Matrix Spike Duplicate
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):	L1018719
Date(s) of Collection:	November 22, 2010
Number / Type: Samples & Analyses	4 sediment grab 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:	January 31, 2011

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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.

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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[1]	Sample Type
S-10N-G001-0-0	L1018719-01	11/22/10	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-10N-G002-0-0	L1018719-02	11/22/10	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
S-10N-G002-0-0REP	L1018719-03	11/22/10	Air-dried Sediment	18 NOAA Congeners	Field Duplicate of S-10N-G002-0-0
S-10N-G003-0-0	L1018719-04	11/22/10	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.

[1] Total Organic Carbon (TOC) and Grain Size analyses were also performed on these samples; however, data validation for these parameters was not required.

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 2010 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.

All results were considered usable for project decisions based on a comparison to the NBH OU1 QAPP Addendum 2010 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 2010 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 Receipt and Holding Time

The sediment grab samples were received at the laboratory intact at 4.4°C on the day of collection, November 22, 2010. Aliquots of the "as received" samples were analyzed for TOC, Grain Size, and percent solids. All four samples had percent solids content of 28-33%; therefore, these sediment grab samples were air-dried, as required by the QAPP, prior to Congener analysis.

After air-drying, the percent solids content for all four samples was greater than 97%. The air-dried sediments were frozen to arrest holding time prior to extraction. Therefore, these air-dried samples were extracted and analyzed within holding time.

Accuracy

The Method Blank was non-detect for all Congeners. There was no Equipment Blank required to be collected along with these grab samples.

The LCS and LCSD recovered all Congeners within criteria.

The MS/MSD analysis on sample S-10N-G002-0-0 reported variable results. The spike level for the matrix spike was not appropriate for several Congeners (i.e., Congener concentrations in the field sample were greater than four times the matrix spike level); therefore, for the affected Congeners, only MS/MSD precision was evaluated (see Precision section below). For other Congeners, the spike level was appropriate for the sample concentrations and these Congeners were all recovered within criteria; therefore, no action was required. Further details are presented in the Data Validation Checklist.

Precision

LCS/LCSD precision was acceptable for all 18 NOAA Congeners.

MS/MSD precision was acceptable for all Congeners in the MS/MSD analysis of S-10S-G002-0-0.

The field duplicate (FD) samples in this SDG were: S-10N-G002-0-0 and S-10N-G002-0-0REP. FD relative percent differences (RPD) were acceptable for all 18 NOAA Congeners except 2,4,4'-Trichlorobiphenyl (BZ#28) and 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ#138). The results for these two Congeners were estimated (DJ) in samples S-10N-G002-0-0 and S-10N-G002-0-0REP with indeterminate bias due to FD imprecision.. These results are an indication of variable precision and representativeness of these sediment grab samples to the site location for PCB Congener analysis.

Sensitivity & Reporting

All samples were analyzed at various dilutions to report all Congeners within the instrument calibration range. All reporting limits (RLs) were increased as a consequence of the dilutions made (RLs were 34 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010). However, Total PCBs (as the sum of all detected Congener results) 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 since all data were reported from analyses with DF > 1. 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-10N-G002-0-0 & S-10N-G002-0-0REP	2,4,4'-Trichlorobiphenyl & 2,2',3,4,4',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; D = result reported from a dilution analysis (added by laboratory).

Bias: L = Low; H = High; I = Indeterminate

Abbreviations used in Table 2:
FD = Field Duplicate

FINAL

NORTH OF WOOD STREET POST-REMEDIATION MONITORING

APRIL 2011 MONITORING EVENT

NEW BEDFORD HARBOR SUPERFUND SITE, OU #1

Contract No. W912WJ-09-D-0001-0010-03



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

July 13, 2011

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FINAL

NORTH OF WOOD STREET POST-REMEDIATION MONITORING

APRIL 2011 MONITORING EVENT

NEW BEDFORD HARBOR SUPERFUND SITE, OU #1

Contract No. W912WJ-09-D-0001-0010-03

July 13, 2011

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

Prepared by:
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81 Technology Park Drive
East Falmouth MA 02536
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Table of Contents

EXECUTIVE SUMMARY ES-1

1.0 INTRODUCTION 1

1.1 NEW BEDFORD HARBOR SUPERFUND SITE 1

1.2 NORTH OF WOOD STREET AREA 3

1.3 PROJECT OBJECTIVES AND SCOPE 3

2.0 METHODS 7

2.1 SEDIMENT COLLECTION 7

2.1.1 Shoreline Soils 7

2.1.2 River Sediments 7

2.2 SEDIMENT CORE PROCESSING 8

2.3 POLYCHLORINATED BIPHENYL ANALYSES 9

2.4 QUALITY ASSURANCE/QUALITY CONTROL 10

2.4.1 Decontamination 10

2.4.2 Field-Based Quality Control Samples 10

2.4.3 Laboratory-Based Quality Control Samples 11

3.0 RESULTS 13

3.1 SEDIMENT AND SHORELINE SAMPLE COLLECTION 13

3.2 PHYSICAL CHARACTERISTICS 13

3.3 POLYCHLORINATED BIPHENYLS 13

3.3.1 River Sediments 16

3.3.2 Shoreline Soils 16

3.4 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES 16

3.4.1 Field Based Quality Control Samples 16

3.4.2 Laboratory Based Quality Control Samples 16

4.0 DISCUSSION 17

4.1 RIVER SEDIMENTS 17

4.2 SHORELINE SOILS 21

5.0 REFERENCES 23

APPENDIX A. NORTH OF WOOD STREET CORE PHOTOGRAPHS AND FIELD LOGS (ON CD) A-1

APPENDIX B. ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA (ON CD) B-1

List of Figures

Figure 1. Basemap of New Bedford Harbor Superfund Site in Southeastern, MA 1
Figure 2. Basemap of the North of Wood Street Area and April 2011 sample locations 5
Figure 3. Total PCBs in Core Samples from NWS Area in April 2011 (left-hand image shows northern stations, right-hand, southern) 15
Figure 4. Station specific trends in total PCBs for river sediments in NWS area 19
Figure 5. System-wide trends in the average Total PCB concentration for river stations in NWS area 20
Figure 6. Station-Specific Trends in Total PCBs for Shoreline Soils in NWS Area ... 22

List of Tables

Table 1. Summary of Samples Collected at NWS Area in April 2011 6
Table 2. Total PCBs in Core Samples from NWS Area in April 2010 14
Table 3. Total PCBs in river sediments at NWS area 18
Table 4. Total PCBs in Shoreline Soils at NWS Area 21

EXECUTIVE SUMMARY

Environmental sampling and analysis was performed for the area north of the Wood Street Bridge (NWS) in April 2011 in support of remedial dredging activities at the New Bedford Harbor Superfund Site. In 2002–2003, as part of a site remediation, approximately 15,000 cubic yards of contaminated material was removed from the NWS area. The primary contaminants of concern in the NWS area are polychlorinated biphenyls (PCBs). The NWS area was remediated using a dry excavation method to eliminate the potential for sediment resuspension and redistribution of contaminants. Annual investigations have been conducted since 2004 to assess the effectiveness of prior remediation and potential recontamination of this area due to sediment transport from unremediated areas. Post-remediation sampling conducted in 2004 identified a shoreline area in Acushnet that should have been included in the 2002–2003 clean-up but was inadvertently neglected; this area was remediated in 2005.

Twenty-one stations in the NWS area were sampled in April 2011, including eleven river sediment locations and ten marsh soil locations along the eastern and western shores of the Acushnet River. Many stations were sampled at the direction of the United States Army Corps of Engineers (USACE) and have been sampled throughout the eight year history of the post-remediation monitoring program. River sediments were generally comprised of a layer of fine black silt and organic detritus underlain by sand, clay or silt. River sediments located closer to the shore and farther upstream were comprised of brown organic sand and silt underlain by gravel and/or sand. Most shoreline soils were comprised of brown organic silt/fine sand underlain by coarse sand.

In 2011, analysis of total PCB concentrations in river sediment samples ranged from 9.91 milligrams per kilograms (mg/kg) to 179.17 mg/kg dry weight. These values are significantly larger than the concentrations observed during 2010 monitoring, but on par with previous years (2004, 2007-2008) of monitoring. The samples with the highest concentrations of total PCB (>50 mg/kg) were measured in sediment from stations in close proximity to the Wood Street Bridge, and towards the center of the river channel just south of a Combined Sewer Overflow (CSO). Total PCB concentrations in all 2011 shoreline soil samples were all below the applicable recreational cleanup criteria (25 mg/kg). All soil samples except one (30W) located in residential areas are below the applicable limit for residential areas (1 mg/kg).

Sediment data from the 2003–2011 monitoring period reveal that total PCB concentrations in river sediment at the NWS area are spatially and temporally variable. The heterogeneous distribution of the PCB concentrations reflects the differences in bulk sediment characteristics and the highly dynamic nature of the system. Total PCB concentrations in 2003 following the remediation of the NWS area in the winter of 2002-2003 were the lowest measured during 2003–2011. However, the total PCB concentrations measured since 2003 (except 2010) have increased and have remained higher than the concentrations measured in 2003.

Conditions in the river prior to the April 2011 sampling were different than in 2010. The April 2010 sampling event took place after the New Bedford region and Acushnet River

watershed experienced a series of extreme precipitation events in late March 2010. Although no analysis has been performed to support this hypothesis, the observed decrease in concentrations of PCBs in both river and shoreline sediment samples collected in April 2010 may be attributed to a natural "flushing" of the NWS area by the high flow conditions experienced in the Acushnet River during late March 2010. No such period of extreme precipitation was recorded in the weeks preceding 2011 sampling, and total PCB values during this time are more likely to represent average conditions of the study area.

The fluctuation of PCB measurements between the ten sampling events is thought to be caused by the result of natural tidal processes transporting contaminated sediment from the upper harbor source area, and countered by high spring river flows that flush contaminants downstream. Although the resuspension and transport of sediments is natural and unavoidable (e.g., tide and storms), the resuspension of contaminated sediment due to the New Bedford Superfund Site remediation activities is controllable. To that end, remediation dredging is performed using methods of minimal disturbance (e.g., hydraulic dredging), and a water quality monitoring program is used to ensure that excessive resuspension of sediment during remediation activities does not occur, or is limited. Annual sediment monitoring will continue at the NWS area as needed to assess the potential for recontamination from the unremediated harbor areas via natural and anthropogenic processes.

1.0 INTRODUCTION

1.1 NEW BEDFORD HARBOR SUPERFUND SITE

The New Bedford Harbor Superfund 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.

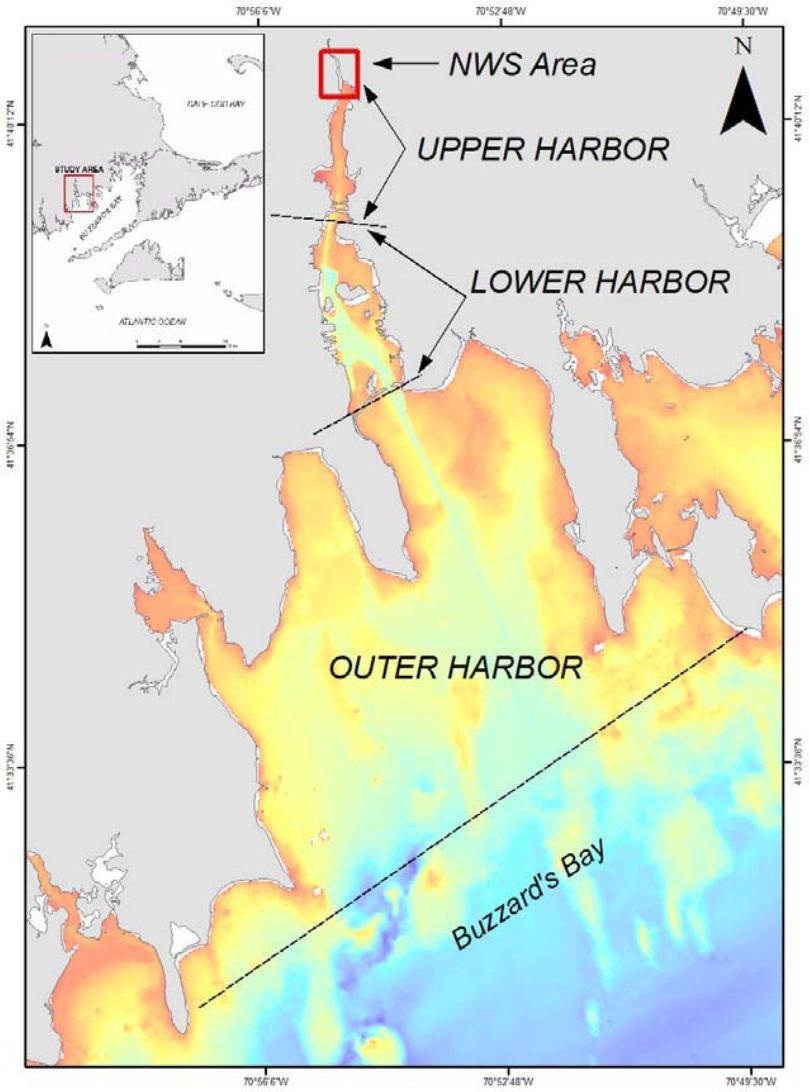

Figure 1. Basemap of New Bedford Harbor Superfund Site in Southeastern, MA

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 (VHB, 1996). 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.

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, is 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, 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).

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.

1.2 NORTH OF WOOD STREET AREA

Located at the far northern end of the Upper Harbor is the North of Wood Street (NWS) area. This location was prioritized for restoration activities based on the high levels of PCB contamination (especially in intertidal and shoreline areas) and the proximity to shoreline residential and recreational land use areas. The NWS area includes in-river sediments and marsh soils on the eastern and western shores of the river. The NWS study area extends from approximately 250-ft south of the Wood Street bridge to approximately 0.25 miles north of the bridge.

Sediments and marsh soils at the NWS area previously had PCB concentrations as high as 46,000 mg/kg. The 1998 ROD clean-up criteria that apply to the NWS area are: 1 mg/kg for residential shoreline areas; 10 mg/kg for sub-tidal sediments and mudflats; 25 mg/kg for the top foot of recreational land use shoreline soils; and 50 mg/kg for shoreline soils deeper than the top foot in residential and recreational land use areas.

In the winter of 2002-2003 approximately 15,000 cubic yards of material was removed from the NWS area. The site was remediated using temporary dams and pumps to divert river water around the site. This allowed excavation activities to be conducted on dry sediments and soils, minimizing the potential for sediment resuspension and recontamination. Clean fill was used to restore the river banks, but sub-tidal areas were left at the depth of excavation (i.e., not backfilled). Marsh and upland vegetation was planted above the low water line to stabilize and restore the shoreline. In August of 2004 post-remediation sampling revealed elevated PCB concentrations on the eastern shoreline of the NWS area, and in certain sub-tidal locations. Elevated concentrations were found above the high tide line suggesting that incomplete remediation was a more likely cause than recontamination from in-river sources. Additional remediation and restoration efforts were conducted in December 2005 to remove the remaining contamination. Samples collected before and after this effort showed a reduction in shoreline PCB concentrations (ENSR, 2006). Additional sampling was conducted in 2006, 2007, 2008, and 2010.

1.3 PROJECT OBJECTIVES AND SCOPE

North of Wood Street sampling occurs on an annual, or as needed basis as part of an environmental monitoring program coordinated with the New Bedford Harbor Superfund Site. The objective of the NWS monitoring program is to assess the potential recontamination of this previously remediated area due to sediment transport from unremediated areas or from areas undergoing active remedial dredging. In 2011, sample stations included 11 sediment stations in the river, 4 soil locations in the remediated

marsh area on the east side of the river south of River View Park, and 6 shoreline stations on the lumber yard site on the west side of the river (Figure 2). These 21 stations were sampled April 14-15, 2011 as part of the 2010 Environmental Monitoring, Sampling, and Analysis of the New Bedford Superfund Site performed by Woods Hole Group under contract to the USACE NAE.

Twenty-one (21) locations have historically been sampled in the NWS area. At the request of the USEPA and USACE, WHG modified four of the 2011 sample collection stations from those sampled in previous years. The change in sample station location was performed to increase the spatial coverage of the monitoring effort. Sediment samples were not collected at shoreline stations NWS-30E, NWS-36 and NWS-38, and river station C009-038. These four stations were replaced by the addition of shoreline stations: NWS-40, NWS-41, NWS-42, and NWS-43 (Table 1).

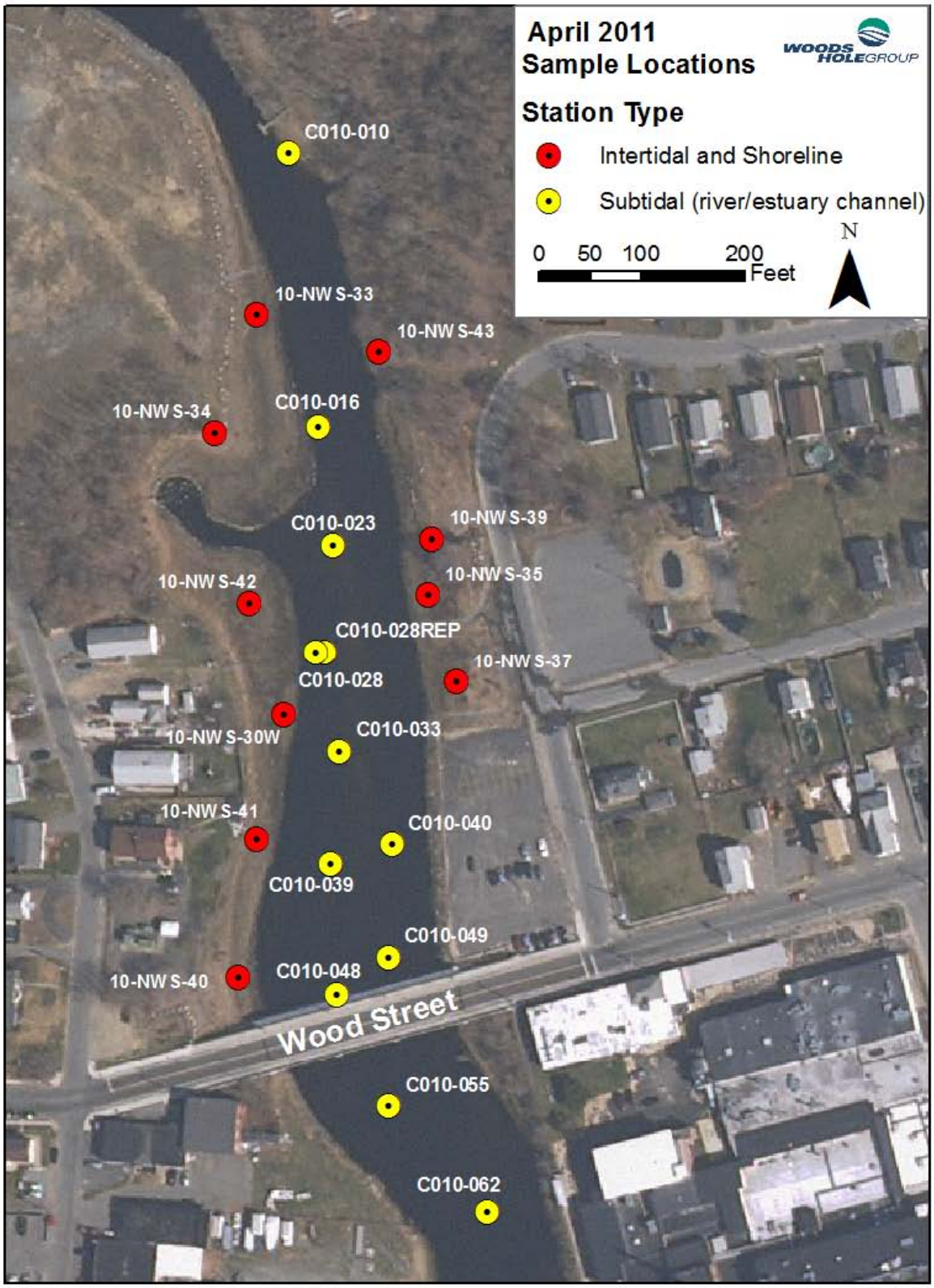

Figure 2. Basemap of the North of Wood Street Area and April 2011 sample locations

Table 1. Summary of Samples Collected at NWS Area in April 2011

Station	Sample ID	Sample Type	Easting (NAD83 MA ft)	Northing (NAD83 MA ft)
10-NWS-35	S-11A-C001-0-0.5	shoreline soil	815502.755	2708768.054
	S-11A-C001-0.5-1.0			
10-NWS-39	S-11A-C002-0-0.5	shoreline soil	815506.934	2708822.743
	S-11A-C002-0.5-1.0			
10- NWS-37	S-11A-C003-0-0.5	shoreline soil	815530.654	2708683.218
	S-11A-C003-0.5-1.0			
10-NWS-43	S-11A-C004-0-0.5	shoreline soil	815455.607	2709004.594
	S-11A-C004-0.5-1.0			
10- NWS-33	S-11A-C005-0-0.5	shoreline soil	815336.983	2709040.224
	S-11A-C005-0.5-1.0			
10- NWS-34	S-11A-C006-0-0.5	shoreline soil	815296.285	2708926.08
	S-11A-C006-0.5-0.8			
10-NWS-30W	S-11A-C007-0-0.5	shoreline soil	815362.403	2708651.701
	S-11A-C007-0.5-1.0			
10-NWS-40	S-11A-C008-0-0.5	shoreline soil	815318.616	2708396.319
	S-11A-C008-0.5-0.8			
10-NWS-41	S-11A-C009-0-0.5	shoreline soil	815335.915	2708530.052
	S-11A-C009-0.5-1.0			
10-NWS-42	S-11A-C010-0-0.5	shoreline soil	815329.786	2708760.799
	S-11A-C010-0.5-1.0			
C010-033	S-11A-C011-0-0.5	river sediment	815417.287	2708615.636
	S-11A-C011-0.5-1.0			
C010-023	S-11A-C012-0-0.5	river sediment	815411.365	2708816.017
	S-11A-C012-0.5-0.9			
C010-010	S-11A-C013-0-0.5	river sediment	815367.775	2709198.342
	S-11A-C013-0-0.9			
C010-016	S-11A-C014-0-0.5	river sediment	815396.918	2708931.312
	S-11A-C014-0.5-1.0			
C010-028	S-11A-C015-0-0.5	river sediment	815393.859	2708712.65
	S-11A-C015-0.5-1.0			
C010-028REP	S-11A-015-0-0.5-REP	river sediment	815393.859	2708712.65
C010-039	S-11A-C016-0-0.5	river sediment	815408.929	2708506.257
	S-11A-C016-0.5-1.0			
C010-040	S-11A-C017-0-0.5	river sediment	815467.993	2708524.881
	S-11A-C017-0.5-0.9			
C010-048	S-1A-C018-0-0.5	river sediment	815414.353	2708378.753
	S-11A-C018-0.5-1.0			
C010-049	S-11A-C019-0-0.5	river sediment	815464.187	2708415.534
	S-11A-C019-0.5-1.0			
C010-055	S-11A-C020-0-0.5	river sediment	815465.183	2708269.78
	S-11A-C020-0.5-1.0			
C010-062	S-11A-C021-0-0.5	river sediment	815561.503	2708167.191
	S-11A-C021-0.5-1.0			

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 2010a) and Quality Assurance Project Plan (Woods Hole Group 2010b). Twenty-one (21) locations were sampled in 2011, including 11 sediment stations in the river and 10 soil stations located at recreational land use shoreline soil areas along the east and west side of the river (Figure 2). To allow accurate comparisons over time, station locations were chosen based on locations sampled previously in 2006, 2007, 2008, and 2010.

2.1 SEDIMENT COLLECTION

All locations for the collection of sediment cores were approved by the USACE NAE and USEPA. Locations were provided in Massachusetts State Plane Mainland coordinates, and were converted into latitude and longitude using the program Corpscon 6. Woods Hole Group navigation system required all waypoints to be entered in geographic coordinates. Actual samples locations were recorded in geographic coordinates on the sediment sampling field logs and reentered into Corpscon 6 to convert the actual coordinates back into Massachusetts State Plane Mainland coordinates.

Sample collection data, including collection date and time, station coordinates, and sample ID, were documented on Sediment Sampling Log forms (Appendix A).

2.1.1 Shoreline Soils

Shoreline soil samples were collected using a soil auger. When sampling with the soil auger, the auger head was pushed and rotated into the sediment to a depth of 6 inches, as determined by measuring tape or other measuring device. The sediment was removed from the auger using a cleaned spoon to push the soil into clean and labeled plastic re-sealable bags. The soil auger and spoon were decontaminated using site water (Acushnet River water collected upstream of sampling activity) and Liquinox. This process was repeated until the required core depth was reached, at least one foot, where each sample was placed into its own labeled plastic bag. Once all sampling was complete, samples were homogenized on-site in the plastic bags they were placed in then transferred to 8 oz. labeled glass jars and stored on ice. All samples were then shipped to Alpha Analytical Laboratories for PCB congener (NOAA 18) analysis or archiving.

The method described here, using plastic bags to contain discrete sample intervals, represents a deviation from the method proposed in the FSP. The method described here was adopted during field sampling procedures because it was a cleaner, more efficient and accurate way of collecting the samples. This method was subsequently discussed with, and approved by, USACE-NAE Project Chemist Mark Koenig and will be utilized in future auger sampling events.

2.1.2 River Sediments

Sediment cores were collected using a push-core sampling device and a 2 5/8-inch inner diameter clear polycarbonate core barrel. A piston assembly inside the core barrel was used to create suction, thereby preventing excessive compaction during penetration and

loss of sediment from the bottom of the barrel during recovery. In all cases, a one foot core was targeted and obtained at every station except NWS-34, NWS-40, C010-023, C010-010 and C010-040.

The piston assembly was positioned just inside the leading end of the core liner and the piston line was held loosely on deck. The coring assembly was lowered into the water until the leading end of the core bore barrel was positioned at the sediment-water interface. At this point, the piston attachment line was secured to the vessel, fixing the elevation of the piston assembly and creating a suction point at the sediment-water interface. 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 recovery of the core onto the vessel, the bottom end of the barrel was capped with a plastic cap. After a rinse of the coring device using site water, the core liner was removed from the socket, the piston was removed from the core liner, and the top of the core liner was fitted with a plastic cap. The core barrel was stored in a vertical position until subsequent processing could take place.

2.2 SEDIMENT CORE PROCESSING

River sediment cores were brought back to the field laboratory at the Sawyer Street facility for documentation, internal inspection, and subsampling. The internal inspection process included: 1) splitting open the core barrel, 2) archival photography, and 3) a geological description of the core, where the transitions between each type of sediment were recorded on a log sheet.

To begin internal inspection, each core barrel was placed into a clean 4 inch gutter and split by cutting along the entire length of the polycarbonate barrel with power shears. Cuts were made on opposite sides of the core barrel, 180 degrees apart. A clean piece of stainless steel wire (18 gauge) was used to slice through the middle of the barrel, using the two cuts in the barrel as guidelines. Care was used to prevent the wire from pulling obstructions (shells, rocks) down the core barrel and potentially mixing sediment layers. After splitting, the cores were rolled 90 degrees and separated. Following separation, the core was photographed (Appendix A); each photograph contains the following elements in the frame:

- The sediment core
- A tape measure (or equivalent) marked in decimal feet lying parallel to length of the core. The sediment-water interface, or top of core should be aligned with the
- top (0-feet) of the tape measure.
- A whiteboard or equivalent was placed next to the core with the following written information:
    - Sample ID – an alpha numeric code that identifies sample matrix, sampling year, station location, and depth interval sampled
    - Sample Date
    - Core length

After photo documentation was complete, the core was geologically described by a trained technician. A description of the sediment texture, sorting, consistency/firmness,

color, and odor was noted on the Sediment Sampling Log forms (appendix A). An ASTM D 2488-06 soil classification was assigned to each sediment layer, and color descriptions followed the Munsell color classification.

Following description and photography, each core was subsampled for chemical analysis. Two 6-inch composite (0–0.5', 0.5–1.0') subsamples were taken from each core, homogenized, and placed into separate sample containers. The sample from the 0.0–0.5 foot interval was submitted for PCB analysis. The sample from the bottom interval (0.5–1.0') was archived until further notice by the USACE. Samples were collected into pre-cleaned, 8-oz glass jars with Teflon lined lids. All samples were held on ice while in the field and then sent to Alpha Analytical Laboratories for PCB congener (NOAA 18) analysis or archiving.

2.3 POLYCHLORINATED BIPHENYL ANALYSES

The methods used by AAL are summarized below and more details are in the Quality Assurance Project Plan (Woods Hole Group 2010b).

During sample preparation at the lab, an aliquot of a well-mixed, homogeneous sediment sample is accurately measured for sample preparation; generally, 5 grams (g) of sediment is extracted from a 30 g field sample. The New Bedford Harbor QAPP requires 30 g of field sample 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. 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 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 a modified USEPA Method 8082 (WHG 2010b). 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) and Pattern Recognition (PR). Concentrations are calculated from the ECD response using internal standard techniques. Sample results were reported in micrograms per kilogram (µg/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.

PCB congener results are reported here in mg/kg dry weight and to two significant figures in this report. Concentrations of total PCB were calculated using the congener results. Total PCB was calculated as the sum of the 18 NOAA congeners multiplied by the project-specific correction factor of 2.6. A value of zero (0) was used in the summation for non-detects.

2.4 QUALITY ASSURANCE/QUALITY CONTROL

2.4.1 Decontamination

All of the sampling equipment was decontaminated prior to use in the field using the procedure specified in EPA Region II, CERCLA Quality Assurance Manual from October 1989, Revision 1 (WHG 2010b). The EPA Region II procedures used for decontamination are summarized below (solvents used during decontamination activities were collected and stored for disposal at the laboratory):

1) Rinse with tap water or site water for gross decontamination
2) Clean with non-phosphate detergent (e.g. Liquinox) and tap water
3) Rinse with Milli-Q or deionized water
4) Rinse with acetone[a]
5) Let air-dry

[a] Used if oily contamination is apparent and only on metal/stainless steel surfaces.

During field sampling all equipment was decontaminated between stations to prevent cross-contamination. However, the procedure described here was modified by using site water instead of tap water or deionized water at step 3 for equipment rinses. All equipment utilized a gross decontamination rinse with site water, cleaning with Liquinox, and hand rinse with fresh site water. There was no apparent need to use acetone for a final rinse of equipment.

Due to changes in shoreline soil sample collection procedures adopted in the field, equipment was also decontaminated between discrete samples intervals collected by the soil auger.

2.4.2 Field-Based Quality Control Samples

One replicate or field duplicate sediment sample was collected during the April 2011 sampling event. The replicate sample was collected adjacent to the field sample collected at Station 028 (within 1 foot). The purpose of this sample was to ensure that field procedures did not affect the quality of the data. Field duplicates samples are used to evaluate the sampling procedure and analytical precision. The sample was collected using the same techniques, and was handled, containerized, preserved, stored and transported in the same manner as field samples.

An equipment blank sample was also collected. This sample was collected by pouring laboratory quality deionized water through the cleaned auger between two sample collections. The purpose of this sample was to verify that decontamination methods were adequate. All field-based QC samples were analyzed by the same laboratory.

2.4.3 Laboratory-Based Quality Control Samples

A routine suite of laboratory-based quality control (QC) samples were prepared with each set of field samples to evaluate data quality in terms of accuracy and precision. For each batch of 20 or fewer samples, the approved QAPP calls for quality control samples for PCB analysis included one procedural blank (also called a method blank or procedural method blank), one laboratory control sample (LCS), one matrix spike (MS) and one matrix spike duplicate (MSD).

In addition, a quality assurance (QA) split sample was sent to ESS laboratory in Cranston, Rhode Island for comparison to the AAL analyzed field sample at Station 033. The QA split sample from Station 033 was analyzed and reported in the same manner as all AAL analyzed samples. The QA split sample result from ESS Laboratory was reported to the USACE Project Chemist, Mark Koenig.

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3.0 RESULTS

Results from the 2010-2011 NWS sediment monitoring activities are described below. Complete field data collection and description logs, along with digital photographs of the split cores are provided in Appendix A. Analytical reports from AAL are provided in Appendix B.

3.1 SEDIMENT AND SHORELINE SAMPLE COLLECTION

Twenty one (21) locations were sampled from the NWS area in April, 2011 (Figure 2). A total of 12 surface sediment samples (11 field samples + 1 field duplicate) were collected from the Acushnet River. A total of 10 shoreline soil samples were also collected; four samples were collected from the eastern shoreline and six from the western shoreline. Sample collection data, including station ID, sample IDs, sample type, and station coordinates are summarized in Table 1. All samples were collected on April 14–15, 2011 and cores were split open for internal description and subsampling on April 15, 2010.

3.2 PHYSICAL CHARACTERISTICS

River sediment cores were visually characterized and physical characteristics, including material type, color, consistency, particle size, and odor, are documented on the Sediment Sampling Log forms provided in Appendix A. Digital photographs of the cores are also provided in Appendix A.

The physical characteristics of surface sediments collected at most river stations were similar, and were characterized by a thin layer of fine black silt with organic debris underlain by sand, clay or silt. The physical characteristics of sediment located closer to the shoreline and farther upstream were different compared to in-river sediment locations. For example, Stations 010 and 016, located at the northern boundary of the NWS area, were comprised of fine to coarse, grey-brown sand and gravel.

Shoreline soils were not described since the sample collection differed from that used for coring.

3.3 POLYCHLORINATED BIPHENYLS

All NWS surface (0–0.5') sediment samples were analyzed for the NOAA 18 PCB congeners. Determination of the total PCB concentration was calculated as the sum of the NOAA 18 congeners, multiplied by the site-specific correction factor of 2.6. A value of zero (0) was used in the case of non-detects. Total PCB concentrations are summarized in Table 2 and displayed in Figure 3. Complete laboratory analytical data are provided in Appendix B.

Table 2. Total PCBs in Core Samples from NWS Area in April 2010

River Sediment			Shoreline Soil		
Station ID	**Sample ID**	**Total PCBs (mg/kg)**	**Station ID**	**Sample ID**	**Total PCBs (mg/kg)**
C010-033	S-11A-C011-0-0.5	127.55	10-NWS-35	S-11A-C001-0-0.5	0.26
C010-023	S-11A-C012-0-0.5	14.16	10-NWS-39	S-11A-C002-0-0.5	0.40
C010-010	S-11A-C013-0-0.5	9.91	10-NWS-37	S-11A-C003-0-0.5	0.07
C010-016	S-11A-C014-0-0.5	46.54	10-NWS-43	S-11A-C004-0-0.5	0.15
C010-028	S-11A-C015-0-0.5	48.27	10-NWS-33	S-11A-C005-0-0.5	0.09
C010-028REP	S-11A-C015-0-0.5 REP	111.94	10-NWS-34	S-11A-C006-0-0.5	0.18
C010-039	S-11A-C016-0-0.5	179.17	10-NWS-30W	S-11A-C007-0-0.5	1.51
C010-040	S-11A-C017-0-0.5	29.87	10-NWS-40	S-11A-C008-0-0.5	0.09
C010-048	S-11A-C018-0-0.5	55.76	10-NWS-41	S-11A-C009-0-0.5	0.30
C010-049	S-11A-C019-0-0.5	12.99	10-NWS-42	S-11A-C010-0-0.5	0.08
C010-055	S-11A-C020-0-0.5	157.27			
C010-062	S-11A-C021-0-0.5	19.92			

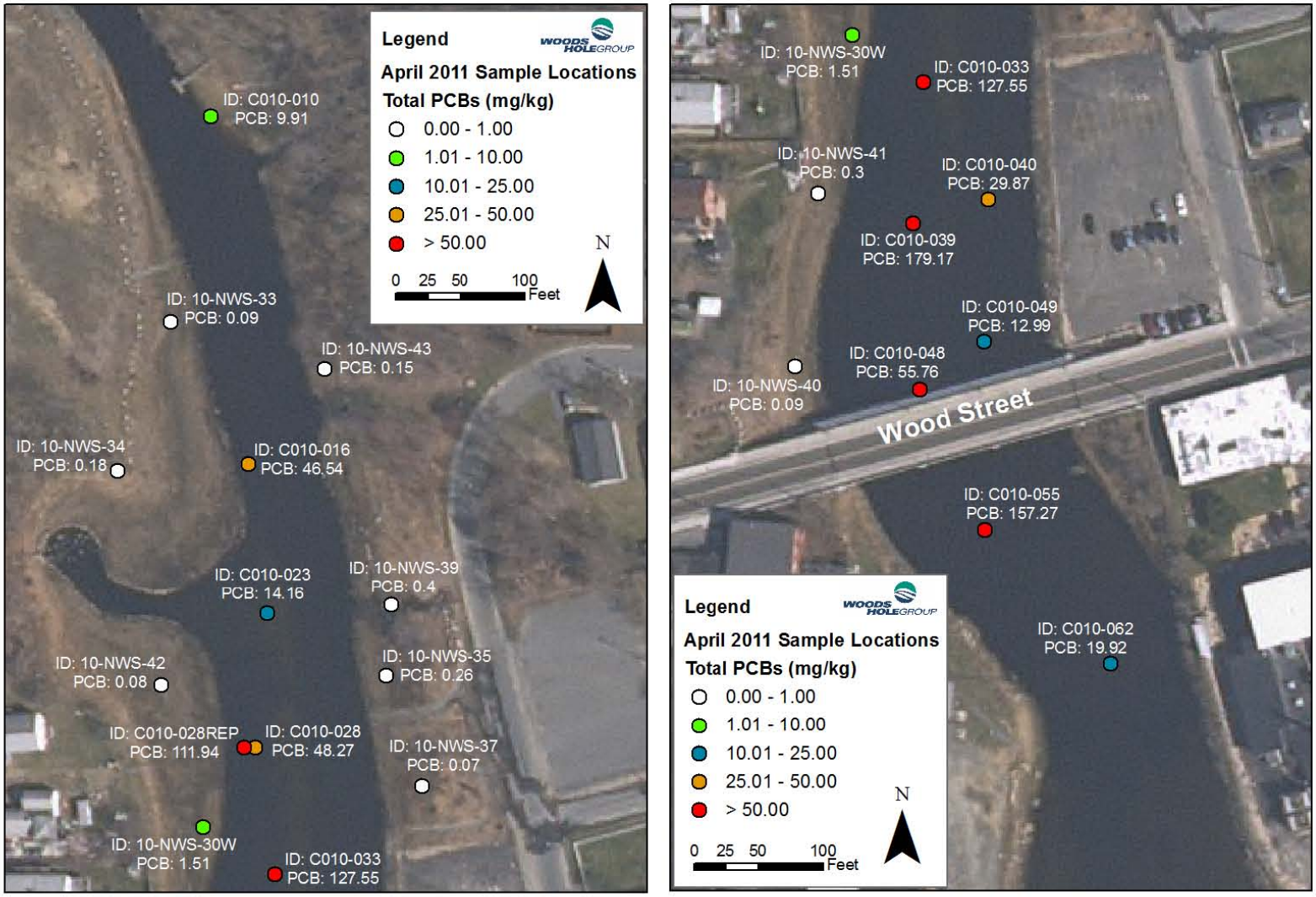

Figure 3. Total PCBs in Core Samples from NWS Area in April 2011 (left-hand image shows northern stations, right-hand, southern)

3.3.1 River Sediments

Total PCB concentrations in river sediment samples ranged from 9.91 mg/kg to 179.17 mg/kg. The highest concentrations of total PCBs (>50 mg/kg) were measured in sediment samples from Stations 028-REP, 033, 039, 048 and 055, located towards the center of the river channel. Slightly lower concentrations (<50 mg/kg) of total PCBs were measured in sediment samples collected closest to the shoreline and at stations farthest upstream (Figure 3). Lower concentrations of PCBs were also measured in sediment collected at station 062.

3.3.2 Shoreline Soils

Total PCB concentrations in the shoreline soils ranged from 0.07 mg/kg to 1.51 mg/kg. The highest concentration of total PCBs was measured in the soil from Station NWS-30W, located on the western shore (Figure 3). This station was not sampled in previous field seasons. The other shoreline samples contained less than 1 mg/kg total PCBs, and all shoreline soils were well within the 25 mg/kg PCB concentration limit for recreational areas, as dictated by the 1998 ROD. Three of four samples located in residential areas (40, 41 and 42 but not 30W) contained less than 1 mg/kg total PCBs, the 1998 ROD limit for residential areas.

3.4 QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

3.4.1 Field Based Quality Control Samples

Quality assurance/quality control samples were collected in the field to ensure that field methods did not affect the quality of the data. The field replicate sample was analyzed to evaluate the sampling procedure and analytical precision. The replicate sample had a higher concentration of total PCBs than the field sample: 111.94 mg/kg in the replicate (028-REP) compared to 48.27 mg/kg in the field sample (028). This discrepancy is likely based on the spatial heterogeneity of the sediments in this dynamic environment. The replicate core sample was collected approximately 1 foot from the field sample core.

The equipment blank sample collected from the auger after decontamination between soil sample collections contained 0.00 µg/L of the NOAA 18 PCB congeners (all non-detects).

3.4.2 Laboratory Based Quality Control Samples

Laboratory-based QC results are reported with the sample data in Appendix B of this report. Results from the analysis of laboratory-based QC samples for PCBs were evaluated against the project measurement quality objectives for accuracy and precision, as defined in the project QAPP (WHG, 2010b). The evaluation is summarized in the QA/QC narrative of the AAL reports (Appendix B). Overall, results from the laboratory-based QC samples for all tests parameters indicate the laboratory methods were in control and the data is usable.

4.0 DISCUSSION

Several investigations have been conducted as part of the NWS monitoring program to characterize PCB contamination in the area since remediation activities were conducted in 2002-2003 (TTFW, 2004). A confirmatory sampling event was conducted by Tetra Tech FW, Inc. immediately following remediation in February 2003. ENSR conducted four sampling events in the area to evaluate changes in river sediment PCB concentrations that may have occurred due to seasonal influence and/or dredging and other remediation activities. The ENSR sampling events occurred in August 2004, May 2005, September 2005, and January 2006. Additionally, Battelle conducted sampling events in November 2006, November/December 2007, and November/December 2008 to further assess potential recontamination of the NWS area. Woods Hole Group completed a sampling event in April 2010. The NWS sample collection that occurred in April 2011 was the tenth event since remediation.

Long-term monitoring data indicate that total PCB concentrations are spatially and temporally variable in river sediments, whereas shoreline soil concentrations are not.

4.1 RIVER SEDIMENTS

Total PCB concentrations measured in river sediments at the NWS area between 2003 and 2011 are summarized in Table 3. Station-specific concentrations and system-wide averages of total PCBs between 2003 and 2011 (if applicable) are plotted in Figures 4 and 5, respectively. The system-wide average concentration was calculated as the average total PCB concentration across all stations within a given sampling event. Sediment data from the 2003–2011 monitoring period show that total PCB concentrations in river sediment at the NWS area are spatially and temporally variable (Figures 4 and 5), which makes it difficult to discern clear trends in the data.

The lowest concentrations of total PCB in river sediment were measured in 2003, immediately following the remediation of the NWS area in the winter of 2002–2003. A post-remediation increase in total PCB concentrations was observed in 2004. Post-remediation levels in 2011 have increased or otherwise showed little evidence of decrease at most stations. The increase between 2010 and 2011 was small (0–20 mg/kg) at some stations (C011-010, 023, 040, 049, 062) and larger (37–170 mg/kg) at other stations (C011-016, 028, 033, 039, 048, and 055). Post-remediation, the system-wide average concentrations of total PCBs in sediment at the NWS area have ranged between 3.7 mg/kg in 2003, to 67.8 mg/kg in 2011. This suggests that natural processes or remediation efforts down-river periodically may resuspend sediments (some containing PCBs), which have been redistributed in the river north of Wood Street. Natural events, such as precipitation, runoff and high river flow, also likely transport and scour sediments downstream south of Wood street.

Table 3. Total PCBs in river sediments at NWS area

Station ID	Total PCBs (mg/kg)*									
	Jan/Feb 2003	Aug 2004	May 2005	Sept 2005	Jan 2006	Nov 2006	Nov/Dec 2007	Nov/Dec 2008	Apr 2010	Apr 2011
C010-010	6.1 (D)	20	-	81	0.99	2.4	4.5	2.3	1.2	9.91
C010-016	4.6 (D)	13	-	18	16	15	29/30	29	4.8	46.54
C010-023	8.3 (D)	22	3.8	2	6.6	8.5	23	44/51[b]	4.29	14.16
C010-028	0.49 (DU)	63	9.8	0.22	11	18	78	76	11.52	48.27/111.94[a]
C010-030E	-	-	-	0.7	88	0.72	0.44	1.1	2.98	-
C010-030W	-	-	-	0.4	5.2	0.16	0.4	0.98	3.3	-
C010-033	0.39 (DU)	64	22	1.1	17	93	120	74	0.23/3.01[a]	127.55
C010-038	0.45 (DU)	36	-	4.7	8.6	1.8	68	33	6.64	-
C010-039	0.54 (DU)	64	4.6	-	-	13	270	140	8.66	179.17
C0101-040	2.9 (D)	72	79	73	190	47	20	24	9.35	29.87
C010-048	0.43 (DU)	23	9	-	-	100	43	46	18.97	55.76
C010-049	12 (D)	160	36	5.9	3.9	12	25	23/26[b]	21.13	12.99
C010-055	0.42 (DU)	61	-	7	20	9.6	190	180/150[a]	5.43	157.27
C010-062	7.4 (D)	19	-	0.87	1.3	40	23	58	5.11	19.92

* - The 1998 ROD clean-up criteria for subtidal sediments and mudflats is 10 mg/kg.
D: result from dilution analysis; U: non detects = detection limit reported (ENSR)
a – result for field replicate sample
b – total PCB result based on homologue analysis

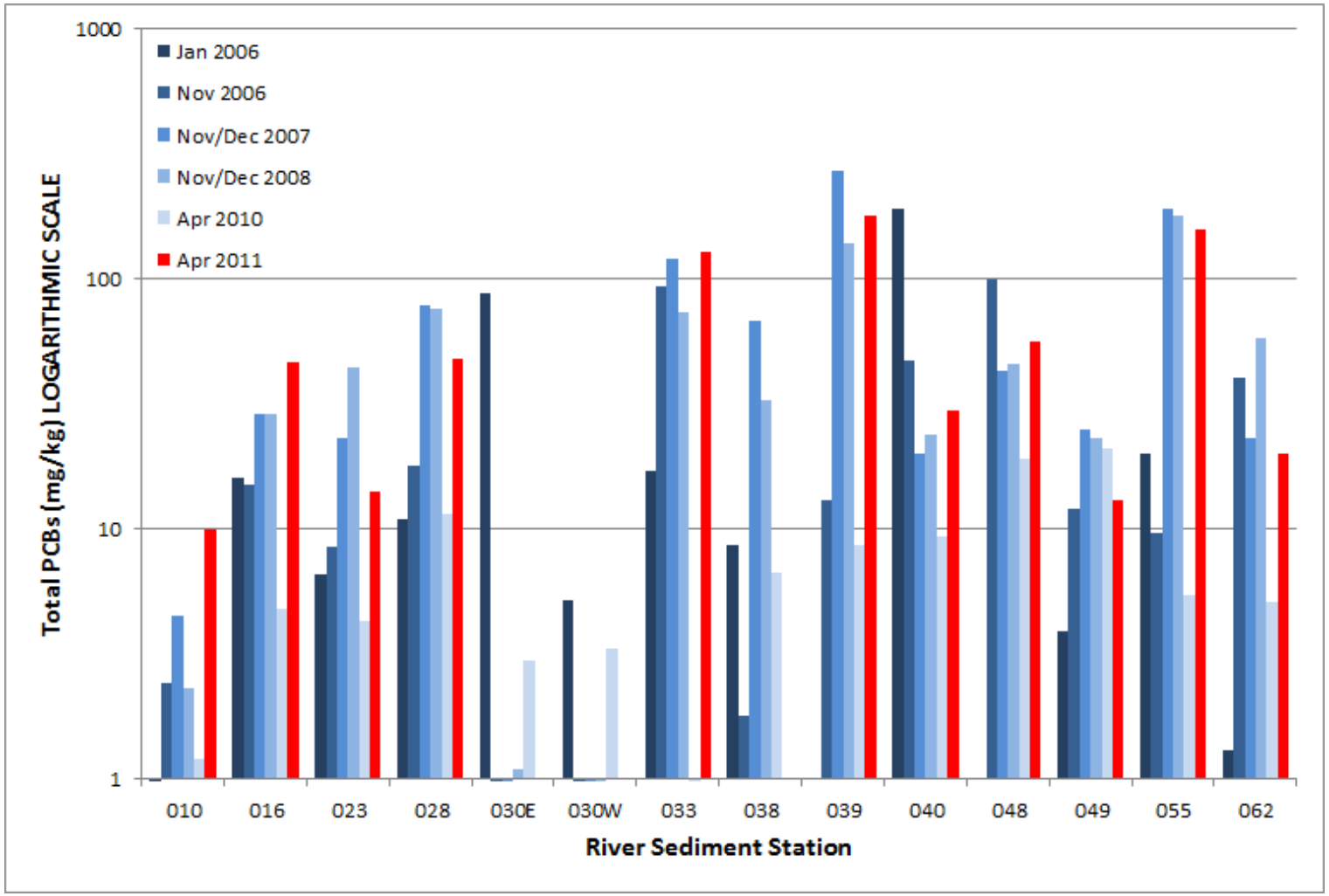

Figure 4. Station specific trends in total PCBs for river sediments in NWS area

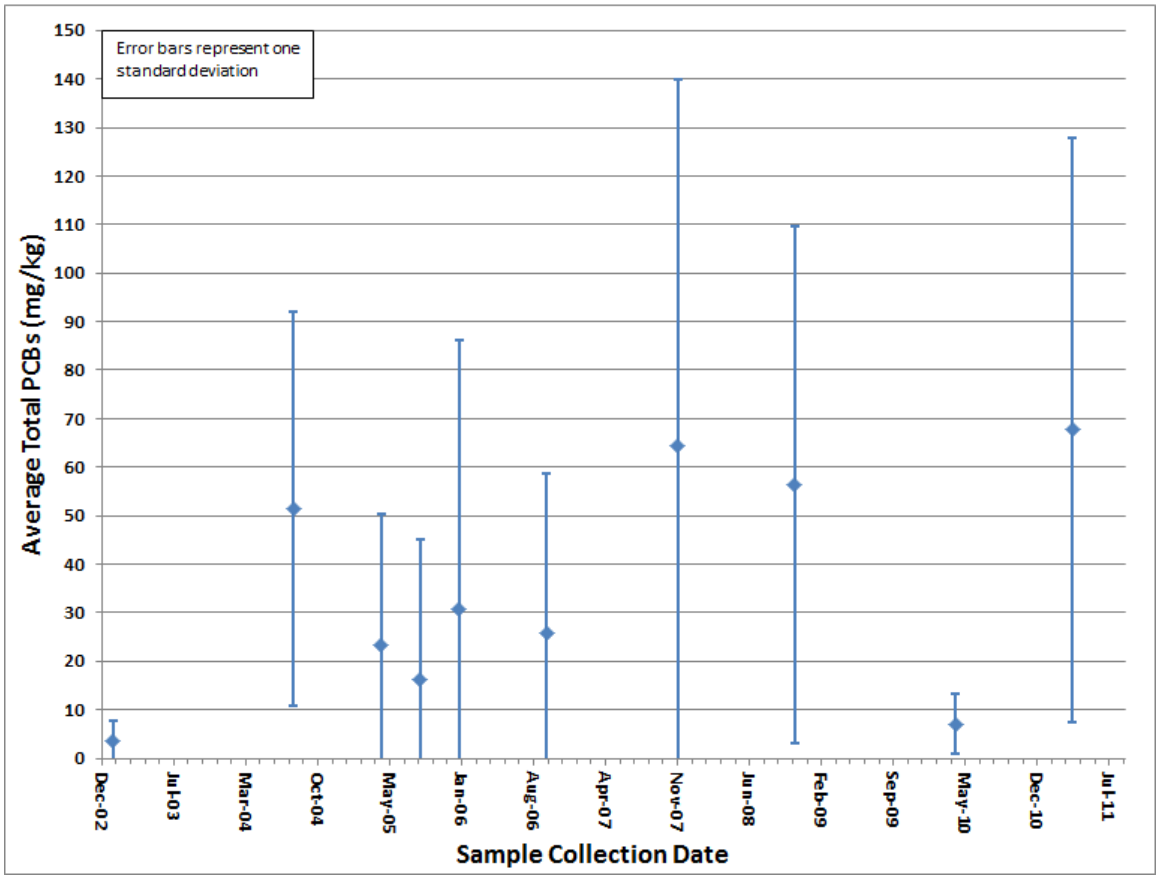

Figure 5. System-wide trends in the average Total PCB concentration for river stations in NWS area

The February 2003 confirmatory sampling dataset serves as the post-remediation baseline for comparison of PCB contamination levels in subsequent sampling events. Statistical analysis of variance (ANOVA) indicates that post-remediation monitoring data from all sampling events, are higher than the concentrations observed immediately following remediation in February 2003. The post-remediation increase in 2011 from 2010 could have resulted from contaminant transport from the upper harbor by natural processes or remediation activities, especially considering remediation activities during the 2010 season were in closest proximity to the NWS.

Although no analysis has been performed to support this hypothesis, the decrease in concentration of total PCBs in both river and shoreline sediment samples collected in April 2010 may be also attributed to a natural "flushing" of the NWS area by the extremely high flow conditions experienced in the Acushnet River during late March 2010 prior to sampling. The high flow conditions in the river were caused by extreme rainfall totals in the Acushnet River watershed over the course of 2–3 days. For example, the cumulative rainfall totals between 14:00 Sunday March 28, and 08:00 Wednesday March 31 (66 hours), were 5.27, 6.05, and 7.12 inches at New Bedford, Acushnet, and Taunton, respectively (NOAA, 2010). In the weeks leading up to the 2011 sampling

event there were no such periods of extreme precipitation: therefore, total PCB concentrations remain high in most subtidal areas. A sediment trap study (WHG, 2010c) conducted during the 2010 dredge season indicated that PCBs are actively transported and deposited in the NWS area during the active dredge season, and during periods of inactivity, which could partly explain the increase in total PCB concentrations observed in subtidal stations from 2010-2011.

Independent of the processes controlling contaminant distribution, the 2011 dataset indicates the NWS area presently contains subtidal total PCB concentrations comparable to those observed in 2007-2008 after remediation activities were well underway.

4.2 SHORELINE SOILS

Total PCB concentrations in shoreline soils are summarized in Table 4 and plotted in Figure 6. Analytical results of PCB concentrations from post-remediation sampling conducted in 2006, 2007, 2008, 2010 and 2011 suggest that the remediation was effective, and has been maintained. Total PCB concentrations from repeated sampling at all sampling stations, and five new stations sampled in 2011 for the first time, have measured below the 1998 ROD criteria of 25 mg/kg for recreational shoreline land use in the soil north of Wood Street. Furthermore, three of four samples located in residential areas (40, 41 and 42 but not 30W) contained less than 1 mg/kg total PCBs, the 1998 ROD limit for residential areas.

Table 4. Total PCBs in Shoreline Soils at NWS Area

Station ID	Land Use	1998 ROD criteria (mg/kg)	Total PCBs (mg/kg)			
			Nov/Dec 2007	Nov/Dec 2008	Apr 2010	Apr 2011
Western Shoreline						
10-NWS-33	Recreational	25	0.089	0.19	0.18	0.09
10-NWS-34	Recreational	25	7.4	0.2	1.36	0.18
10-NWS-30W	Residential	1	-	-	-	1.51
10-NWS-40	Residential	1	-	-	-	0.09
10-NWS-41	Residential	1	-	-	-	0.30
10-NWS-42	Residential	1	-	-	-	0.08
Eastern Shoreline						
10-NWS-35	Recreational	25	0.19	0.67	0.15	0.26
10-NWS-36	Recreational	25	0.31	0.18	0.1	-
10-NWS-37	Recreational	25	4.5	0.13	16.72	0.07
10-NWS-38	Recreational	25	0.26	0.076	0.06	-
10-NWS-39	Recreational	25	0.035/0.06[a]	0.14	0.16	0.40
10-NWS-43	Recreational	25	-	-	-	0.15

a – result for field replicate sample

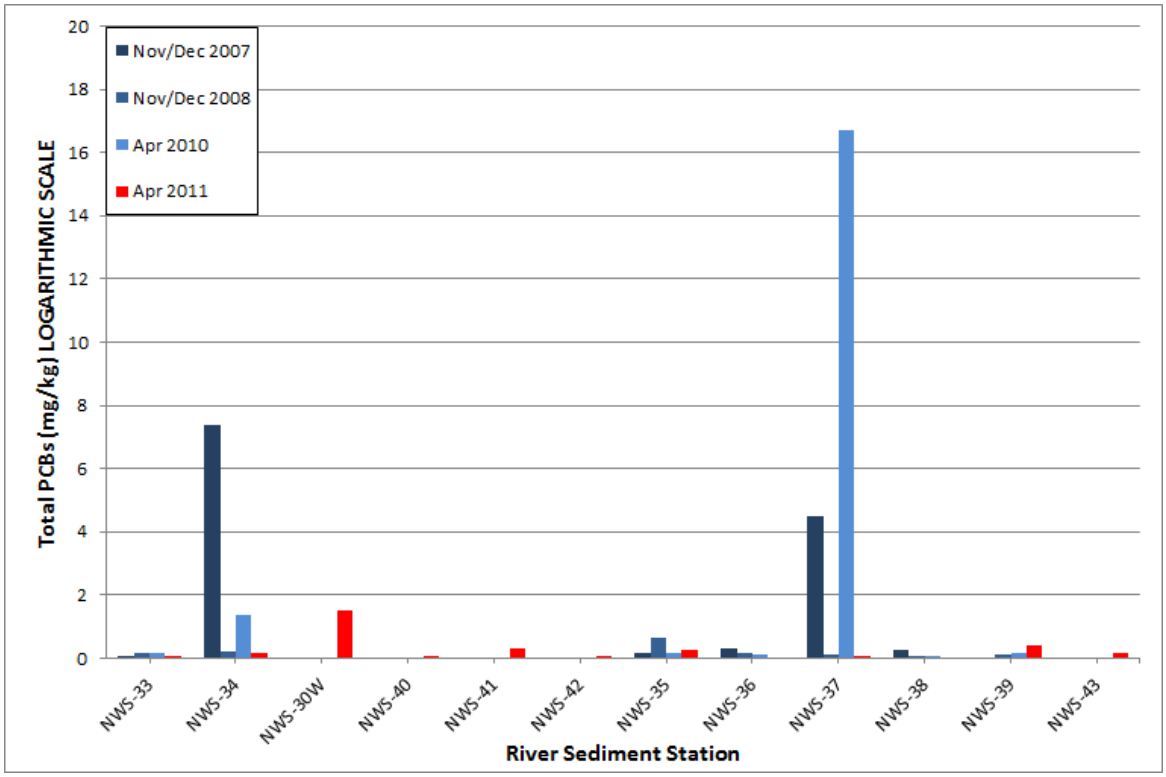

Figure 6. Station-Specific Trends in Total PCBs for Shoreline Soils in NWS Area

Substantive changes in shoreline PCB concentrations between 2007 and 2011 were not observed, except at stations NWS-34 and NWS-37 where the concentration decreased by an order of magnitude in 2011 compared to 2007 and 2010 results. The monitoring data indicate that concentrations of total PCBs in shoreline soils have been uniformly low both spatially and temporally.

The lower PCB concentrations between shoreline soils and river sediments may be due to differences in exposure to contaminated sediments transported by tidal currents. Most shoreline stations are located above MHW on the marsh surface and are only flooded during spring tides. Consequently, shoreline stations receive far less exposure to contaminated sediments suspended in river water, which reduces the likelihood of recontamination. Conversely, subtidal stations can be exposed to contaminated sediments during every tidal cycle, and have a greater opportunity to accumulate contaminated sediments.

Annual sediment monitoring will continue at the NWS area as needed to assess the potential for recontamination from the unremediated harbor areas via anthropogenic disturbances and natural sediment transport processes.

5.0 REFERENCES

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APPENDIX A. NORTH OF WOOD STREET CORE PHOTOGRAPHS AND FIELD LOGS (ON CD)

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APPENDIX A. NORTH OF WOOD STREET CORE PHOTOGRAPHS AND FIELD LOGS

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

Date: 4/14/11
Station ID: NWS-35
All Measurements are ±0.1 feet
Logged By: M. Walsh
Core Sample ID: S-11A-C001
Water Depth (A):
Collection Mechanism: HA
Latitude: 41° 40.768'
Length of Push Core Assembly (B):
Time on Station: 1008
Longitude: 70° 55.004'
Water Surface to Top of Bundle (C):
Time of Collection: ~~1054~~ (est) 1010
GPS Accuracy:
Length of Core (from bottom) (D): 1.0'
Time Depart Station: 1015
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I_1) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I_1 + I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs

Comments:
Two Samples Collected:
S-11A-C001-0-0.5, S-11A-C001-0.5-1.0

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

Date: 4/14/11	Station ID: NWS-39	All Measurements are ± 0.1 feet	
Logged By: M. Walsh	Core Sample ID: S-11A-C002	Water Depth (A):	
Collection Mechanism: HA	Latitude: 41° 40.777'	Length of Vibe Core Assembly (B):	
Time on Station: 1018	Longitude: 70° 55.003'	Water Surface to Top of Handle (C):	
Time of Collection: 1022	GPS Accuracy:	Length of Core (from below) (D): 1.0'	
Time Depart Station: 1031		Tide Elevation (from tide board) (G):	

Calculations for Determination of E* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(E*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_A) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_A within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs

Comments:

Two Samples Collected:
S-11A-C002-0-0.5, S-11A-C002-0.5-1.0

Project Name: New Bedford Harbor Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0020
Location: New Bedford, MA NWS Annual Monitoring — Vessel:
Client: USACE NAE — Chief Scientist: Dave Walsh

Date: 4/14/11 — Station ID: NWS-37 — All Measurements are ± 0.1 feet
Logged By: M. Walsh — Core Sample ID: S-11A-C003 — Water Depth (A):
Collection Method: HA — Latitude: 41° 40.754' — Length of Push Core Assembly (B):
Time on Station: 0957 — Longitude: 70° 54.998' — Water Surface to Top of Handle (C):
Time of Collection: 0959 — GPS Accuracy: — Length of Core (from bottom) (D):
Time Depart Station: 0956 1006 — Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z^*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology – Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs

Comments

Two Samples Collected: S-11A-C003-0-0.5, S-11A-C003-0.5-1.0

Project Name: New Bedford Harbor Environmental Monitoring Project #: W912WJ-09-D-0001, Task Order No. 0020

Location: New Bedford, MA NWS Annual Monitoring Vessel:

Client: USACE NAE Chief Scientist: DAVE WAGH

Date: 4/14/11	Station ID: NWS-43	All Measurements are ± 0.1 feet	
Logged By: M. WAGH	Core Sample ID: S-11A-C004	Water Depth (A):	
Collection Method: HA	Latitude: 41° 40.507'	Length of Push Core Assembly (B):	
Time on Station: 1034	Longitude: 70° 55.014'	Water Surface to Top of Sample (C):	
Time of Collection: 1037	GPS Accuracy:	Length of Core (from bottom) (D):	
Time Depart Station: 1045		Tide Elevation (from tide board) (G):	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Color	Sample IDs

Comments

Two Samples Collected:

S-11A-C004-0-0.5, S-11A-C004-0.5-1.0

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

Date: 4/14/11 — Station ID: NWS - 33 — All Measurements are ± 0.1 feet
Logged By: M. WALSH — Core Sample ID: S-11A-C005 — Water Depth (A):
Collection Method: HA — Latitude: 41° 40.873 — Length of Push Core Assembly (B):
Time on Station: 1109 — Longitude: 70° 55.040 — Water Surface to Top of Handle (C):
Time of Collection: 1113 — GPS Accuracy: — Length of Core (from bottom) (D):
Time Depart Station: 1121 — Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_A) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_A$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs

Comments

Two Samples Collected:
S-11A-C005-0-0.5, S-11A-C005-0.5-1.0

Project Name: New Bedford Harbor Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA NWS Annual Monitoring — Visit:
Client: USACE NAE — Chief Scientist: Dave WALSH

Date: 4/14/11	Station ID: NWS-34	All Measurements are ± 0.1 feet
Logged By: M. WALSH	Core Sample ID: S-11A-C006	Water Depth (A):
Collection Method(s): MA	Latitude: 41° 40.794	Length of Push Core Assembly (B):
Time on Station: 1124	Longitude: 70° 55.040	Water Surface to Top of Handle (C):
Time of Collection: 1128	GPS Accuracy:	Length of Core (from bottom) (D):
Time Depart Station: 1136		Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs

Comments

Two Samples Collected:

S-11A-C006-0-0.5, S-11A-C006-0.5-0.8

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

Date: 4/14/11	Station ID: Ø30 W		All Measurements are ± 0.1 feet
Logged By: M.WALSH	Core Sample ID: S-11A-C007		Water Depth (A):
Collection Method: HA	Latitude: 41° 40. 749		Length of Push Core Assembly (B):
Time on Station: 1154	Longitude: 70° 55. 035		Water Surface to Top of Handle (C):
Time of Collection: 1156	GPS Accuracy:		Length of Core (from bottom) (D):
Time Depart Station: 1201			Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs

Comments:
Two Samples Collected:
S-11A-C007-0-0.5, S-11A-C007-0.5-1.0

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

Date: 4/14/11
Logged By: M. WALSH
Collection Method: HA
Time on Station: 1220
Time of Collection: 1223
Time Depart Station: 1228
Station ID: NWS-40
Core Sample ID: S-11A-C008
Latitude: 41° 40.707
Longitude: 70° 55.045
GPS Accuracy:
All Measurements are ± 0.1 feet
Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z^*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_w) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_w within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Color	Sample ID#

Comments:
Two Samples Collected;
S-11A-C008-0.0-0.5, S-11A-C008-0.5-0.9

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

Date: 4/14/11 — Station ID: NWS-41 — All Measurements are ± 0.1 feet
Logged By: M. WALSH — Core Sample ID: S-11A-C009 — Water Depth (A):
Collection Mechanism: HA — Latitude: 41° 40.729 — Length of Push Core Assembly (B):
Time on Station: 1205 — Longitude: 070° 55.041 — Water Surface to Top of Handle (C):
Time of Collection: 1209 — GPS Accuracy: — Length of Core (from bottom) (D):
Time Depart Station: 1213 — Tide Elevation (From tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 10)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs

Comments

Two Samples Collected:
~~SA~~ (AW) @ S-11A-C009-0-0.5, S-11A-C009-0.5-1.0

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

Date: 4/14/11 Station ID: NWS-42 All Measurements are ± 0.1 feet
Logged By: M. WALSH Core Sample ID: S-11A-C010 Water Depth (A):
Collection Method: HA Latitude: 41° 40.767 Length of Push Core Assembly (B):
Time on Station: 1140 Longitude: 70° 55.042 Water Surface to Top of Sample (C):
Time of Collection: 1144 GPS Accuracy: Length of Core (from bottom) (D):
Time Depart Station: 1151 Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_A) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

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

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs

Comments
Four Samples Collected:
Three S-11A-C010-0-0.5, S-11A-C010-0.5-1.0,
S-11A-C010-0-0.5 MSMSD

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA – NORTH OF WOOD ST. ANNUAL MONITORING
Client: USACE NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: F/V GEORGE HAMPSON
Chief Scientist: DAVID WALSH

Date: 4/15/11	Station ID: Ø33	All Measurements are ± 0.1 feet: 0.9	
Logged By: DWALSH	Core Sample ID: S-NA-C011	Water Depth (A): 0.9 ft.	
Collection Mechanism: PC	Latitude: 41° 40.743'	Length of Push Core Assembly (B):	
Time on Station: 10:46	Longitude: 70° 55.023'	Water Surface to Top of Handle (C):	
Time of Collection: 10:50	GPS Accuracy: 11 ft.	Length of Core (from bottom) (D): 1.0 ft.	
Time Depart Station: 10:55		Tide Elevation (From tide board) (G):	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

~~Elevation (NGVD) (i.e. Bottom = H)~~	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.5	OL	Organic SILT	BLACK				
0.5-1.0		SAND with SILT and gravel	Greyish Brown ~~SILT~~				

Comments

2 Samples : S-11A-C011-0-0.5, S-11A-C011-0.5-1.0

1 QA split sample : S-11A-C011-0-0.5QA

NWS
033 / 0-1.0'
4/15/11
S-11A-C011

Project Name: New Bedford Harbor Environmental Monitoring
Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA NORTH OF WOOD ST.
Vessel: R/V GEORGE HAMPSON
Client: USACE NAE ANNUAL MONITORING
Chief Scientist: D. WALSH

Date: 4/15/11
Station ID: Ø23
All Measurements are ± 0.1 feet
Logged By: DWALSH
Core Sample ID: S-11A-C012
Water Depth (A): 1.7 ft
Collection Method(s): PC
Latitude: 41° 40.776'
Length of Push Core Assembly (B):
Time on Station: 09:57
Longitude: 70° 55.024'
Water Surface to Top of Handle (C):
Time of Collection: 10:04
GPS Accuracy: 11 ft.
Length of Core (from bottom) (D): 0.9 ft
Time Depart Station: 10:09
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I$_2$) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I$_2$ within + 1.0 foot, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0 - 0.3		SILTY SAND w/ HIGH ORGANIC CONTENT	BLACK - dark BROWN	LOOSE			
0.3 - 0.9		SILT w/ LOW % organic content	Dark BROWN	firm			

Comments
2 samples: S-11A-C012-0-0.5, S-11A-C012-0.5-0.9

NWS
023/0-0.9'
4/15/11
S-11A-C012

Project Name: New Bedford Harbor Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA – NORTH OF WOOD ST. — Vessel: GEOSCIENCE EXPLORER
Client: USACE NAE ANNUAL MONITORING — Chief Scientist: D. WALSH

Date: 4/15/11 — Station ID: 010 — All Measurements are ± 0.1 feet
Logged By: D.WALSH — Core Sample ID: S-11A-C013 — Water Depth (A): 0.8 ft
Collection Method(s): PC — Latitude: 41° 40.839' — Length of Push Core Assembly (B):
Time on Station: 08:58 — Longitude: 70° 55.033' — Water Surface to Top of Bundle (C):
Time of Collection: 09:20 — GPS Accuracy: 12 ft. — Length of Core (from bottom) (D): ~~0.85 ft~~ 0.9 ft Drew
Time Depart Station: 09:28 — Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

~~Elevation (NGVD) (i.e. Bottom = H)~~	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.4		FINE SAND	Light Brown - Brown	moderate			
0.4-0.9		SANDY SILT w/ organics.	dark Brown	Loose			

Comments:
1st attempt was a "washout" with a large cobble and sand. It is very difficult to locate a suitable coring location at this station. The bottom substrate is cobbles, gravel – armoring the sandy material beneath it. NO SATISFACTORY LOCATION TO CORE @ TARGET STATION COORDINATES, SEARCH (09:10) FINDS A SUITABLE LOCATION TO NORTH, along the east shoreline in subtidal sandy sediments. Location (NEW) is approx. 70 feet NORTH from target.
TWO SAMPLES: S-11A-C013-0-0.5, S-11A-C013-0.5-0.9
↳ may want to analyze due to texture.


S-11A-C010
4/15/11
0.0-0.9
NWS

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA – NORTH OF WOOD ST.
Client: USACE-NAE ANNUAL MONITORING
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V GEORGE HAMPSON
Chief Scientist: D. WALSH

Date: 4/15/11
Station ID: Ø16
All Measurements are ±0.1 feet
Logged By: DWALSH
Core Sample ID: S-11A-C014
Water Depth (A): 1.6 ft
Collection Mechanism: PC
Latitude: 41° 40.795'
Length of Push Core Assembly (B):
Time on Station: 0934
Longitude: 70° 55.027'
Water Surface to Top of Handle (C):
Time of Collection: 09:46
GPS Accuracy: 11 ft
Length of Core (from bottom) (D): 1.0 ft
Time Depart Station: 09.54
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board)

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within ± 1.0 feet, discard and resample)

~~Elevation (NGVD) (i.e. Bottom = H)~~	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.1		FINE SAND w/ Low % organics	BLACK	firm			
0.1-0.4		SAND & SILT	very dark Brown	firm			
0.4-1.0		SILT w/ POCKETS OF POORLY SORTED SAND (fine-coarse)	very dark Brown - dark Brown	firm			

Comments
GOOD CORE SAMPLE LOCATION IN VICINITY (WITHIN 16') OF TARGET, JUST SOUTH OF LARGE OUTCROPPING ROCK.
- TWO Samples: S-11A-C014-0-0.5, S-11A-C014-0.5-1.0


S-11A-C016
4/15/11
0.1-0.0
SWS

Project Name: New Bedford Harbor Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA – NORTH OF WOOD ST. — Vessel: R/V GEORGE HAMPSON
Client: USACE NAE — ANNUAL MONITORING — Chief Scientist: DAVID WALSH

Date: 4/15/11 — Station ID: Ø28 — All Measurements are ± 0.1 Feet
Logged By: DWALSH — Core Sample ID: S-11A-C015 — Water Depth (A): 0.9 ft
Collection Mechanism: PC — Latitude: 41° 40.759' — Length of Push Core Assembly (B):
Time on Station: 10:14 — Longitude: 70° 55.029' — Water Surface to Top of Sample (C):
Time of Collection: 10:19 — GPS Accuracy: 12 ft. — Length of Core (from bottom) (D): 1.3 ft
Time Depart Station: 10:35 — Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

~~Elevation (NGVD) (i.e. Bottom = H)~~	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.3	OH	HIGH CONTENT ORGANICS	BLACK	LOOSE			
0.3-0.6		FINE-MED SAND W/ LOW % SILT	DARK BROWN	MOD. FIRM			
0.6-1.3	ML	SILT WITH thin FINE SAND LENSES	OLIVE/GREY/BROWN	MODERATE FIRM			

Comments

* AFTER THIS FIELD SAMPLE WAS collected a REPLICATE CORE WAS collected @ 10:31.

- TWO SAMPLES: S-11A-C015-0-0.5, S-11A-C015-0.5-1.0


NWS
028/0-1.3
4/15/11
S-11A-C028

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA - NORTH OF WOOD ST.
Client: USACE NAE ANNUAL MONITORING
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: F/V GEORGE HAMPSON
Chief Scientist: DAVID WALSH

Date: 4/15/11
Logged By: DW, MSH
Collection Mechanism: PC
Time on Station: 10:14
Time of Collection: 10:31
Time Depart Station: 10:35

Station ID: Ø28 REP
Core Sample ID: S-11A-C015
Latitude: 41° 40.759'
Longitude: 70° 55.029'
GPS Accuracy: 12 Ft

All Measurements are ± 0.1 feet
Water Depth (A): 0.9 Ft
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): ~~1.25 Ft~~ 1.3 Ft DAW
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.-0.5	←	OL/OH Organic detritus and sand.	Black				
0.5-0.7		Fine - medium sand w/ few % silt.	dark greyish Brown				
0.7-1.3	ML	Silt w/fine sand lenses.	dense Brown				

Comments
* CORE WAS collected as a field REPLICATE (REP) to CORE Ø28. CORE WAS collected from a location one-foot adjacent to the field sample.
one sample: S-11A-C015-0-0.5REP


NWS
028/0-1.3
4/15/11
S-11A-C028-REP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA NORTH OF WOOD ST.
Client: USACE NAE ANNUAL MONITORING
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V GEORGE HAMPSON
Chief Scientist: DAN WALSH

Date: 4/15/11
Station ID: 039
All Measurements are ± 0.1 feet
Logged By: D. WALSH
Core Sample ID: S-11A-C016
Water Depth (A): 1.6 ft
Collection Mechanism: PC
Latitude: 41° 40.725'
Length of Push Core Assembly (B):
Time on Station: 10:58
Longitude: 70° 55.025'
Water Surface to Top of Handle (C):
Time of Collection: 11:01
GPS Accuracy: 13 ft.
Length of Core (from bottom) (D): 1.0 ft
Time Depart Station: 11:07
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.5	OL	organic detritus and silt	BLACK	very loose			
0.5-1.0		SILT/SAND/gravel (SILTY MATRIX)	DARK GREYISH BROWN	Loose-mod consolidated			

Comments
TWO samples: S-11A-C016-0-0.5, S-11A-C016-0.5-1.0


NWS
039/0-1.3
4/15/11
S-11A-C039-REP

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA - NORTH OF WOOD ST.
Client: USACE NAE ANNUAL MONITORING
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V GEDCOE HAMPSON
Chief Scientist: DAVID WALSH

Date: 4/15/11
Logged By: D. WALSH
Collection Mechanism: D.C.
Time on Station: 11:12
Time of Collection: 11:16
Time Depart Station: 11:25
Station ID: Ø4Ø
Core Sample ID: S-11A-C017
Latitude: 41°40.728'
Longitude: 7055.012'
GPS Accuracy: 12 ft
All Measurements are ± 0.1 feet
Water Depth (A): 2.6 ft
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 0.9 ft.
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within + 1.0 feet, discard and resample)

~~Elevation (NGVD) (i.e. Bottom = H)~~	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.36		FINE-MEDIUM SAND w/ organics	v. DARK grey-BLACK	MOD-LOOSE			
0.36-0.9		Fine SAND w/ low % silt, well sorted	Brown	Firm			

Comments
* Core penetrated ft refusal.
* TWO samples - S-11A-C017-0-0.5, S-11A-C017-0.5-0.9

NWS
040/ 0-0.9
4/15/11
S-11A-C040

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA NORTH OF WOOD ST.
Client: USACE NAE ANNUAL MONITORING

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V GEORGE HAMPSON
Chief Scientist: DAVID WALSH

Date:	4/15/11	Station ID:	Ø48	All Measurements are ± 0.1 feet	
Logged By:	D WALSH	Core Sample ID:	S-11A-C018	Water Depth (A):	1.2 ft.
Collection Mechanism:	P.C.	Latitude:	41°40.704'	Length of Push Core Assembly (B):	
Time on Station:	11:41	Longitude:	70°55.024'	Water Surface to Top of Handle (C):	
Time of Collection:	11:46	GPS Accuracy:	14 ft.	Length of Core (from bottom) (D):	1.7 ft
Time Depart Station:	11:54			Tide Elevation (from tide board) (G):	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): _____

(H) Elevation of the bottom of the core (NGVD): G - (B - C) _____

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) _____

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D _____

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A _____

(Note if I + I_2 within ± 1.0 feet, discard and resample)

~~Elevation (NGVD) (i.e. Bottom = H)~~	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.4	←	OL ~~[illegible]~~ organic detritus w/silt & SAND	Black	Loose			
0.4-1.7	ML	Silt w/ fine-med coarse sand lenses. Occasional gravel particle. Low % organics (SANDY SILT)	dark brownish grey	moderately consolidated			

Comments

* Two samples: S-11A-C018-0-0.5, S-11A-C018-0.5-1.0


S-11A-C048
4/15/11
0-1.7'
SMN

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA NORTH OF WOOD ST.
Client: USACE NAE ANNUAL MONITORING

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V George Hampson
Chief Scientist: DAVID WALSH

Date:	4/15/11	Station ID:	Ø49	All Measurements are ± 0.1 feet	
Logged By:	D WALSH	Core Sample ID:	S-11A-CØ19	Water Depth (A):	2.1 ft
Collection Mechanism:	P.C.	Latitude	41°40.710'	Length of Push Core Assembly (B):	
Time on Station:	11:56	Longitude	70°55.013'	Water Surface to Top of Handle (C):	
Time of Collection:	12:00	GPS Accuracy	12 ft.	Length of Core (from bottom) (D):	1.0 ft.
Time Depart Station:	12:10			Tide Elevation (from tide board) (G):	

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board): _____

(H) Elevation of the bottom of the core (NGVD): G - (B - C) _____

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition) _____

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D _____

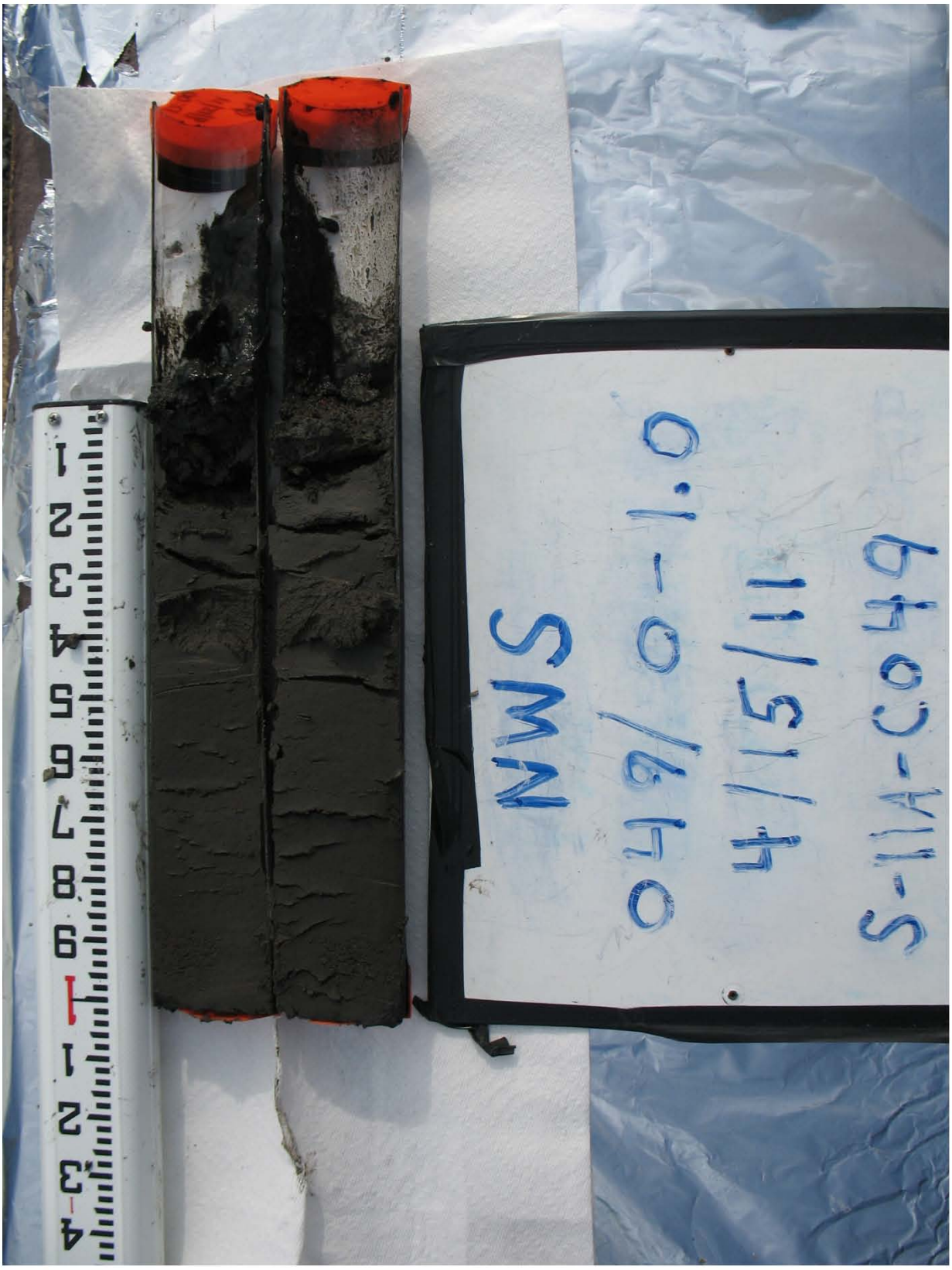
(I_1) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A _____

(Note if I + I_1 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0.0 - 0.02		Organic SILT	BLACK	Loose			
0.02 - 0.9	ML	SILT w/ fine SAND, - Occasional gravel frag	brownish grey	moderately well consolidated			
0.9 - 1.0		SILTY SAND SILT w/ Med SAND	brownish grey	moderately well consolidated			

Comments

* TWO samples: S-11A-CO19-0-0.5, S-11A-CO19-0.5-1.0


NWS
049/0-1.0
4/15/11
S-11A-C049

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA NORTH OF WOOD ST.
Client: USACE NAE ANNUAL MONITORING

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V GEORGE HAMPSON
Chief Scientist: DAVID WALSH

Date: 4/15/11
Station ID: Ø55
All Measurements are ± 0.1 feet
Logged By: D. WALSH
Core Sample ID: S-11A-C020
Water Depth (A): 2.5 ft.
Collection Mechanism: PC
Latitude: 41° 40.686'
Length of Push Core Assembly (B):
Time on Station: 1214
Longitude: 70° 55.013'
Water Surface to Top of Handle (C):
Time of Collection: 1216
GPS Accuracy: 12 ft.
Length of Core (from bottom) (D): 1.2 ft.
Time Depart Station: 1226
Tide Elevation (From tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(Z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if $I - I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Litology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.6	OL	Organic silt	Black	Loose			
0.6-1.2		Silty SAND, Sand is Fine - medium grained - low organic content.	dark grey	Firm			

Comments:
* two samples: S-11A-C020-0-0.5, S-11A-C020-0.5-1.0


NWS
0.5'/0-1.2'
4/15/11
S-11A-CO.5

Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA NORTH OF WOOD ST.
Client: USACE NAE ANNUAL MONITORING
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel: R/V GEORGE HAMPSON
Chief Scientist: DAVID WALSH

Date: 4/15/11
Logged By: DWALSH
Collection Mechanism: PC
Time on Station: 1238
Time of Collection: 1240
Time Depart Station: 1249
Station ID: 062
Core Sample ID: S-11A-C021
Latitude: 41° 40. 669'
Longitude: 70° 54. 992'
GPS Accuracy: 12 ft
All Measurements are ± 0.1 feet
Water Depth (A): 1.9 ft.
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.2 ft
Tide Elevation (from tide board) (G):

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD) (as read from tide board):

(H) Elevation of the bottom of the core (NGVD): G - (B - C)

(z*) Elevation of visual transition (NGVD): H + (distance to visual transition)

(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A

(Note if I - I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample IDs
0-0.26		Organic detritus w/ silt and SAND. SAND is fine - coarse.	Black	Loose - med.			
0.26 - 1.2		SANDY SILT, SILT MATRIX w/ organic detritus and Fine - med sand - SAND LENS @ 0.96-1.06, well sorted fine sand.	very dark grey	Firm			

Comments:
* TWO SAMPLES: S-11A-C021-0-0.5, S-11A-C021-0.5-1.0


NWS
062/0-12'
4/15/11
S-11A-C062

APPENDIX B. ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA (ON CD)

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APPENDIX B. ALPHA ANALYTICAL LABORATORIES REPORTS AND ANALYTICAL DATA

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ANALYTICAL REPORT

Lab Number:	L1105174
Client:	Woods Hole Group 81 Technology Park Drive East Falmouth, MA 02536
ATTN:	Dave Walsh
Phone:	(508) 540-8080
Project Name:	NORTH OF WOOD STREET
Project Number:	TO-0010-03
Report Date:	04/28/11

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

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

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

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1105174-01	S-11A-C001-0-0.5	NEW BEDFORD, MA	04/14/11 10:10
L1105174-02	S-11A-C002-0-0.5	NEW BEDFORD, MA	04/14/11 10:22
L1105174-03	S-11A-C003-0-0.5	NEW BEDFORD, MA	04/14/11 09:59
L1105174-04	S-11A-C004-0-0.5	NEW BEDFORD, MA	04/14/11 10:37
L1105174-05	S-11A-C005-0-0.5	NEW BEDFORD, MA	04/14/11 11:13
L1105174-06	S-11A-C006-0-0.5	NEW BEDFORD, MA	04/14/11 11:28
L1105174-07	S-11A-C007-0-0.5	NEW BEDFORD, MA	04/14/11 11:56
L1105174-08	S-11A-C008-0-0.5	NEW BEDFORD, MA	04/14/11 12:23
L1105174-09	S-11A-C009-0-0.5	NEW BEDFORD, MA	04/14/11 12:09
L1105174-10	S-11A-C010-0-0.5	NEW BEDFORD, MA	04/14/11 11:44
L1105174-11	EB-041411-01	NEW BEDFORD, MA	04/14/11 14:06
L1105174-12	S-11A-C011-0-0.5	NEW BEDFORD, MA	04/15/11 10:50
L1105174-13	S-11A-C012-0-0.5	NEW BEDFORD, MA	04/15/11 10:04
L1105174-14	S-11A-C013-0-0.5	NEW BEDFORD, MA	04/15/11 09:20
L1105174-15	S-11A-C014-0-0.5	NEW BEDFORD, MA	04/15/11 09:46
L1105174-16	S-11A-C015-0-0.5	NEW BEDFORD, MA	04/15/11 10:19
L1105174-17	S-11A-C015-0-0.5 REP	NEW BEDFORD, MA	04/15/11 10:31
L1105174-18	S-11A-C016-0-0.5	NEW BEDFORD, MA	04/15/11 11:01
L1105174-19	S-11A-C017-0-0.5	NEW BEDFORD, MA	04/15/11 11:16
L1105174-20	S-11A-C018-0-0.5	NEW BEDFORD, MA	04/15/11 11:46
L1105174-21	S-11A-C019-0-0.5	NEW BEDFORD, MA	04/15/11 12:00
L1105174-22	S-11A-C020-0-0.5	NEW BEDFORD, MA	04/15/11 12:16
L1105174-23	S-11A-C021-0-0.5	NEW BEDFORD, MA	04/15/11 12:40
L1105174-24	S-11A-C001-0.5-1.0	NEW BEDFORD, MA	04/14/11 10:10
L1105174-25	S-11A-C002-0.5-1.0	NEW BEDFORD, MA	04/14/11 10:22
L1105174-26	S-11A-C003-0.5-1.0	NEW BEDFORD, MA	04/14/11 09:59
L1105174-27	S-11A-C004-0.5-1.0	NEW BEDFORD, MA	04/14/11 10:37
L1105174-28	S-11A-C005-0.5-1.0	NEW BEDFORD, MA	04/14/11 11:13
L1105174-29	S-11A-C006-0.5-0.8	NEW BEDFORD, MA	04/14/11 11:28
L1105174-30	S-11A-C007-0.5-1.0	NEW BEDFORD, MA	04/14/11 11:56
L1105174-31	S-11A-C008-0.5-0.9	NEW BEDFORD, MA	04/14/11 12:23

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1105174-32	S-11A-C009-0.5-1.0	NEW BEDFORD, MA	04/14/11 12:09
L1105174-33	S-11A-C010-0.5-1.0	NEW BEDFORD, MA	04/14/11 11:44
L1105174-34	S-11A-C011-0.5-1.0	NEW BEDFORD, MA	04/15/11 10:50
L1105174-35	S-11A-C012-0.5-0.9	NEW BEDFORD, MA	04/15/11 10:04
L1105174-36	S-11A-C013-0.5-0.9	NEW BEDFORD, MA	04/15/11 09:20
L1105174-37	S-11A-C014-0.5-1.0	NEW BEDFORD, MA	04/15/11 09:46
L1105174-38	S-11A-C015-0.5-1.0	NEW BEDFORD, MA	04/15/11 10:19
L1105174-39	S-11A-C016-0.5-1.0	NEW BEDFORD, MA	04/15/11 11:01
L1105174-40	S-11A-C017-0.5-0.9	NEW BEDFORD, MA	04/15/11 11:16
L1105174-41	S-11A-C018-0.5-1.0	NEW BEDFORD, MA	04/15/11 11:46
L1105174-42	S-11A-C019-0.5-1.0	NEW BEDFORD, MA	04/15/11 12:00
L1105174-43	S-11A-C020-0.5-1.0	NEW BEDFORD, MA	04/15/11 12:16
L1105174-44	S-11A-C021-0.5-1.0	NEW BEDFORD, MA	04/15/11 12:40

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174
Project Number: TO-0010-03 **Report Date:** 04/28/11

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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

Sample Receipt

Sediment samples were received intact on April 15, 2011 and placed in frozen storage immediately. Samples were removed from frozen storage on April 18, 2011 and aliquots of the samples were analyzed for percent solids. Based on the results of the percent solids, samples underwent air drying and were placed in refrigerated storage until April 21, 2011 and April 22, 2011 when they were removed to extract samples for PCB Congener analysis and analyze for air-dried percent solids.

PCB Congeners by 8082

L1105174-02 and -07 have elevated detection limits due to the dilution required by the concentrations of target compounds in the sample.

Project Name:	NORTH OF WOOD STREET	**Lab Number:**	L1105174
Project Number:	TO-0010-03	**Report Date:**	04/28/11

Case Narrative (continued)

L1105174-12 through-23 have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample. Due to the dilution required for these samples, the surrogates were diluted out.

WG464094-4/5 MS/MSD perfromed on L1105174-10 were analyzed at dilution to get the target compounds in the calibration range. Surrogates were diluted out. Sample L1105174-10 was analyzed without dilution.

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: 04/28/11

ORGANICS

PCBS

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-01	Date Collected:	04/14/11 10:10
Client ID:	S-11A-C001-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 16:15	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	4.75		ug/kg	1.32	--	1
Cl4-BZ#52	15.4		ug/kg	1.32	--	1
Cl6-BZ#138	8.27		ug/kg	1.32	--	1
Cl6-BZ#128	2.12		ug/kg	1.32	--	1
Cl7-BZ#180	1.37		ug/kg	1.32	--	1
Cl7-BZ#170	ND		ug/kg	1.32	--	1
Cl8-BZ#195	ND		ug/kg	1.32	--	1
Cl9-BZ#206	ND		ug/kg	1.32	--	1
Cl10-BZ#209	ND		ug/kg	1.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	78		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-01	Date Collected:	04/14/11 10:10
Client ID:	S-11A-C001-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 16:15	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1.86		ug/kg	1.32	--	1
Cl3-BZ#28	14.9		ug/kg	1.32	--	1
Cl4-BZ#44	6.72		ug/kg	1.32	--	1
Cl4-BZ#66	6.79		ug/kg	1.32	--	1
Cl5-BZ#101	9.76		ug/kg	1.32	--	1
Cl5-BZ#118	9.54		ug/kg	1.32	--	1
Cl6-BZ#153	6.76		ug/kg	1.32	--	1
Cl5-BZ#105	3.69		ug/kg	1.32	--	1
Cl7-BZ#187	1.34		ug/kg	1.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	85		30-150
BZ 198	78		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-02	Date Collected:	04/14/11 10:22
Client ID:	S-11A-C002-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 16:56	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	8.40		ug/kg	2.67	--	2
Cl3-BZ#18	12.9		ug/kg	2.67	--	2
Cl6-BZ#138	7.12		ug/kg	2.67	--	2
Cl6-BZ#128	ND		ug/kg	2.67	--	2
Cl7-BZ#170	ND		ug/kg	2.67	--	2
Cl8-BZ#195	ND		ug/kg	2.67	--	2
Cl9-BZ#206	ND		ug/kg	2.67	--	2
Cl10-BZ#209	ND		ug/kg	2.67	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	83		30-150
BZ 198	60		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-02	Date Collected:	04/14/11 10:22
Client ID:	S-11A-C002-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 16:56	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	31.2		ug/kg	2.67	--	2
Cl4-BZ#52	29.6		ug/kg	2.67	--	2
Cl4-BZ#44	11.4		ug/kg	2.67	--	2
Cl4-BZ#66	5.79		ug/kg	2.67	--	2
Cl5-BZ#101	8.99		ug/kg	2.67	--	2
Cl5-BZ#118	9.85		ug/kg	2.67	--	2
Cl6-BZ#153	7.67		ug/kg	2.67	--	2
Cl5-BZ#105	ND		ug/kg	2.67	--	2
Cl7-BZ#187	ND		ug/kg	2.67	--	2
Cl7-BZ#180	ND		ug/kg	2.67	--	2

DBOB	83	30-150
BZ 198	60	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-03	Date Collected:	04/14/11 09:59
Client ID:	S-11A-C003-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 17:38	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.30	--	1
Cl3-BZ#18	ND		ug/kg	1.30	--	1
Cl4-BZ#44	1.75		ug/kg	1.30	--	1
Cl5-BZ#118	1.69		ug/kg	1.30	--	1
Cl6-BZ#138	1.56		ug/kg	1.30	--	1
Cl7-BZ#187	ND		ug/kg	1.30	--	1
Cl6-BZ#128	ND		ug/kg	1.30	--	1
Cl7-BZ#180	ND		ug/kg	1.30	--	1
Cl7-BZ#170	ND		ug/kg	1.30	--	1
Cl8-BZ#195	ND		ug/kg	1.30	--	1
Cl9-BZ#206	ND		ug/kg	1.30	--	1
Cl10-BZ#209	ND		ug/kg	1.30	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	70		30-150
DBOB	101		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-03	Date Collected:	04/14/11 09:59
Client ID:	S-11A-C003-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 17:38	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2.19		ug/kg	1.30	--	1
Cl4-BZ#52	3.20		ug/kg	1.30	--	1
Cl4-BZ#66	1.71		ug/kg	1.30	--	1
Cl5-BZ#101	1.89		ug/kg	1.30	--	1
Cl6-BZ#153	ND		ug/kg	1.30	--	1
Cl5-BZ#105	ND		ug/kg	1.30	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
BZ 198	70		30-150
DBOB	101		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-04	Date Collected:	04/14/11 10:37
Client ID:	S-11A-C004-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 18:20	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.30	--	1
Cl3-BZ#18	ND		ug/kg	1.30	--	1
Cl4-BZ#44	ND		ug/kg	1.30	--	1
Cl4-BZ#66	6.03		ug/kg	1.30	--	1
Cl5-BZ#118	8.93		ug/kg	1.30	--	1
Cl6-BZ#128	ND		ug/kg	1.30	--	1
Cl7-BZ#180	1.30		ug/kg	1.30	--	1
Cl7-BZ#170	ND		ug/kg	1.30	--	1
Cl8-BZ#195	ND		ug/kg	1.30	--	1
Cl9-BZ#206	ND		ug/kg	1.30	--	1
Cl10-BZ#209	ND		ug/kg	1.30	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	96		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-04	Date Collected:	04/14/11 10:37
Client ID:	S-11A-C004-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 18:20	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	5.25		ug/kg	1.30	--	1
Cl4-BZ#52	6.27		ug/kg	1.30	--	1
Cl5-BZ#101	6.40		ug/kg	1.30	--	1
Cl6-BZ#153	6.61		ug/kg	1.30	--	1
Cl5-BZ#105	1.60		ug/kg	1.30	--	1
Cl6-BZ#138	5.28		ug/kg	1.30	--	1
Cl7-BZ#187	ND		ug/kg	1.30	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	91		30-150
BZ 198	96		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-05	Date Collected:	04/14/11 11:13
Client ID:	S-11A-C005-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 19:01	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.32	--	1
Cl3-BZ#18	1.71		ug/kg	1.32	--	1
Cl4-BZ#44	ND		ug/kg	1.32	--	1
Cl4-BZ#66	2.58		ug/kg	1.32	--	1
Cl5-BZ#118	1.90		ug/kg	1.32	--	1
Cl5-BZ#105	ND		ug/kg	1.32	--	1
Cl6-BZ#138	1.37		ug/kg	1.32	--	1
Cl7-BZ#187	ND		ug/kg	1.32	--	1
Cl6-BZ#128	ND		ug/kg	1.32	--	1
Cl7-BZ#180	ND		ug/kg	1.32	--	1
Cl7-BZ#170	ND		ug/kg	1.32	--	1
Cl8-BZ#195	ND		ug/kg	1.32	--	1
Cl9-BZ#206	ND		ug/kg	1.32	--	1
Cl10-BZ#209	ND		ug/kg	1.32	--	1

DBOB	97	30-150
BZ 198	69	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-05	Date Collected:	04/14/11 11:13
Client ID:	S-11A-C005-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 19:01	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	4.58		ug/kg	1.32	--	1
Cl4-BZ#52	4.82		ug/kg	1.32	--	1
Cl5-BZ#101	2.37		ug/kg	1.32	--	1
Cl6-BZ#153	ND		ug/kg	1.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	69		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-06	Date Collected:	04/14/11 11:28
Client ID:	S-11A-C006-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 19:43	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1.43		ug/kg	1.32	--	1
Cl3-BZ#18	3.21		ug/kg	1.32	--	1
Cl6-BZ#138	3.87		ug/kg	1.32	--	1
Cl7-BZ#187	ND		ug/kg	1.32	--	1
Cl6-BZ#128	ND		ug/kg	1.32	--	1
Cl7-BZ#180	ND		ug/kg	1.32	--	1
Cl7-BZ#170	ND		ug/kg	1.32	--	1
Cl8-BZ#195	ND		ug/kg	1.32	--	1
Cl9-BZ#206	ND		ug/kg	1.32	--	1
Cl10-BZ#209	ND		ug/kg	1.32	--	1

DBOB	104	30-150
BZ 198	74	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-06	Date Collected:	04/14/11 11:28
Client ID:	S-11A-C006-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 19:43	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	10.9		ug/kg	1.32	--	1
Cl4-BZ#52	11.8		ug/kg	1.32	--	1
Cl4-BZ#44	4.82		ug/kg	1.32	--	1
Cl4-BZ#66	6.60		ug/kg	1.32	--	1
Cl5-BZ#101	6.34		ug/kg	1.32	--	1
Cl5-BZ#118	5.87		ug/kg	1.32	--	1
Cl6-BZ#153	4.21		ug/kg	1.32	--	1
Cl5-BZ#105	1.84		ug/kg	1.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	104		30-150
BZ 198	74		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-07	Date Collected:	04/14/11 11:56
Client ID:	S-11A-C007-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 20:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	8.41		ug/kg	6.66	--	5
Cl3-BZ#18	25.1		ug/kg	6.66	--	5
Cl4-BZ#66	69.6		ug/kg	6.66	--	5
Cl5-BZ#118	68.3		ug/kg	6.66	--	5
Cl6-BZ#138	39.4		ug/kg	6.66	--	5
Cl6-BZ#128	8.75		ug/kg	6.66	--	5
Cl7-BZ#180	11.3		ug/kg	6.66	--	5
Cl7-BZ#170	6.67		ug/kg	6.66	--	5
Cl8-BZ#195	ND		ug/kg	6.66	--	5
Cl9-BZ#206	ND		ug/kg	6.66	--	5
Cl10-BZ#209	ND		ug/kg	6.66	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	89		30-150
BZ 198	68		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-07	Date Collected:	04/14/11 11:56
Client ID:	S-11A-C007-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 20:25	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	73.2		ug/kg	6.66	--	5
Cl4-BZ#52	82.2		ug/kg	6.66	--	5
Cl4-BZ#44	35.8		ug/kg	6.66	--	5
Cl5-BZ#101	61.6		ug/kg	6.66	--	5
Cl6-BZ#153	54.0		ug/kg	6.66	--	5
Cl5-BZ#105	9.57		ug/kg	6.66	--	5
Cl7-BZ#187	8.09		ug/kg	6.66	--	5

DBOB	89	30-150
BZ 198	68	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-08	Date Collected:	04/14/11 12:23
Client ID:	S-11A-C008-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 21:06	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.30	--	1
Cl3-BZ#18	ND		ug/kg	1.30	--	1
Cl4-BZ#44	ND		ug/kg	1.30	--	1
Cl4-BZ#66	2.62		ug/kg	1.30	--	1
Cl7-BZ#187	ND		ug/kg	1.30	--	1
Cl6-BZ#128	ND		ug/kg	1.30	--	1
Cl7-BZ#180	ND		ug/kg	1.30	--	1
Cl7-BZ#170	ND		ug/kg	1.30	--	1
Cl8-BZ#195	ND		ug/kg	1.30	--	1
Cl9-BZ#206	ND		ug/kg	1.30	--	1
Cl10-BZ#209	ND		ug/kg	1.30	--	1

DBOB	100	30-150
BZ 198	84	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-08	Date Collected:	04/14/11 12:23
Client ID:	S-11A-C008-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 21:06	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2.33		ug/kg	1.30	--	1
Cl4-BZ#52	4.54		ug/kg	1.30	--	1
Cl5-BZ#101	2.67		ug/kg	1.30	--	1
Cl5-BZ#118	2.79		ug/kg	1.30	--	1
Cl6-BZ#153	2.02		ug/kg	1.30	--	1
Cl5-BZ#105	ND		ug/kg	1.30	--	1
Cl6-BZ#138	2.38		ug/kg	1.30	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	100		30-150
BZ 198	84		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-09	Date Collected:	04/14/11 12:09
Client ID:	S-11A-C009-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 21:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	7.08		ug/kg	1.32	--	1
Cl4-BZ#66	13.0		ug/kg	1.32	--	1
Cl5-BZ#118	9.23		ug/kg	1.32	--	1
Cl6-BZ#138	8.35		ug/kg	1.32	--	1
Cl6-BZ#128	1.99		ug/kg	1.32	--	1
Cl7-BZ#180	ND		ug/kg	1.32	--	1
Cl8-BZ#195	ND		ug/kg	1.32	--	1
Cl9-BZ#206	ND		ug/kg	1.32	--	1
Cl10-BZ#209	ND		ug/kg	1.32	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	86		30-150
BZ 198	68		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-09	Date Collected:	04/14/11 12:09
Client ID:	S-11A-C009-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 21:48	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	100%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3.21		ug/kg	1.32	--	1
Cl3-BZ#28	16.3		ug/kg	1.32	--	1
Cl4-BZ#52	18.9		ug/kg	1.32	--	1
Cl4-BZ#44	7.92		ug/kg	1.32	--	1
Cl5-BZ#101	10.6		ug/kg	1.32	--	1
Cl6-BZ#153	6.65		ug/kg	1.32	--	1
Cl5-BZ#105	3.49		ug/kg	1.32	--	1
Cl7-BZ#187	1.36		ug/kg	1.32	--	1
Cl7-BZ#170	ND		ug/kg	1.32	--	1

DBOB	86	30-150
BZ 198	68	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-10	Date Collected:	04/14/11 11:44
Client ID:	S-11A-C010-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 22:29	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/kg	1.30	--	1
Cl3-BZ#18	ND		ug/kg	1.30	--	1
Cl4-BZ#44	ND		ug/kg	1.30	--	1
Cl4-BZ#66	2.58		ug/kg	1.30	--	1
Cl6-BZ#138	1.69		ug/kg	1.30	--	1
Cl7-BZ#187	ND		ug/kg	1.30	--	1
Cl6-BZ#128	ND		ug/kg	1.30	--	1
Cl7-BZ#180	ND		ug/kg	1.30	--	1
Cl7-BZ#170	ND		ug/kg	1.30	--	1
Cl8-BZ#195	ND		ug/kg	1.30	--	1
Cl9-BZ#206	ND		ug/kg	1.30	--	1
Cl10-BZ#209	ND		ug/kg	1.30	--	1

DBOB	67	30-150
BZ 198	49	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-10	Date Collected:	04/14/11 11:44
Client ID:	S-11A-C010-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:52
Analytical Date:	04/25/11 22:29	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/22/11
Percent Solids:	99%	Cleanup Method2:	- - - -

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	2.88		ug/kg	1.30	--	1
Cl4-BZ#52	3.28		ug/kg	1.30	--	1
Cl5-BZ#101	2.73		ug/kg	1.30	--	1
Cl5-BZ#118	2.10		ug/kg	1.30	--	1
Cl6-BZ#153	1.43		ug/kg	1.30	--	1
Cl5-BZ#105	ND		ug/kg	1.30	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	67		30-150
BZ 198	49		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-11	Date Collected:	04/14/11 14:06
Client ID:	EB-041411-01	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:25
Analytical Date:	04/21/11 20:23	Cleanup Method1:	- - - -
Analyst:	AW		- - - -
		Cleanup Method2:	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	ND		ug/l	0.00105	--	1
Cl3-BZ#18	ND		ug/l	0.00105	--	1
Cl3-BZ#28	ND		ug/l	0.00105	--	1
Cl4-BZ#52	ND		ug/l	0.00105	--	1
Cl4-BZ#44	ND		ug/l	0.00105	--	1
Cl4-BZ#66	ND		ug/l	0.00105	--	1
Cl5-BZ#101	ND		ug/l	0.00105	--	1
Cl5-BZ#118	ND		ug/l	0.00105	--	1
Cl5-BZ#105	ND		ug/l	0.00105	--	1
Cl6-BZ#138	ND		ug/l	0.00105	--	1
Cl7-BZ#187	ND		ug/l	0.00105	--	1
Cl6-BZ#128	ND		ug/l	0.00105	--	1
Cl7-BZ#180	ND		ug/l	0.00105	--	1
Cl7-BZ#170	ND		ug/l	0.00105	--	1
Cl8-BZ#195	ND		ug/l	0.00105	--	1
Cl9-BZ#206	ND		ug/l	0.00105	--	1
Cl10-BZ#209	ND		ug/l	0.00105	--	1

DBOB	88	30-150
BZ 198	78	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-11	Date Collected:	04/14/11 14:06
Client ID:	EB-041411-01	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	1,8082	Extraction Date:	04/21/11 15:25
Analytical Date:	04/21/11 20:23	Cleanup Method1:	- - - -
Analyst:	AW		- - - -
		Cleanup Method2:	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl6-BZ#153	ND		ug/l	0.00105	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	78		30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-12	Date Collected:	04/15/11 10:50
Client ID:	S-11A-C011-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 22:05	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	5100		ug/kg	666	--	500
Cl4-BZ#66	3750		ug/kg	666	--	500
Cl6-BZ#138	1570		ug/kg	666	--	500
Cl6-BZ#128	ND		ug/kg	666	--	500
Cl7-BZ#180	ND		ug/kg	666	--	500
Cl7-BZ#170	ND		ug/kg	666	--	500
Cl8-BZ#195	ND		ug/kg	666	--	500
Cl9-BZ#206	ND		ug/kg	666	--	500
Cl10-BZ#209	ND		ug/kg	666	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-12	Date Collected:	04/15/11 10:50
Client ID:	S-11A-C011-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 22:05	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2260		ug/kg	666	--	500
Cl3-BZ#28	10300		ug/kg	666	--	500
Cl4-BZ#52	10000		ug/kg	666	--	500
Cl4-BZ#44	3520		ug/kg	666	--	500
Cl5-BZ#101	2870		ug/kg	666	--	500
Cl5-BZ#118	2030		ug/kg	666	--	500
Cl6-BZ#153	2330		ug/kg	666	--	500
Cl5-BZ#105	ND		ug/kg	666	--	500
Cl7-BZ#187	ND		ug/kg	666	--	500

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-13	Date Collected:	04/15/11 10:04
Client ID:	S-11A-C012-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 14:27	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	804		ug/kg	67.0	--	50
Cl5-BZ#118	206		ug/kg	67.0	--	50
Cl6-BZ#138	142		ug/kg	67.0	--	50
Cl6-BZ#128	ND		ug/kg	67.0	--	50
Cl7-BZ#180	ND		ug/kg	67.0	--	50
Cl7-BZ#170	ND		ug/kg	67.0	--	50
Cl8-BZ#195	ND		ug/kg	67.0	--	50
Cl9-BZ#206	ND		ug/kg	67.0	--	50
Cl10-BZ#209	ND		ug/kg	67.0	--	50

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-13	Date Collected:	04/15/11 10:04
Client ID:	S-11A-C012-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 14:27	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	420		ug/kg	67.0	--	50
Cl3-BZ#28	1100		ug/kg	67.0	--	50
Cl4-BZ#52	1010		ug/kg	67.0	--	50
Cl4-BZ#44	357		ug/kg	67.0	--	50
Cl4-BZ#66	393		ug/kg	67.0	--	50
Cl5-BZ#101	266		ug/kg	67.0	--	50
Cl6-BZ#153	212		ug/kg	67.0	--	50
Cl5-BZ#105	ND		ug/kg	67.0	--	50
Cl7-BZ#187	ND		ug/kg	67.0	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-14	Date Collected:	04/15/11 09:20
Client ID:	S-11A-C013-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 15:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	45%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1080		ug/kg	148	--	50
Cl4-BZ#66	544		ug/kg	148	--	50
Cl5-BZ#118	234		ug/kg	148	--	50
Cl5-BZ#105	ND		ug/kg	148	--	50
Cl6-BZ#138	228		ug/kg	148	--	50
Cl7-BZ#187	ND		ug/kg	148	--	50
Cl6-BZ#128	ND		ug/kg	148	--	50
Cl7-BZ#180	ND		ug/kg	148	--	50
Cl7-BZ#170	ND		ug/kg	148	--	50
Cl8-BZ#195	ND		ug/kg	148	--	50
Cl9-BZ#206	ND		ug/kg	148	--	50
Cl10-BZ#209	ND		ug/kg	148	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-14	Date Collected:	04/15/11 09:20
Client ID:	S-11A-C013-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 15:09	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	45%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1100		ug/kg	148	--	50
Cl3-BZ#28	945		ug/kg	148	--	50
Cl4-BZ#52	1940		ug/kg	148	--	50
Cl4-BZ#44	552		ug/kg	148	--	50
Cl5-BZ#101	355		ug/kg	148	--	50
Cl6-BZ#153	285		ug/kg	148	--	50

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-15	Date Collected:	04/15/11 09:46
Client ID:	S-11A-C014-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 15:50	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	100%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	988		ug/kg	268	--	200
Cl3-BZ#18	3630		ug/kg	268	--	200
Cl5-BZ#118	500		ug/kg	268	--	200
Cl6-BZ#138	313		ug/kg	268	--	200
Cl7-BZ#187	ND		ug/kg	268	--	200
Cl6-BZ#128	ND		ug/kg	268	--	200
Cl7-BZ#180	ND		ug/kg	268	--	200
Cl7-BZ#170	ND		ug/kg	268	--	200
Cl8-BZ#195	ND		ug/kg	268	--	200
Cl9-BZ#206	ND		ug/kg	268	--	200
Cl10-BZ#209	ND		ug/kg	268	--	200

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-15	Date Collected:	04/15/11 09:46
Client ID:	S-11A-C014-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 15:50	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	100%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	3860		ug/kg	268	--	200
Cl4-BZ#52	2760		ug/kg	268	--	200
Cl4-BZ#44	1310		ug/kg	268	--	200
Cl4-BZ#66	1470		ug/kg	268	--	200
Cl5-BZ#101	593		ug/kg	268	--	200
Cl6-BZ#153	331		ug/kg	268	--	200
Cl5-BZ#105	ND		ug/kg	268	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-16	Date Collected:	04/15/11 10:19
Client ID:	S-11A-C015-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 16:32	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	1680		ug/kg	269	--	200
Cl6-BZ#138	561		ug/kg	269	--	200
Cl6-BZ#128	ND		ug/kg	269	--	200
Cl7-BZ#180	ND		ug/kg	269	--	200
Cl7-BZ#170	ND		ug/kg	269	--	200
Cl8-BZ#195	ND		ug/kg	269	--	200
Cl9-BZ#206	ND		ug/kg	269	--	200
Cl10-BZ#209	ND		ug/kg	269	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-16	Date Collected:	04/15/11 10:19
Client ID:	S-11A-C015-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 16:32	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	930		ug/kg	269	--	200
Cl3-BZ#28	3690		ug/kg	269	--	200
Cl4-BZ#52	4040		ug/kg	269	--	200
Cl4-BZ#44	1360		ug/kg	269	--	200
Cl4-BZ#66	1450		ug/kg	269	--	200
Cl5-BZ#101	1060		ug/kg	269	--	200
Cl5-BZ#118	758		ug/kg	269	--	200
Cl6-BZ#153	883		ug/kg	269	--	200
Cl5-BZ#105	ND		ug/kg	269	--	200
Cl7-BZ#187	ND		ug/kg	269	--	200

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-17	Date Collected:	04/15/11 10:31
Client ID:	S-11A-C015-0-0.5 REP	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 17:14	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	100%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	3530		ug/kg	659	--	500
Cl4-BZ#66	3490		ug/kg	659	--	500
Cl6-BZ#138	1290		ug/kg	659	--	500
Cl6-BZ#128	ND		ug/kg	659	--	500
Cl7-BZ#180	ND		ug/kg	659	--	500
Cl7-BZ#170	ND		ug/kg	659	--	500
Cl8-BZ#195	ND		ug/kg	659	--	500
Cl9-BZ#206	ND		ug/kg	659	--	500
Cl10-BZ#209	ND		ug/kg	659	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-17	Date Collected:	04/15/11 10:31
Client ID:	S-11A-C015-0-0.5 REP	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 17:14	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	100%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2180		ug/kg	659	--	500
Cl3-BZ#28	8640		ug/kg	659	--	500
Cl4-BZ#52	8960		ug/kg	659	--	500
Cl4-BZ#44	3270		ug/kg	659	--	500
Cl5-BZ#101	2600		ug/kg	659	--	500
Cl5-BZ#118	1790		ug/kg	659	--	500
Cl6-BZ#153	2030		ug/kg	659	--	500
Cl5-BZ#105	ND		ug/kg	659	--	500
Cl7-BZ#187	ND		ug/kg	659	--	500

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-18	Date Collected:	04/15/11 11:01
Client ID:	S-11A-C016-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 17:55	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	100%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	3390		ug/kg	1300	--	1000
Cl3-BZ#18	6370		ug/kg	1300	--	1000
Cl5-BZ#105	ND		ug/kg	1300	--	1000
Cl6-BZ#138	2040		ug/kg	1300	--	1000
Cl7-BZ#187	ND		ug/kg	1300	--	1000
Cl6-BZ#128	ND		ug/kg	1300	--	1000
Cl7-BZ#180	ND		ug/kg	1300	--	1000
Cl7-BZ#170	ND		ug/kg	1300	--	1000
Cl8-BZ#195	ND		ug/kg	1300	--	1000
Cl9-BZ#206	ND		ug/kg	1300	--	1000
Cl10-BZ#209	ND		ug/kg	1300	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-18	Date Collected:	04/15/11 11:01
Client ID:	S-11A-C016-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 17:55	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	100%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#28	12800		ug/kg	1300	--	1000
Cl4-BZ#52	14900		ug/kg	1300	--	1000
Cl4-BZ#44	5220		ug/kg	1300	--	1000
Cl4-BZ#66	4860		ug/kg	1300	--	1000
Cl5-BZ#101	3550		ug/kg	1300	--	1000
Cl5-BZ#118	2390		ug/kg	1300	--	1000
Cl6-BZ#153	2990		ug/kg	1300	--	1000

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-19	Date Collected:	04/15/11 11:16
Client ID:	S-11A-C017-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 18:37	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	912		ug/kg	265	--	200
Cl4-BZ#66	811		ug/kg	265	--	200
Cl5-BZ#118	411		ug/kg	265	--	200
Cl6-BZ#138	363		ug/kg	265	--	200
Cl7-BZ#187	ND		ug/kg	265	--	200
Cl6-BZ#128	ND		ug/kg	265	--	200
Cl7-BZ#180	ND		ug/kg	265	--	200
Cl7-BZ#170	ND		ug/kg	265	--	200
Cl8-BZ#195	ND		ug/kg	265	--	200
Cl9-BZ#206	ND		ug/kg	265	--	200
Cl10-BZ#209	ND		ug/kg	265	--	200

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-19	Date Collected:	04/15/11 11:16
Client ID:	S-11A-C017-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 18:37	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	496		ug/kg	265	--	200
Cl3-BZ#28	2080		ug/kg	265	--	200
Cl4-BZ#52	2370		ug/kg	265	--	200
Cl4-BZ#44	835		ug/kg	265	--	200
Cl5-BZ#101	578		ug/kg	265	--	200
Cl6-BZ#153	512		ug/kg	265	--	200
Cl5-BZ#105	ND		ug/kg	265	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-20	Date Collected:	04/15/11 11:46
Client ID:	S-11A-C018-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 19:19	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	98%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	2120		ug/kg	271	--	200
Cl6-BZ#138	659		ug/kg	271	--	200
Cl6-BZ#128	ND		ug/kg	271	--	200
Cl7-BZ#180	ND		ug/kg	271	--	200
Cl7-BZ#170	ND		ug/kg	271	--	200
Cl8-BZ#195	ND		ug/kg	271	--	200
Cl9-BZ#206	ND		ug/kg	271	--	200
Cl10-BZ#209	ND		ug/kg	271	--	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-20	Date Collected:	04/15/11 11:46
Client ID:	S-11A-C018-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 19:19	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	98%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	1030		ug/kg	271	--	200
Cl3-BZ#28	4360		ug/kg	271	--	200
Cl4-BZ#52	4920		ug/kg	271	--	200
Cl4-BZ#44	1740		ug/kg	271	--	200
Cl4-BZ#66	1550		ug/kg	271	--	200
Cl5-BZ#101	1150		ug/kg	271	--	200
Cl5-BZ#118	797		ug/kg	271	--	200
Cl6-BZ#153	951		ug/kg	271	--	200
Cl5-BZ#105	ND		ug/kg	271	--	200
Cl7-BZ#187	ND		ug/kg	271	--	200

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-21	Date Collected:	04/15/11 12:00
Client ID:	S-11A-C019-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 20:00	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	502		ug/kg	67.2	--	50
Cl4-BZ#66	352		ug/kg	67.2	--	50
Cl6-BZ#138	156		ug/kg	67.2	--	50
Cl7-BZ#187	ND		ug/kg	67.2	--	50
Cl6-BZ#128	ND		ug/kg	67.2	--	50
Cl7-BZ#180	ND		ug/kg	67.2	--	50
Cl7-BZ#170	ND		ug/kg	67.2	--	50
Cl8-BZ#195	ND		ug/kg	67.2	--	50
Cl9-BZ#206	ND		ug/kg	67.2	--	50
Cl10-BZ#209	ND		ug/kg	67.2	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-21	Date Collected:	04/15/11 12:00
Client ID:	S-11A-C019-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 20:00	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	99%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	224		ug/kg	67.2	--	50
Cl3-BZ#28	1010		ug/kg	67.2	--	50
Cl4-BZ#52	1190		ug/kg	67.2	--	50
Cl4-BZ#44	373		ug/kg	67.2	--	50
Cl5-BZ#101	249		ug/kg	67.2	--	50
Cl5-BZ#118	172		ug/kg	67.2	--	50
Cl6-BZ#153	232		ug/kg	67.2	--	50
Cl5-BZ#105	ND		ug/kg	67.2	--	50

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-22	Date Collected:	04/15/11 12:16
Client ID:	S-11A-C020-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 20:42	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	98%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	5120		ug/kg	1360	--	1000
Cl5-BZ#105	ND		ug/kg	1360	--	1000
Cl6-BZ#138	1900		ug/kg	1360	--	1000
Cl7-BZ#187	ND		ug/kg	1360	--	1000
Cl6-BZ#128	ND		ug/kg	1360	--	1000
Cl7-BZ#180	ND		ug/kg	1360	--	1000
Cl7-BZ#170	ND		ug/kg	1360	--	1000
Cl8-BZ#195	ND		ug/kg	1360	--	1000
Cl9-BZ#206	ND		ug/kg	1360	--	1000
Cl10-BZ#209	ND		ug/kg	1360	--	1000

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-22	Date Collected:	04/15/11 12:16
Client ID:	S-11A-C020-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 20:42	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	98%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	2390		ug/kg	1360	--	1000
Cl3-BZ#28	10500		ug/kg	1360	--	1000
Cl4-BZ#52	13400		ug/kg	1360	--	1000
Cl4-BZ#44	4710		ug/kg	1360	--	1000
Cl4-BZ#66	3840		ug/kg	1360	--	1000
Cl5-BZ#101	3000		ug/kg	1360	--	1000
Cl5-BZ#118	2030		ug/kg	1360	--	1000
Cl6-BZ#153	2720		ug/kg	1360	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-23	Date Collected:	04/15/11 12:40
Client ID:	S-11A-C021-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 21:23	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	100%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl3-BZ#18	867		ug/kg	133	--	100
Cl5-BZ#105	ND		ug/kg	133	--	100
Cl6-BZ#138	206		ug/kg	133	--	100
Cl7-BZ#187	ND		ug/kg	133	--	100
Cl6-BZ#128	ND		ug/kg	133	--	100
Cl7-BZ#180	ND		ug/kg	133	--	100
Cl7-BZ#170	ND		ug/kg	133	--	100
Cl8-BZ#195	ND		ug/kg	133	--	100
Cl9-BZ#206	ND		ug/kg	133	--	100
Cl10-BZ#209	ND		ug/kg	133	--	100

DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

SAMPLE RESULTS

Lab ID:	L1105174-23	Date Collected:	04/15/11 12:40
Client ID:	S-11A-C021-0-0.5	Date Received:	04/15/11
Sample Location:	NEW BEDFORD, MA	Field Prep:	Not Specified
Matrix:	Sediment	Extraction Method:	EPA 3540C
Analytical Method:	1,8082	Extraction Date:	04/22/11 14:29
Analytical Date:	04/26/11 21:23	Cleanup Method1:	EPA 3630
Analyst:	AW	Cleanup Date1:	04/24/11
Percent Solids:	100%		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Congeners (NOAA List) - Mansfield Lab						
Cl2-BZ#8	343		ug/kg	133	--	100
Cl3-BZ#28	1570		ug/kg	133	--	100
Cl4-BZ#52	1840		ug/kg	133	--	100
Cl4-BZ#44	475		ug/kg	133	--	100
Cl4-BZ#66	432		ug/kg	133	--	100
Cl5-BZ#101	329		ug/kg	133	--	100
Cl5-BZ#118	230		ug/kg	133	--	100
Cl6-BZ#153	306		ug/kg	133	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
DBOB	**0**	Q	30-150
BZ 198	**0**	Q	30-150

Project Name: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 04/21/11 18:18
Analyst: AW

Extraction Method: EPA 3510C
Extraction Date: 04/21/11 15:25
Cleanup Method1: - - - -
Cleanup Date1:
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 11 Batch: WG464083-1					
Cl2-BZ#8	ND		ug/l	0.00100	--
Cl3-BZ#18	ND		ug/l	0.00100	--
Cl3-BZ#28	ND		ug/l	0.00100	--
Cl4-BZ#52	ND		ug/l	0.00100	--
Cl4-BZ#44	ND		ug/l	0.00100	--
Cl4-BZ#66	ND		ug/l	0.00100	--
Cl5-BZ#101	ND		ug/l	0.00100	--
Cl5-BZ#118	ND		ug/l	0.00100	--
Cl5-BZ#105	ND		ug/l	0.00100	--
Cl6-BZ#138	ND		ug/l	0.00100	--
Cl7-BZ#187	ND		ug/l	0.00100	--
Cl6-BZ#128	ND		ug/l	0.00100	--
Cl7-BZ#180	ND		ug/l	0.00100	--
Cl7-BZ#170	ND		ug/l	0.00100	--
Cl8-BZ#195	ND		ug/l	0.00100	--
Cl9-BZ#206	ND		ug/l	0.00100	--
Cl10-BZ#209	ND		ug/l	0.00100	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	81		30-150

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 04/21/11 18:18
Analyst: AW

Extraction Method: EPA 3510C
Extraction Date: 04/21/11 15:25
Cleanup Method1: - - - -
Cleanup Date1:
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 11 Batch: WG464083-1					
Cl6-BZ#153	ND		ug/l	0.00100	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	93		30-150
BZ 198	81		30-150

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 04/22/11 16:57
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 04/21/11 15:52
Cleanup Method1: EPA 3630
Cleanup Date1: 04/22/11
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-10 Batch: WG464091-1					
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	88		30-150
BZ 198	81		30-150

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 04/22/11 16:57
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 04/21/11 15:52
Cleanup Method1: EPA 3630
Cleanup Date1: 04/22/11
Cleanup Method2: - - - -
Cleanup Date2:

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 01-10 Batch: WG464091-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	88		30-150
BZ 198	81		30-150

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 04/25/11 12:38
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 04/22/11 14:29
Cleanup Method1: EPA 3630
Cleanup Date1: 04/24/11

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 12-23 Batch: WG464267-1					
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	97		30-150
BZ 198	80		30-150

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 04/25/11 12:38
Analyst: AW

Extraction Method: EPA 3540C
Extraction Date: 04/22/11 14:29
Cleanup Method1: EPA 3630
Cleanup Date1: 04/24/11

Parameter	Result	Qualifier	Units	RL	MDL
PCB Congeners (NOAA List) - Mansfield Lab for sample(s): 12-23 Batch: WG464267-1					
Cl6-BZ#153	ND		ug/kg	1.33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
DBOB	97		30-150
BZ 198	80		30-150

Matrix Spike Analysis
Batch Quality Control

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

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): 01-10 QC Batch ID: WG464091-4 WG464091-5 QC Sample: L1105174-10 Client ID: S-11A-C010-0-0.5												
Cl2-BZ#8	ND	1680	1080	64		1030	61		40-140	5		30
Cl3-BZ#18	ND	1680	1060	63		1050	63		40-140	1		30
Cl4-BZ#44	ND	1680	1120	67		1060	63		40-140	6		30
Cl4-BZ#66	2.58	1680	1140	68		1060	63		40-140	7		30
Cl7-BZ#187	ND	1680	1030	61		983	59		40-140	5		30
Cl6-BZ#128	ND	1680	1100	66		1020	61		40-140	8		30
Cl7-BZ#180	ND	1680	1210	72		1110	66		40-140	9		30
Cl7-BZ#170	ND	1680	1090	65		1010	60		40-140	8		30
Cl8-BZ#195	ND	1680	1080	64		1000	60		40-140	8		30
Cl9-BZ#206	ND	1680	1230	73		1160	69		40-140	6		30
Cl10-BZ#209	ND	1680	1090	65		1020	61		40-140	7		30
Cl3-BZ#28	2.88	1680	1190	71		1110	66		40-140	7		30
Cl4-BZ#52	3.28	1680	1150	68		1100	65		40-140	4		30
Cl5-BZ#101	2.73	1680	1110	66		1040	62		40-140	7		30
Cl5-BZ#118	2.10	1680	1180	70		1090	65		40-140	8		30
Cl6-BZ#153	1.43	1680	1070	64		996	59		40-140	7		30
Cl5-BZ#105	ND	1680	1170	70		1060	63		40-140	10		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
BZ 198	**0**	Q	**0**	Q	30-150

Matrix Spike Analysis

Batch Quality Control

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

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): 01-10 QC Batch ID: WG464091-4 WG464091-5 QC Sample: L1105174-10 Client ID: S-11A-C010-0-0.5												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
DBOB	**0**	Q	**0**	Q	30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NORTH OF WOOD STREET

Project Number: TO-0010-03

Lab Number: L1105174

Report Date: 04/28/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 11		Batch: WG464083-2	WG464083-3				
Cl2-BZ#8	74		75		40-140	1		30
Cl3-BZ#18	74		76		40-140	3		30
Cl3-BZ#28	83		84		40-140	2		30
Cl4-BZ#52	77		78		40-140	1		30
Cl4-BZ#44	78		78		40-140	1		30
Cl4-BZ#66	79		79		40-140	0		30
Cl5-BZ#101	76		75		40-140	1		30
Cl5-BZ#118	82		81		40-140	0		30
Cl5-BZ#105	84		82		40-140	2		30
Cl6-BZ#138	81		81		40-140	0		30
Cl7-BZ#187	76		77		40-140	1		30
Cl6-BZ#128	80		80		40-140	1		30
Cl7-BZ#180	81		80		40-140	1		30
Cl7-BZ#170	78		79		40-140	1		30
Cl8-BZ#195	78		78		40-140	0		30
Cl9-BZ#206	87		88		40-140	0		30
Cl10-BZ#209	77		77		40-140	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NORTH OF WOOD STREET

Project Number: TO-0010-03

Lab Number: L1105174

Report Date: 04/28/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 11 Batch: WG464083-2 WG464083-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	78		80		30-150
DBOB	94		97		30-150

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 11 Batch: WG464083-2 WG464083-3								
Cl6-BZ#153	78		78		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	78		80		30-150
DBOB	94		97		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NORTH OF WOOD STREET

Project Number: TO-0010-03

Lab Number: L1105174

Report Date: 04/28/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-10 Batch: WG464091-2 WG464091-3								
Cl2-BZ#8	71		69		40-140	3		30
Cl3-BZ#18	72		73		40-140	1		30
Cl3-BZ#28	79		79		40-140	0		30
Cl4-BZ#52	76		80		40-140	5		30
Cl4-BZ#44	79		73		40-140	8		30
Cl4-BZ#66	77		74		40-140	4		30
Cl5-BZ#101	77		74		40-140	4		30
Cl5-BZ#118	80		77		40-140	4		30
Cl5-BZ#105	77		71		40-140	8		30
Cl6-BZ#138	80		76		40-140	5		30
Cl7-BZ#187	76		75		40-140	1		30
Cl6-BZ#128	78		74		40-140	5		30
Cl7-BZ#180	78		74		40-140	5		30
Cl7-BZ#170	79		74		40-140	7		30
Cl8-BZ#195	77		74		40-140	4		30
Cl9-BZ#206	87		84		40-140	4		30
Cl10-BZ#209	77		74		40-140	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 01-10 Batch: WG464091-2 WG464091-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
DBOB	84		78		30-150
BZ 198	78		76		30-150

PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 12-23 Batch: WG464267-2 WG464267-3					
Cl2-BZ#8	74	75	40-140	1	30
Cl3-BZ#18	80	77	40-140	4	30
Cl3-BZ#28	85	83	40-140	2	30
Cl4-BZ#52	81	81	40-140	0	30
Cl4-BZ#44	85	81	40-140	5	30
Cl4-BZ#66	83	82	40-140	1	30
Cl5-BZ#101	81	80	40-140	1	30
Cl5-BZ#118	86	86	40-140	0	30
Cl5-BZ#105	83	81	40-140	2	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: NORTH OF WOOD STREET

Project Number: TO-0010-03

Lab Number: L1105174

Report Date: 04/28/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab Associated sample(s): 12-23 Batch: WG464267-2 WG464267-3								
Cl6-BZ#138	83		82		40-140	1		30
Cl7-BZ#187	81		81		40-140	0		30
Cl6-BZ#128	82		82		40-140	0		30
Cl7-BZ#180	86		84		40-140	2		30
Cl7-BZ#170	77		77		40-140	0		30
Cl8-BZ#195	79		80		40-140	1		30
Cl9-BZ#206	91		90		40-140	1		30
Cl10-BZ#209	82		81		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	79		77		30-150
DBOB	91		85		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: NORTH OF WOOD STREET

Project Number: TO-0010-03

Lab Number: L1105174

Report Date: 04/28/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Congeners (NOAA List) - Mansfield Lab	Associated sample(s): 12-23		Batch: WG464267-2		WG464267-3			
Cl6-BZ#153	79		78		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
BZ 198	79		77		30-150
DBOB	91		85		30-150

INORGANICS
&
MISCELLANEOUS

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-01
Client ID: S-11A-C001-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 10:10
Date Received: 04/15/11
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	99.3		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	78.4		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-02
Client ID: S-11A-C002-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 10:22
Date Received: 04/15/11
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	99.4		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	69.4		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-03
Client ID: S-11A-C003-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 09:59
Date Received: 04/15/11
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	100		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	83.0		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-04
Client ID: S-11A-C004-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 10:37
Date Received: 04/15/11
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	100		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	82.5		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-05
Client ID: S-11A-C005-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 11:13
Date Received: 04/15/11
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	100		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	82.3		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-06
Client ID: S-11A-C006-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 11:28
Date Received: 04/15/11
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	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	64.7		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-07
Client ID: S-11A-C007-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 11:56
Date Received: 04/15/11
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	100		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	73.2		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-08
Client ID: S-11A-C008-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 12:23
Date Received: 04/15/11
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	99.4		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	81.9		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-09
Client ID: S-11A-C009-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 12:09
Date Received: 04/15/11
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	100		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	84.1		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-10
Client ID: S-11A-C010-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/14/11 11:44
Date Received: 04/15/11
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	99.3		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	82.7		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-12
Client ID: S-11A-C011-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 10:50
Date Received: 04/15/11
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	99.1		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	29.9		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-13
Client ID: S-11A-C012-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 10:04
Date Received: 04/15/11
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	98.6		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	53.6		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-14
Client ID: S-11A-C013-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 09:20
Date Received: 04/15/11
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	44.8		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	76.2		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-15
Client ID: S-11A-C014-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 09:46
Date Received: 04/15/11
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	99.5		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	79.6		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-16
Client ID: S-11A-C015-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 10:19
Date Received: 04/15/11
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	99.0		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	44.8		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-17
Client ID: S-11A-C015-0-0.5 REP
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 04/15/11 10:31
Date Received: 04/15/11
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	100		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	31.7		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-18
Client ID: S-11A-C016-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 11:01
Date Received: 04/15/11
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	100		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	27.2		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-19
Client ID: S-11A-C017-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 11:16
Date Received: 04/15/11
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	98.7		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	70.3		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-20
Client ID: S-11A-C018-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 11:46
Date Received: 04/15/11
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	97.9		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	44.9		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-21
Client ID: S-11A-C019-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment
Date Collected: 04/15/11 12:00
Date Received: 04/15/11
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	99.1		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	55.8		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-22
Client ID: S-11A-C020-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 12:16
Date Received: 04/15/11
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	98.1		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	36.2		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03
Lab Number: L1105174
Report Date: 04/28/11

SAMPLE RESULTS

Lab ID: L1105174-23
Client ID: S-11A-C021-0-0.5
Sample Location: NEW BEDFORD, MA
Matrix: Sediment

Date Collected: 04/15/11 12:40
Date Received: 04/15/11
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	100		%	0.100	--	1	-	04/21/11 18:00	30,2540G	SP
Solids, Total (Pre-Dried)	63.6		%	0.100	NA	1	-	04/19/11 09:20	30,2540G	KB

Lab Duplicate Analysis
Batch Quality Control

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-10,12-20 QC Batch ID: WG464098-1 QC Sample: L1105174-01 Client ID: S-11A-C001-0-0.5						
Solids, Total	99.3	100	%	1		20
General Chemistry - Mansfield Lab Associated sample(s): 21-23 QC Batch ID: WG464184-1 QC Sample: L1105174-23 Client ID: S-11A-C021-0-0.5						
Solids, Total	100	99.3	%	1		20

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1105174-01A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-02A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-03A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-04A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-05A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-06A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-07A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-08A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-09A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-10A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-MS/MSD(),A2-TS-PREDRIED(7)
L1105174-10B	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-MS/MSD(),A2-TS-PREDRIED(7)
L1105174-11A	Amber 1000ml unpreserved	A	7	3	Y	Absent	A2-PCBCONG-8082-NOAA(7)
L1105174-12A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-13A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-14A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-15A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-16A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)

*Values in parentheses indicate holding time in days

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1105174-17A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-18A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-19A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-20A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-21A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-22A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-23A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-TS(7),A2-PCBCONG-8082-NOAA(14),A2-TS-PREDRIED(7)
L1105174-24A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-25A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-26A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-27A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-28A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-29A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-30A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-31A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-32A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-33A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-34A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-35A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-36A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-37A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-38A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-39A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-40A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-41A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()
L1105174-42A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-43A	Glass 250ml unpreserved	B	N/A	3.2	Y	Absent	A2-STORAGE()
L1105174-44A	Glass 250ml unpreserved	A	N/A	3	Y	Absent	A2-STORAGE()

Container Comments

L1105174-24A	samples originally frozen upon receipt 4/15/11
L1105174-25A	samples originally frozen upon receipt 4/15/11

*Values in parentheses indicate holding time in days

Project Name: NORTH OF WOOD STREET
Project Number: TO-0010-03

Lab Number: L1105174
Report Date: 04/28/11

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)

Container Comments

L1105174-26A	samples originally frozen upon receipt 4/15/11
L1105174-27A	samples originally frozen upon receipt 4/15/11
L1105174-29A	samples originally frozen upon receipt 4/15/11
L1105174-30A	samples originally frozen upon receipt 4/15/11
L1105174-31A	samples originally frozen upon receipt 4/15/11
L1105174-32A	samples originally frozen upon receipt 4/15/11
L1105174-33A	samples originally frozen upon receipt 4/15/11
L1105174-35A	samples originally frozen upon receipt 4/15/11
L1105174-36A	samples originally frozen upon receipt 4/15/11
L1105174-37A	samples originally frozen upon receipt 4/15/11
L1105174-38A	samples originally frozen upon receipt 4/15/11
L1105174-39A	samples originally frozen upon receipt 4/15/11
L1105174-40A	samples originally frozen upon receipt 4/15/11
L1105174-41A	samples originally frozen upon receipt 4/15/11
L1105174-42A	samples originally frozen upon receipt 4/15/11
L1105174-43A	samples originally frozen upon receipt 4/15/11
L1105174-44A	samples originally frozen upon receipt 4/15/11

*Values in parentheses indicate holding time in days

Project Name:	NORTH OF WOOD STREET	**Lab Number:**	L1105174
Project Number:	TO-0010-03	**Report Date:**	04/28/11

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.

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.

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.

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.

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. 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

Report Format: Data Usability Report

Project Name:	NORTH OF WOOD STREET	**Lab Number:**	L1105174
Project Number:	TO-0010-03	**Report Date:**	04/28/11

Data Qualifiers

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: NORTH OF WOOD STREET **Lab Number:** L1105174

Project Number: TO-0010-03 **Report Date:** 04/28/11

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 March 23, 2011 – 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.)

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.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA, 245.1, 245.7, 1631E, 180.1, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081, 8082, 8260B, 8270C.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7470A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, 3015, SM2320B, EPA 200.8, SM2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, 1631E, SW-846 7470A, 9040B, 6020, 9010B, 9014 Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640C, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 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, 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, 9014, 9040B, 120.1, SM2510B, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 9010B. 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.)

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, 9014, 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, 2510B, EPA 120.1, 180.1, 1631E, 245.7.)

Solid & Chemical Materials (Inorganic Parameters: EPA 9040, 9060, 6020, 7470, 7471, 7474. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270, 8260.)

U.S. Army Corps of Engineers

Department of Defense 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.)

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, 8015-DRO.

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 5

Date Rec'd in Lab:

ALPHA Job #: L1105174

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

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: ~~NORTH OF WOOD ST. ABH TANK MONITORING~~ ANNUAL MONITORING
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVID WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS PCB Cong. (NOAA 18)	ANALYSIS ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
1	S-11A-C001-0-0.5	4/14/11	10:10	SED	DRW	X		NWS-35	1
-24	S-11A-C001-0.5-1.0	↓	10:10	↓	↓		X	NWS-35	1
2	S-11A-C002-0-0.5	↓	10:22	↓	↓	X		NWS-39	1
-25	S-11A-C002-0.5-1.0	↓	10:22	↓	↓		X	NWS-39	1
3	S-11A-C003-0-0.5	↓	09:59	↓	↓	X		NWS-37	1
-26	S-11A-C003-0.5-1.0	↓	09:59	↓	↓		X	NWS-37	1
4	S-11A-C004-0-0.5	↓	10:37	↓	↓	X		NWS-43	1
-27	S-11A-C004-0.5-1.0	↓	10:37	↓	↓		X	NWS-43	1
5	S-11A-C005-0-0.5	↓	11:13	↓	↓	X		NWS-33	1
-28	S-11A-C005-0.5-1.0	↓	11:13	↓	↓		X	NWS-33	1

	PCB Cong.	ARCHIVE
Container Type	G	G
Preservative	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
DWalsh 4/15/11	1824	[signature] 4-15-11	4-14-11 1824

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

FORM NO: 101-09 (rev. 27-SEP-10)

MANSFIELD CHAIN OF CUSTODY

PAGE 2 OF 5

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

Date Rec'd in Lab:

ALPHA Job #: L1105174

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NORTH OF WOOD ST. ANNUAL MONITORING
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVID WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

ANALYSIS: PCB Cong (NEMA 18) ARCHIVE

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Cong	ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
-6	S-11A-C006-0-0.5	4/14/11	11:28	SED	DRW	X		NWS-34	1
-29	S-11A-C006-0.5-0.8		11:28				X	NWS-34	1
7	S-11A-C007-0-0.5		11:56			X		030W	1
-30	S-11A-C007-0.5-1.0		11:56				X	030W	1
8	S-11A-C008-0-0.5		12:23			X		NWS-40	1
-31	S-11A-C008-0.5-0.9		12:23				X	NWS-40	1
9	S-11A-C009-0-0.5		12:09			X		NWS-41	1
-32	S-11A-C009-0.5-1.0		12:09				X	NWS-41	1
10	S-11A-C010-0-0.5		11:44			X		NWS-42	1
-33	S-11A-C010-0.5-1.0	↓	11:44	↓	↓		X	NWS-42	1
	Container Type					G	G		
	Preservative					A	A		

Relinquished By:	Date/Time	Received By:	Date/Time
	4/15/11 1824		4-15-11 1824

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 5

Date Rec'd in Lab:

ALPHA Job #: L1105174

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

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NORTH OF WOOD ST. ANNUAL MONITORING
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVID WALSH
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB Cong (NOAA18)	ANALYSIS: ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
-10	S-11A-C010-0-0.5 MS MSD		4/14/11 11:44	SED	DRW	X		NWS-42 MS MSD	1
	~~EB-041411~~								
-11	EB-041411-01	4/14/11	14:06	WATER	DRW	X		AUGER EQUIPMENT BLANK	1
-12	S-11A-C011-0-0.5	4/15/11	10:50	SED	DRW	X		Ø33	1
-34	S-11A-C011-0.5-1.0	↓	10:50	↓	↓		X	Ø33	1
-13	S-11A-C012-0-0.5	↓	10:04	↓	↓	X		Ø23	1
-35	S-11A-C012-0.5-0.9	↓	10:04	↓	↓		X	Ø23	1
-14	S-11A-C013-0-0.5	↓	09:20	↓	↓	X		Ø1Ø	1
-36	S-11A-C013-0.5-0.9	↓	09:20	↓	↓		X	Ø1Ø	1
-15	S-11A-C014-0-0.5	↓	09:46	↓	↓	X		Ø16	1

Container Type	G	G
Preservative	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
DWalsh 4/15/11	1824	[signature]	4-15-11 1824

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 5

ALPHA ANALYTICAL

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

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

Date Rec'd in Lab:

ALPHA Job #: L1105174

Client Information

Client: WOODS HOLE GROUP

Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NORTH OF WOOD ST. ANNUAL MONITORING

Project Location: NEW BEDFORD, MA

Project #: TO-0010-03

Project Manager: DAVID WALSH

ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☒ FedEx ☐ 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:

PLEASE NOTE

MS/MSD (at unit cost) will be omitted unless you check here: ☐

ANALYSIS: PCB Cong (NOAA) ARCHIVE

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Cong (NOAA)	ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
-37	S-11A-C014-0.5-1.0	4/15/11	09:46	SED	DRW		X	Ø16	1
-16	S-11A-C015-0-0.5	4/15/11	10:19	SED	DRW	X		Ø28	1
-17	S-11A-C015-0-0.5REP		10:31			X		Ø28 REPLICATE	1
-38	S-11A-C015-0.5-1.0		10:19				X	Ø28	1
-18	S-11A-C016-0-0.5		11:01			X		Ø39	1
-39	S-11A-C016-0.5-1.0		11:01				X	Ø39	1
-19	S-11A-CØ17-0-0.5		11:16			X		Ø40	1
-40	S-11A-CØ17-0.5-0.9		11:16				X	Ø40	1
-20	S-11A-CØ18-0-0.5		11:46			X		Ø48	1
-41	S-11A-CØ18-0.5-1.0		11:46				X	Ø48	1
	Container Type					G	G		
	Preservative					A	A		

Relinquished By:	Date/Time	Received By:	Date/Time
	4/15/11 1824		4-15-11 18:24

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.

Serial_No:04281113:33

CHAIN OF CUSTODY

PAGE 5 OF 5

Date Rec'd in Lab:

ALPHA Job #: L1105174

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

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NORTH OF WOOD ST. ANNUAL MONITORING
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVID WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
If MS is required , indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB CONG. (NOAA 18)	ANALYSIS: ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
-21	S-11A-C019-0-0.5	4/15/11	12:00	SED	DRW	X		Ø49	1
-42	S-11A-C019-0.5-1.0	↓	12:00	↓	↓		X	Ø49	1
-22	S-11A-C020-0-0.5	↓	12:16	↓	↓	X		Ø55	1
-43	S-11A-C020-0.5-1.0	↓	12:16	↓	↓		X	Ø55	1
-23	S-11A-C021-0-0.5	↓	12:40	↓	↓	X		Ø62	1
-44	S-11A-C021-0.5-1.0	↓	12:40	↓	↓		X	Ø62	1

	PCB CONG.	ARCHIVE
Container Type	G	G
Preservative	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
DWalsh	4/15/11, 1824	[signature]	4-15-11 1824

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

FORM NO: 01-01 (rev. 18-Jan-2010)

MANSFIELD CHAIN OF CUSTODY

PAGE 1 OF 5

Date Rec'd in Lab:

ALPHA Job #: L1105174

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

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: ~~NORTH OF WOOD ST. ABH TANK MONITORING~~ ANNUAL MONITORING
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVID WALSH
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS PCB Cong. (NOAA 18)	ANALYSIS ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
1	S-11A-C001-0-0.5	4/14/11	10:10	SED	DRW	X		NWS-35	1
-24	S-11A-C001-0.5-1.0	↓	10:10	↓	↓		X	NWS-35	1
2	S-11A-C002-0-0.5	↓	10:22	↓	↓	X		NWS-39	1
-25	S-11A-C002-0.5-1.0	↓	10:22	↓	↓		X	NWS-39	1
3	S-11A-C003-0-0.5	↓	09:59	↓	↓	X		NWS-37	1
-26	S-11A-C003-0.5-1.0	↓	09:59	↓	↓		X	NWS-37	1
4	S-11A-C004-0-0.5	↓	10:37	↓	↓	X		NWS-43	1
-27	S-11A-C004-0.5-1.0	↓	10:37	↓	↓		X	NWS-43	1
5	S-11A-C005-0-0.5	↓	11:13	↓	↓	X		NWS-33	1
-28	S-11A-C005-0.5-1.0	↓	11:13	↓	↓		X	NWS-33	1

	PCB Cong.	ARCHIVE
Container Type	G	G
Preservative	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
DWalsh 4/15/11	1824	[signature] 4-15-11	4-14-11 1824

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FORM NO: 101-09 (rev. 27-SEP-10)

MANSFIELD CHAIN OF CUSTODY

PAGE 2 OF 5

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

Date Rec'd in Lab:

ALPHA Job #: L1105174

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NORTH OF WOOD ST. ANNUAL MONITORING
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVID WALSH
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

ANALYSIS: PCB Cong (NEMA 18) ARCHIVE

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB Cong (NEMA 18)	ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
-6	S-11A-C006-0-0.5	4/14/11	11:28	SED	DRW	X		NWS-34	1
-29	S-11A-C006-0.5-0.8		11:28				X	NWS-34	1
7	S-11A-C007-0-0.5		11:56			X		030W	1
-30	S-11A-C007-0.5-1.0		11:56				X	030W	1
8	S-11A-C008-0-0.5		12:23			X		NWS-40	1
-31	S-11A-C008-0.5-0.9		12:23				X	NWS-40	1
9	S-11A-C009-0-0.5		12:09			X		NWS-41	1
-32	S-11A-C009-0.5-1.0		12:09				X	NWS-41	1
10	S-11A-C010-0-0.5		11:44			X		NWS-42	1
-33	S-11A-C010-0.5-1.0	↓	11:44	↓	↓		X	NWS-42	1
	Container Type					G	G		
	Preservative					A	A		

Relinquished By:	Date/Time	Received By:	Date/Time
	4/15/11 1824		4-15-11 1824

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 5

Date Rec'd in Lab:

ALPHA Job #: L1105174

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

Client Information

Client: WOODS HOLE GROUP
Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536
Phone: 508-540-8080
Fax: 508-540-1001
Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NORTH OF WOOD ST. ANNUAL MONITORING
Project Location: NEW BEDFORD, MA
Project #: TO-0010-03
Project Manager: DAVID WALSH
ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE
MS/MSD (at unit cost) will be omitted unless you check here: ☐

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: RCB Cong (NOAA18)	ANALYSIS: ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
-10	S-11A-C010-0-0.5 MS MSD		4/14/11 11:44	SED	DRW	X		NWS-42 MS MSD	1
	~~EB-041411~~								
-11	EB-041411-01	4/14/11	14:06	WATER	DRW	X		AUGER EQUIPMENT BLANK	1
-12	S-11A-C011-0-0.5	4/15/11	10:50	SED	DRW	X		Ø33	1
-34	S-11A-C011-0.5-1.0	↓	10:50	↓	↓		X	Ø33	1
-13	S-11A-C012-0-0.5	↓	10:04	↓	↓	X		Ø23	1
-35	S-11A-C012-0.5-0.9	↓	10:04	↓	↓		X	Ø23	1
-14	S-11A-C013-0-0.5	↓	09:20	↓	↓	X		Ø1Ø	1
-36	S-11A-C013-0.5-0.9	↓	09:20	↓	↓		X	Ø1Ø	1
-15	S-11A-C014-0-0.5	↓	09:46	↓	↓	X		Ø16	1

	RCB Cong (NOAA18)	ARCHIVE
Container Type	G	G
Preservative	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
DWalsh 4/15/11	1824	[signature]	4-15-11 1824

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 5

Date Rec'd in Lab:

ALPHA Job #: L1105174

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. E. FALMOUTH, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NORTH OF WOOD ST. ANNUAL MONITORING

Project Location: NEW BEDFORD, MA

Project #: TO-0010-03

Project Manager: DAVID WALSH

ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State Fed Program | Criteria

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE

MS/MSD (at unit cost) will be omitted unless you check here: ☐

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: PCB Cong (NOAA)	ANALYSIS: Archive	Sample Specific Comments	TOTAL # BOTTLES
-37	S-11A-C014-0.5-1.0	4/15/11	09:46	SED	DRW		X	Ø16	1
-16	S-11A-C015-0-0.5	4/15/11	10:19	SED	DRW	X		Ø28	1
-17	S-11A-C015-0-0.5REP		10:31			X		Ø28 REPLICATE	1
-38	S-11A-C015-0.5-1.0		10:19				X	Ø28	1
-18	S-11A-C016-0-0.5		11:01			X		Ø39	1
-39	S-11A-C016-0.5-1.0		11:01				X	Ø39	1
-19	S-11A-CØ17-0-0.5		11:16			X		Ø40	1
-40	S-11A-CØ17-0.5-0.9		11:16				X	Ø40	1
-20	S-11A-CØ18-0-0.5		11:46			X		Ø48	1
-41	S-11A-CØ18-0.5-1.0		11:46				X	Ø48	1
	Container Type					G	G		
	Preservative					A	A		

SAMPLE HANDLING

Filtration
☐ Done ☐ Not needed ☐ Lab to do

Preservation
☐ Lab to do (Please specify below)

Relinquished By:	Date/Time	Received By:	Date/Time
	4/15/11 1824		4-15-11 18:24

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

CHAIN OF CUSTODY

PAGE 5 OF 5+

ALPHA ANALYTICAL

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

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

Date Rec'd in Lab:

ALPHA Job #: L1105174

Client Information

Client: WOODS HOLE GROUP

Address: 81 TECHNOLOGY PARK DR. E. FALMOUTH, MA 02536

Phone: 508-540-8080

Fax: 508-540-1001

Email: DWALSH@WHGRP.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NORTH OF WOOD ST. ANNUAL MONITORING

Project Location: NEW BEDFORD, MA

Project #: T8-0010-03

Project Manager: DAVID WALSH

ALPHA Quote #:

Turn-Around Time

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

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program | Criteria

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required , indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All ***CAM*** methods for inorganic analyses require MS every 20 soil samples)

ANALYSIS: PCB CONG. (CAM 6) ARCHIVE

SAMPLE HANDLING

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB CONG. (CAM 6)	ARCHIVE	Sample Specific Comments	TOTAL # BOTTLES
-21	S-11A-C019-0-0.5	4/15/11	12:00	SED	DRW	X		Ø49	1
-42	S-11A-C019-0.5-1.0		12:00				X	Ø49	1
-22	S-11A-C020-0-0.5		12:16			X		Ø55	1
-43	S-11A-C020-0.5-1.0		12:16				X	Ø55	1
-23	S-11A-C021-0-0.5		12:40			X		Ø62	1
-44	S-11A-C021-0.5-1.0		12:40				X	Ø62	1

Container Type	G	G
Preservative	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/15/11, 1824	[signature]	4-15-11 1824

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.

APPENDIX C. NEW ENVIRONMENTAL HORIZONS, INC. DATA EVALUATION REPORTS

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Data Validation Report
EPA Region I Tier I+
NOAA Congeners by 8082

Client/Company:	Woods Hole Group, Inc. (WHG)
Site/Project Name:	North of Wood Street Process Cores, New Bedford Harbor, MA
Laboratory:	Alpha Analytical – Mansfield, MA
Lab Project Number(s):	L1105174
Date(s) of Collection:	April 14, 2011 and April 15, 2011
Number / Type Samples & Analyses	22 sediment core samples plus 1 equipment blank 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 24, 2010

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. 3.0, prepared by Woods Hole Group, Inc., August 2010 (NBH OU1 QAPP Addendum 2010); 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-11A-C001-0-0.5	L1105174-01	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C002-0-0.5	L1105174-02	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C003-0-0.5	L1105174-03	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C004-0-0.5	L1105174-04	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C005-0-0.5	L1105174-05	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C006-0-0.5	L1105174-06	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C007-0-0.5	L1105174-07	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C008-0-0.5	L1105174-08	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C009-0-0.5	L1105174-09	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C010-0-0.5	L1105174-10	4/14/11	Air-dried Sediment	18 NOAA Congeners	Field Sample [used for MS/MSD]
EB-041411-01	L1105174-11	4/14/11	Air-dried Sediment	18 NOAA Congeners	Equipment Blank

Table 1. Sample Descriptions and Analytical Parameters Validated

Sample ID	Lab Sample ID	Collection Date	Matrix	Analytical Parameters	Sample Type
S-11A-C011-0-0.5	L1105174-12	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C012-0-0.5	L1105174-13	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C013-0-0.5	L1105174-14	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C014-0-0.5	L1105174-15	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C015-0-0.5	L1105174-16	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C015-0-0.5 REP	L1105174-17	4/15/11	Air-dried Sediment	18 NOAA Congeners	FD of S-11A-C015-0-0.5
S-11A-C016-0-0.5	L1105174-18	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C017-0-0.5	L1105174-19	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C018-0-0.5	L1105174-20	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C019-0-0.5	L1105174-21	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C020-0-0.5	L1105174-22	4/15/11	Air-dried Sediment	18 NOAA Congeners	Field Sample
S-11A-C021-0-0.5	L1105174-23	4/15/11	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 2009 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 2010 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 2010 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 Receipt and Holding Time

The North of Wood Street process sediment cores were collected on April 14, 2011 and April 15, 2011 and separate aliquots of the cores were generated by WHG, for PCB Congener analysis. The sediment core samples were received at the laboratory intact at 3.0°C and 3.2°C on the day of sample aliquoting, April 15, 2011. Aliquots of the "as received" samples were analyzed for percent solids. All samples

had percent solids content of 27-84%. All of these sediment core samples were air-dried, as required by the QAPP, prior to Congener analysis, even though some samples had percent solids content above 50%. 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 97%. These air-dried samples were frozen after receipt and prior to air-drying, to arrest the holding time for sample extraction. As a consequence of the freezing, these samples were considered to have been extracted and analyzed within holding time.

Accuracy

The Method Blanks (3) and the Equipment Blank were non-detect for all 18 NOAA. Therefore, blank action to negate sample data was not required.

One LCS/LCSD did not report results for the Congener 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ#153). Since all other Congeners in this LCS/LCSD were recovered within criteria and since BZ#153 was recovered within criteria in another LCS/LCSD extracted on the same day, a decision was to accept the LCS/LCSD results without requesting re-issue of the data package. LCS/LCSD recoveries were acceptable for all NOAA Congeners in all three LCS/LCSD pairs indicating acceptable accuracy in the laboratory analysis.

MS/MSD analyses were performed on sample S-11A-C010-0-0.5. The QAPP required frequency of MS/MSD analysis was 5% (1 MS/MSD per 20 field samples). This QAPP QC frequency was not met for these sediment core samples as 21 field samples (plus 1 FD) were included in this SDG. No action was taken other than to note this deviation. MS/MSD recoveries were acceptable for all NOAA Congeners indicating acceptable accuracy in the laboratory analysis of the site matrix.

Precision

LCS/LCSD precision, for all three sets of QC samples, was acceptable for all NOAA Congeners reported indicating acceptable precision in the laboratory analysis.

Precision was acceptable for all 18 NOAA Congeners in the MS/MSD analysis of S-11A-C010-0-0.5 indicating acceptable precision in the laboratory analysis of these samples.

The FD pair was S-11A-C015-0-0.5 & S-11A-C015-0-0.5 REP. Precision was acceptable for the eight non-detected NOAA Congeners in this FD pair but unacceptable for the ten detected Congeners including 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, and 2,2',4,4',5,5'-Hexachlorobiphenyl. The results for these ten Congeners were estimated (J) in the field duplicate samples, as shown in Table 2, with indeterminate bias. These results are an indication of variable precision and representativeness of these sediment core samples and evidence of heterogeneity in the site matrix for PCB Congener analysis.

Sensitivity & Reporting

Nine samples (eight sediment cores + equipment blank) were analyzed without dilution (i.e., dilution factor (DF) = 1) and all non-detects in these samples were reported with reporting limits (RLs) below the Project Quantitation Limits (PQLs) given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010. The other fourteen samples were analyzed with various dilutions to report all Congeners within the instrument calibration range. For these samples, all RLs were increased as a consequence of the dilutions made (RLs achieved were 2 to 270 times higher than the 5 µg/Kg PQL given in QAPP Worksheet #15 of the NHB OU1 QAPP Addendum 2010). However, Total PCBs (as the sum of all detected Congener results) for these fourteen samples were detected 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 at a dilution 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-11A-C015-0-0.5 & S-11A-C015-0-0.5 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; D = result reported from a dilution analysis (added by laboratory).

Bias: L = Low; H = High; I = Indeterminate

Abbreviations used in Table 2:
FD = Field Duplicate