IMMEDIATE RESPONSE ACTION COMPLETION REPORT AND IMMINENT HAZARD EVALUATION

Triangle Island TI-3 Area

New Bedford High School
230 Hathaway Boulevard
New Bedford, Massachusetts
Release Tracking Number (RTN) 4-23526

Prepared for:

Department of Environmental Stewardship
City of New Bedford
133 William Street
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November 2, 2011

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Triangle Island TI-3 Area

New Bedford High School
230 Hathaway Boulevard
New Bedford, Massachusetts

Release Tracking Number (RTN) 4-23526

TRC Project Number: 115058
November 2, 2011

TRC Environmental Corporation (TRC) is submitting this Immediate Response Action (IRA) Completion Report to the Massachusetts Department of Environmental Protection (MassDEP) on behalf of the City of New Bedford (City) through the City's Department of Environmental Stewardship and per the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). This IRA Completion Report addresses the detection of polychlorinated biphenyls (PCBs) in soil at a tree island composite sample location identified as TREE-TI-3. Triangle Island TI-3 is located west of House #2 (Gold House) of the A-Block portion of the New Bedford High School (NBHS) building located at 230 Hathaway Boulevard in New Bedford, Massachusetts (the "Site"). PCBs were detected in the top foot of soil at a concentration above that set forth in 310 CMR 40.0321(2)(b) of the MCP. The reporting condition is associated with the compound, concentration, depth below surface, proximity to a school or residential dwelling, and the potential accessibility of soil containing PCBs above 10 milligrams per kilogram (mg/kg). The City reported the detection to MassDEP per 310 CMR 40.0321(2) (b) and 310 CMR 40.0311(7) with TRC via telephone on September 6, 2011 at approximately 12:55 pm. MassDEP orally approved IRA assessment activities and assigned Release Tracking Number (RTN) 4-23526. The NBHS Campus is part of the Parker Street Waste Site (PSWS) that is tracked by MassDEP under RTN 4-15685. Response actions at the PSWS are conducted under a Special Project designation (310 CMR 40.0060). The location of the Site is shown in Figure 1.

This IRA Completion Report is organized as follows: Section I (Background) briefly summarizes information on TRC's involvement with the Site, the circumstances of the release, and the response actions conducted at the Site under MassDEP oral approval. Section II (IRA Completion Report) provides the contents of an IRA Completion Report as set forth under the MCP, specifically 310 CMR 40.0427. Section III (References) lists information sources relied upon in the preparation of this IRA Status Report.

In addition, Appendix A provides an Imminent Hazard Evaluation, Appendix B contains pertinent soil boring logs, Appendix C contains copies of relevant laboratory analytical data reports, Appendix D contains a copy of a clarification letter to the United States Environmental Protection Agency (EPA) dated October 28, 2011 and Appendix E contains public notification letters.

I. BACKGROUND

On April 6, 2011, the City submitted a RAM Plan to MassDEP for soil remediation activities at the NBHS Campus (TRC, 2011a). MassDEP issued written Conditional Approval of the RAM on April 15, 2011. The RAM Plan identified areas for targeted soil removal or installation and/or expansion of paving exposure barriers. Following soil removal in areas targeted for remediation or prevention of direct contact exposure, TRC used a Method 1/Method 2 risk characterization approach to demonstrate that a Condition of No Significant Risk will exist for soil at the Site for the top 3 feet of soil in unpaved areas, which was then verified using a Method 3 risk characterization approach. A detailed description of the remedial approach is provided in the RAM Plan and associated Soil Management Plan (SMP) dated April 6, 2011 (TRC, 2011a).

As part of the MassDEP Conditional Approval, a RAM Plan Modification was required to be submitted to MassDEP prior to conducting activities "where pavement will be increased and/or for the installation of storm water utilities." On July 22, 2011, a RAM Plan Modification was submitted to MassDEP to address MCP requirements and MassDEP's April 15, 2011 letter, as well as several changes in proposed RAM Plan activities (TRC, 2011b). The MassDEP issued written Conditional Approval of the RAM Plan Modification on August 1, 2011.

Among the proposed changes described in the RAM Plan Modification dated July 22, 2011 (TRC, 2011b) was the consideration of existing mature stands of trees within areas targeted for soil excavation. Specifically, the RAM Plan Modification called for the following:

- In the areas to be paved where trees are located, the trees will remain in place and the soils surrounding the trees and root systems will be excavated to a depth of three feet; and

- In the remaining excavations where trees are located, the trees will remain in place and the soils surrounding the trees and root systems will be excavated to a depth of three feet.

As described in Section 4.2.5 of the RAM Plan Modification, following remedial activities implemented to date in excavation areas where trees are located, the trees remain in place and the soil surrounding the trees and root systems has been excavated to a depth of three feet, except for the area underneath the dense root mass closer to the tree trunk. Soil was excavated up to approximately a 20-foot radius from the tree, depending on the size of the excavation, tree size, health (determined in collaboration with a City-contracted arborist), and species of the tree. With the exception of underneath the dense root mass closer to the tree trunk, due to the impracticality of removing soil without damaging the integrity of the tree and/or of accessing the soil under the root mass, an excavator and hand tools were used to excavate soil to a depth of 3-feet within the 20-foot radius of the tree. Following excavation of soil from the root system, backfilling and compaction occurred per Sections 4.2.4 and 4.2.6 of the RAM Plan Modification and associated SMP.

Excavation activities were implemented in the above-described manner around a total of eleven (11) trees throughout the western portion of the NBHS Campus. Soil below the tree trunks, larger roots and dense root mass remain in place so as to maintain the integrity of the tree support

systems. Following excavation activities, the remaining root zone soil was sampled in support of post-remediation risk characterization. Individual grab aliquots were collected by TRC and composited in the field. Composite soil samples, generally consisting of four grab aliquots collected from the northern, eastern, southern and western portions of each root mass, were collected from the 0 to 1 foot and 1 to 3 foot depth interval around each of the trees.

Soil composite samples were submitted under chain-of-custody to Con-Test Analytical Laboratory (Con-Test) in East Longmeadow, Massachusetts for PCB Aroclor (EPA Method 8082), arsenic, barium, cadmium, chromium and lead (EPA Method 6010C) analyses.

Initial laboratory results from one of the composite soil samples (i.e., TREE-TI-3 [0-1]) indicated a total PCB Aroclor concentration of 100 milligrams per kilogram (mg/kg) in the top foot of soil (see Figure 2). The detected concentration of PCBs was greater than the reporting thresholds set forth in 310 CMR 0321(2)(b) of the MCP. Therefore, on September 6, 2011, the condition was reported to the MassDEP via telephone by TRC and the City. MassDEP orally approved IRA assessment activities and assigned RTN 4-23526. In addition, the EPA Region 1 PCB Coordinator was notified of the initial detection via teleconference on September 6, 2011.

II. IRA COMPLETION REPORT (310 CMR 40.0424)

This IRA Completion Report is organized according to the information needs set forth under 310 CMR 40.0427(4)(a) through (f) of the MCP.

(a) Description of Release, Threat of Release, Site Conditions, and Surrounding Receptors

The Phase II Comprehensive Site Assessment (TRC 2011c) submitted to MassDEP on April 6, 2011 presents a complete description of the Site Investigative History, Site-Geologic/Hydrologic Conditions, prior immediate response actions, and the Nature and Extent of Chemical Impacts for the NBHS Campus.

Description of Release

The reporting condition was identified on September 6, 2011 for the detection of PCBs above 10 mg/kg in surface soil (0 to 1 feet in depth) at tree island sample location TREE-TI-3 (0-1) located to the west of House #2 of the NBHS building. TRC has performed an IH evaluation, which is provided in Appendix A.

Site Conditions

The area of concern is located to the west of House #2 of the NBHS building within a triangular shaped traffic island along Hathaway Boulevard (see Figure 2). This area may be accessed by students, staff and child and adult visitors at the high school. The traffic island area is sparsely vegetated following excavation activities, and surrounded by paved surfaces, and the island areas will be periodically maintained by mowing in the future. The area immediately surrounding Triangle Island TI-3 is paved.

Surrounding Receptors

The reporting condition per 310 CMR 40.0321(2)(b) was detected in surface soil on a school property and within 500 feet of recreational areas.

Groundwater PCB impacts have not been detected in the vicinity of Tree Island TI-3. Groundwater categories at NBHS include actual or potential GW-2, depending upon proximity to occupied structures (groundwater is less than 15 feet below ground surface based on data from nearby monitoring well locations), and GW-3 (applies to all groundwater throughout the Commonwealth).

Based on review of on-line MassDEP Priority Resource Map data available from Massachusetts Geographic Information System (MassGIS), the Site is not located with a Current or Potential Drinking Water Source Area (MassGIS, 2008).

The Triangle Island TI-3 is at the NBHS campus is not located in a wetland resource area. No other documented sensitive ecological receptor areas (e.g., Areas of Critical Environmental Concern [ACECs]) are known to be located at or near the Site.

(b) Description of any Immediate Response Actions Undertaken to Date at Triangle Island TI-3

At the time of oral notification, MassDEP approved additional assessment as an appropriate IRA.

Supplemental Assessment

Based on the September 6, 2011 teleconference with the EPA Region 1 PCB Coordinator and following oral approval of additional assessment activities by MassDEP, a quality assurance review of the laboratory analytical data reports was initiated by TRC's Senior Chemist. As the initially reported PCB detection (100 mg/kg) was greater than 50 mg/kg in soils, the associated soil would be classified as a PCB Remediation Waste as defined in 40 CFR §761.3 and the regulations of the Toxic Substances Control Act (TSCA) would affect remedial decisions/approaches. A supplemental investigation approach was designed to determine the lateral and vertical extents of potential PCB impacted soil within the Triangle Island TI-3 root mass. The proposed scope of work was submitted to EPA via electronic mail on September 8, 2011.

In addition, on September 8, 2011, the City erected a temporary chain-link encompassing Triangle Island TI-3 as an initial response action.

The supplemental assessment consisted of using a GeoProbe® direct push track-mounted drill rig to advance soil borings, collect soil samples and observe subsurface soil conditions with the intention of delineating potential PCB impacts within the Triangle Island TI-3 root mass. The delineation approach targeted representative locations of the four grab aliquots that composed sample TREE-TI-3 (0-1) collected on August 25, 2011. Soil samples TI-3N, TI-3E (including field duplicate), TI-3S and TI-3W were collected from the 0 to 1 foot depth interval on September 26, 2011 to represent the original northern, eastern, southern and western grab aliquots, respectively (see Figure 2). Two additional soil samples were collected from each soil boring location from the 1 to 1.3 foot and 2 to 2.3 foot depth intervals, respectively. These deeper samples were retained for analysis contingent upon the analytical results of the upper 0 to 1 foot horizon in an attempt to delineate the vertical extent of impacts, if present, without having to remobilize sampling teams.

As depicted in Figure 2, additional soil borings were advanced within the northern (i.e., TI-3N1 through TI-3N2), eastern (i.e., TI-3E1 through TI-3E3), southern (i.e., TI-3S1 through TI-3S3) and western (i.e., TI-3W1 through TI-3W3) sectors of the Triangle Island TI-3 root mass for analysis contingent upon the analytical results of the 0 to 1 foot depth interval TI-3N, TI-3E, TI-3S and TI-3W grab aliquots. Contingency grab soil samples were collected from the 0 to 1 foot, 1 to 1.3 foot and 2 to 2.3 foot depth intervals from each of the twelve additional soil boring locations. In addition, three point composite soil samples were collected from the northern (i.e., TI-3N-COMP), eastern (i.e., TI-3E-COMP), southern (i.e., TI-3S-COMP) and western (i.e., TI-3W-COMP) sectors from the 0 to 1 foot, 1 to 1.3 foot and 2 to 2.3 foot depth intervals. Composite sample volume was collected from the twelve above-referenced contingency soil boring locations in support of remedial planning, if necessary.

Drilling services and equipment were provided by New England Geotech, LLC (New England Geotech) of Jamestown, Rhode Island. Copies of associated soil boring logs for the environmental investigations conducted on September 26 – 27, 2011 are provided in Appendix B.

TRC conducted field screening of soil samples consisting of visual and olfactory observations, readings using a calibrated photoionization detector (PID), and professional judgment, consistent with TRC Standard Operating Procedures (SOPs) and general industry practice. No PID readings were detected above background. TRC also evaluated and logged the geologic character of the soil samples consistent with the Burmeister (1958) method.

The sampling locations were surveyed by Land Planning, Incorporated of Hanson, Massachusetts (Land Planning) following TRC's sampling activities on September 28, 2011.

Soil samples for PCB Aroclor analysis were submitted to Pace/Northeast Analytical Laboratories (Pace/NEA) of Schenectady, New York. All samples were submitted under chain-of-custody. Total PCB Aroclor concentrations ranged from 0.115 mg/kg (TI-3N [0-1]) to 3.53 mg/kg (TI-3E [0-1]). A summary of the soil analytical results at Triangle Island TI-3 is included in Table 1. Laboratory analytical data reports are included in Appendix C.

Quality Assurance Review

A quality assurance review of the laboratory analytical data report associated with the original TREE-TI-3 (0-1) composite sample collected on August 25, 2011 was initiated by TRC's Senior Chemist on September 6, 2011.

TRC subsequently requested additional information and clarification on select items related to the laboratory analytical report from Con-Test. This included an inquiry regarding inconsistencies between the dilution factor noted on the instrument injection logs and those reported with the samples. Con-Test acknowledged that the originally reported dilution factor for sample TREE-TI-3 (0-1) of "100" was incorrect due to a typographical error. The correct dilution factor was "20". The laboratory analytical data report was revised to reflect the correct dilution factor and correspondingly correct concentration for PCB Aroclor 1254 of 20 mg/kg, rather than the initially reported 100 mg/kg (see Table 1). The revised report was issued to TRC on September 29, 2011 and is included in Appendix C.

Imminent Hazard Evaluation

An Imminent Hazard (IH) evaluation was initiated within 14 days of obtaining knowledge of the reporting condition, which is provided in Appendix A. TRC's risk assessment specialist conducted the IH calculations using an arithmetic mean as the Exposure Point Concentration (EPC) for PCBs. The IH was also conservatively calculated using the maximum detected concentration as the EPC for PCBs. In both cases the calculated Hazard Index (HI) and the Excess Lifetime Cancer Risk (ELCR) do not exceed the MassDEP IH limits of 10 and 1E-05, respectively.

TRC performed the initial IH analysis on September 11, 2011, satisfying the IH evaluation initiation timeline under the MCP. The IH evaluation was subsequently revised on October 10, 2011 following laboratory revision of the TREE-TI-3 (0-1) sample result to 20 mg/kg.

The risk characterization calculations indicate that no IH condition exists at the Triangle Island TI-3 area of the NBHS Campus. Please refer to the full IH evaluation included as Appendix A for additional details.

(c) Statement of IRA Findings and Conclusions

No IH condition exists at the Triangle Island TI-3 area of the NBHS Campus. The estimated cancer risk and noncarcinogenic hazard for the young child recreational user do not exceed the MCP risk limits for an IH of a HI of 10 and an ELCR of 1E-05.

Following receipt of the revised laboratory analytical data report associated with soil composite sample TREE-TI-3 and the delineation soil samples results representing the original northern, eastern, southern and western grab aliquots, TRC reported the results via electronic mail to the EPA Region 1 PCB Coordinator on October 6, 2011. On October 28, 2011, TRC issued a clarification letter to EPA summarizing the discovery, correction and issuance of a revised PCB Aroclor result of 20 mg/kg for composite soil sample TREE-TI-3 (0-1). In addition, the letter summarized the results of supplemental investigation activities in support of a determination that the soil associated with the Triangle Island TI-3 root mass does not represent a PCB Remediation Waste as defined in 40 CFR §761.3 and does not require EPA regulation under TSCA.

(d) Management of Remediation Waste, Remedial Waste Water, and/or Remedial Additives

Soil generated during excavation activities in the vicinity of Triangle Island TI-3 was managed as described in the MassDEP approved RAM Plan, RAM Plan Modification and associated SMP. The stockpiled soil material is currently staged on and covered with polyethylene sheeting at the Shawmut Avenue Transfer Station pending off-site reuse, recycling, and/or disposal. Soil management and disposal activities will be described in a future RAM-related regulatory submittal.

No additional remediation waste or remedial waste water has been generated, and no remedial additives were used in association with IRA activities.

(e) Ongoing Activities

The objective of this IRA was to assess and delineate the reporting condition. This work has been completed.

The reporting condition that gave rise to the IRA was determined to not present an IH based on conservative calculations discussed herein. The diagnosis, remedy, and closure of the release condition will be addressed, as needed, as part of the comprehensive response actions for the

PSWS under Special Project status and in accordance with the MCP. The Site will also be linked under RTN 4-15685 which has received Special Project Designation status.

(f) Such Other Information that the Department May Deem Appropriate and Necessary

Public Involvement

As required by 310 CMR 40.1403(3)(b) and (c), the Mayor and the Board of Health for the City of New Bedford have been notified of the IRA activities and the availability of this IRA Completion Statement. Copies of the notification letters sent to the Mayor and Board of Health are provided in Appendix E.

III. REFERENCES

Burmeister, 1958 — *Suggested Methods of Tests for Identification of Soils.* In: Procedures for Testing Soils. American Society for Testing and Materials, Philadelphia, PA, 1958.

MassGIS, 2008 — Massachusetts Geographic Information System (MassGIS), On-line MassDEP Priority Resource Map. Accessed May 21, 2009. http://maps.massgis.state.ma.us/21e/viewer.htm

TRC 2011a — *Release Abatement Measure Plan, Soil Excavation and Removal, New Bedford High School, New Bedford, Massachusetts.* Prepared for the City of New Bedford. Prepared by TRC, Lowell, Massachusetts. April 2011.

TRC 2011b — *Release Abatement Measure Plan Modification, Soil Excavation and Removal, New Bedford High School, New Bedford, Massachusetts.* Prepared for the City of New Bedford. Prepared by TRC, Lowell, Massachusetts. July 2011.

TRC 2011c — *Phase II Comprehensive Site Assessment, New Bedford High School Campus at the Parker Street Waste Site, New Bedford, Massachusetts.* Prepared for the City of New Bedford. Prepared by TRC, Lowell, Massachusetts. April 2011.

TABLES

Table 1
Summary of Analytical Results for Triangle Island TI-3 Soil Samples
New Bedford High School
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:			TREE-TI-3 (1)		TI-3E		TI-3N	TI-3S	TI-3W
		Sample Depth (ft.):			0-1	1-3	0-1	0-1	0-1	0-1	0-1
		Sample Date:			8/25/2011	8/25/2011	9/26/2011	9/26/2011	9/26/2011	9/26/2011	9/26/2011
		S-1/GW-3	S-2/GW-3	S-3/GW-3	Composite	Composite	Grab	Grab Field Dup	Grab	Grab	Grab
PCBs											
(mg/kg)	Aroclor-1016	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1221	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1232	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1242	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1248	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1254	2	3	3	**20**	**2.5**	**2.46**	**2.54**	**0.115**	**0.906**	**0.179**
	Aroclor-1260	2	3	3	2.2 U	0.25 U	**1.07**	**0.933**	0.0549 U	**0.261**	**0.0911**
	Aroclor-1262	2	3	3	2.2 U	0.25 U	NA	NA	NA	NA	NA
	Aroclor-1268	2	3	3	2.2 U	0.25 U	NA	NA	NA	NA	NA
	Total PCBs	2	3	3	**20**	**2.5**	**3.53**	**3.473**	**0.115**	**1.167**	**0.270**
Metals, total											
(mg/kg)	Arsenic	20	20	20	**6.7**	**12**	NA	NA	NA	NA	NA
	Barium	1,000	3,000	5,000	**2,500**	**7,000**	NA	NA	NA	NA	NA
	Cadmium	2	30	30	**5.3**	**5.2**	NA	NA	NA	NA	NA
	Chromium	30	200	200	**260**	**390**	NA	NA	NA	NA	NA
	Lead	300	300	300	**790**	**3,000**	NA	NA	NA	NA	NA

Notes:

(1) - Initially reported result for sample TREE-TI-3 (0-1) was revised by the laboratory on September 29, 2011

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

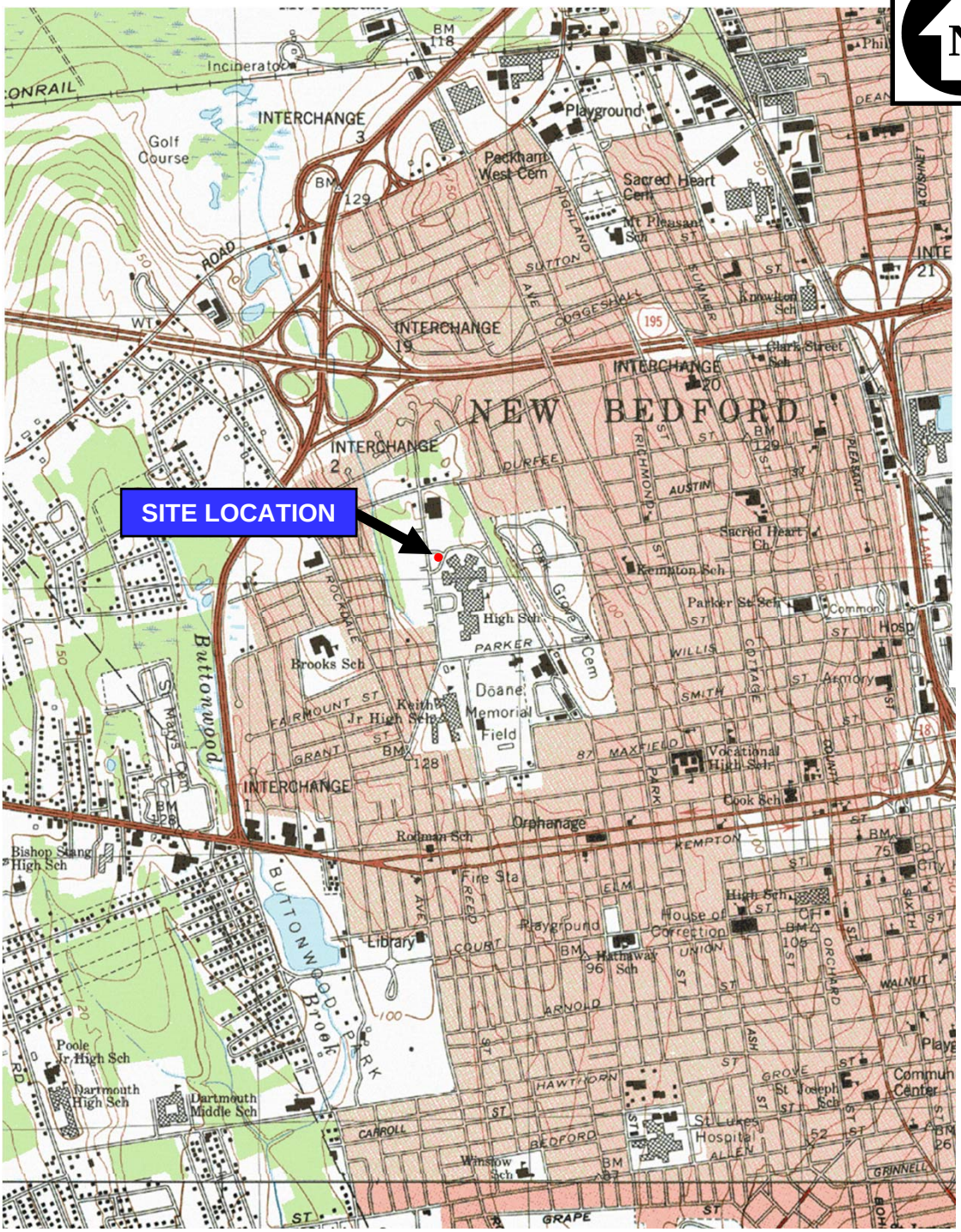
U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

PCBs - Polychlorinated Biphenyls.

FIGURES



BASE MAP IS A PORTION OF THE FOLLOWING 7.5' X 15' USGS TOPOGRAPHIC QUADRANGLES: NEW BEDFORD NORTH, MA, 1979; NEW BEDFORD SOUTH, MA 1977

0 1000 2000 3000

scale in feet

QUADRANGLE LOCATION

T:\E_CAD\115058\SITE LOC.ppt

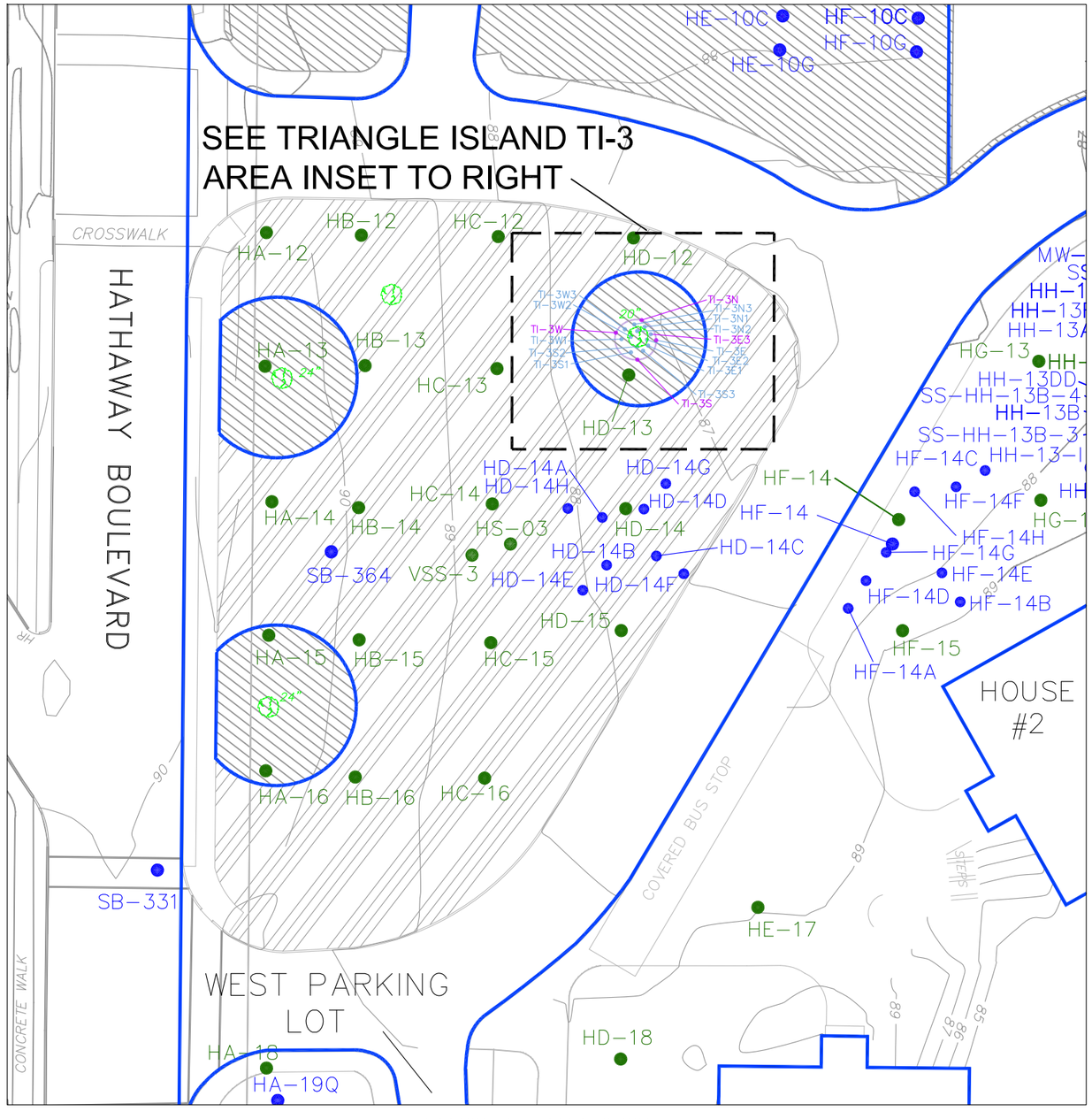
NEW BEDFORD HIGH SCHOOL
NEW BEDFORD, MASSACHUSETTS

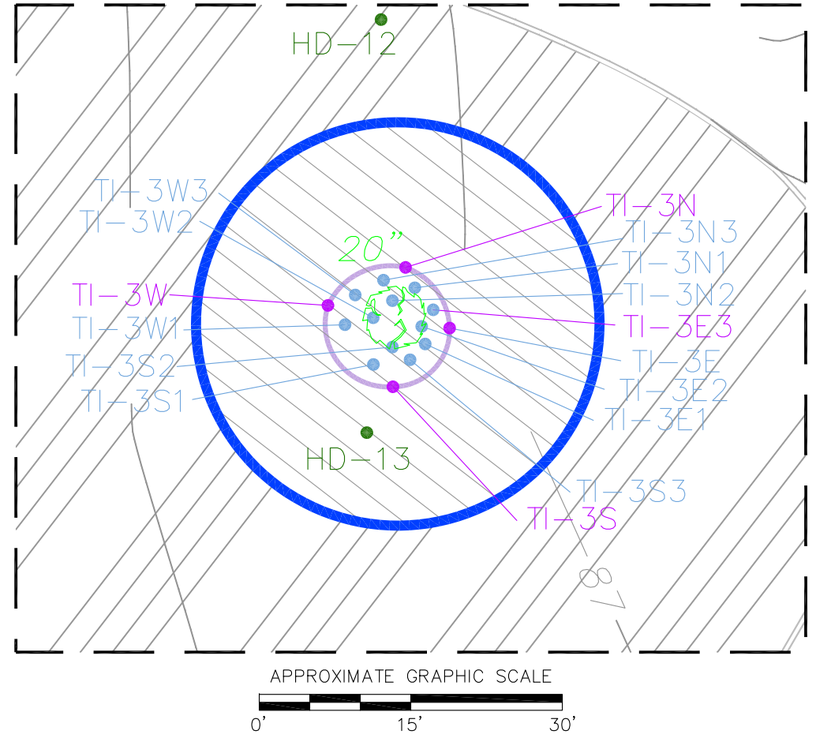
SITE LOCATION MAP

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
978-970-5600

Drawn: HWB	SCALE: AS SHOWN
Checked: JS	Date: OCT 2011

FIGURE 1





LEGEND:

- TRC DISCRETE SAMPLE LOCATIONS
- TRC SECTOR COMPOSITE SAMPLE LOCATIONS
- PREVIOUS TRC SAMPLE LOCATIONS
- VHB/BETA SAMPLE LOCATIONS
- PAVED AREA
- BACKFILLED SOIL AREA
- APPROXIMATE LIMIT OF ROOT BALL

NOTE:

SAMPLES TREE-TI-3 (0-1') AND TREE-TI-3 (1-3') REPRESENT FOUR POINT COMPOSITES COLLECTED ON AUGUST 25, 2011 FROM THE APPROXIMATE LOCATIONS OF SOIL BORINGS TI-3N, TI-3E, TI-3S, AND TI-3W.

NEW BEDFORD HIGH SCHOOL
NEW BEDFORD, MASSACHUSETTS

TREE TI-3 DELINEATION LOCATION

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

DRAWN BY: HWB
CHECKED BY: JBS
DATE: OCT 2011

FIGURE 2

FILE: T:\E_CAD\115058\NBHS TI AREA -3.dwg

APPENDIX A

IMMINENT HAZARD EVALUATION

IMMINENT HAZARD EVALUATION
TREE ISLANDS TI-1 THROUGH TI-3 SURFACE SOIL
NEW BEDFORD HIGH SCHOOL
NEW BEDFORD, MASSACHUSETTS

An Imminent Hazard (IH) evaluation was performed in response to the detection of polychlorinated biphenyls (PCBs) in soil (0 to 1 foot in depth) at the Triangle Island TI-3 portion of the New Bedford High School (NBHS) Campus.

Background

The potential IH condition was discovered during post-excavation characterization of potential residual concentrations of PCBs and metals in soil present at the base of three mature trees (i.e., TI-1 through TI-3) in the triangular shaped tree belt located west of NBHS House #2. The post-excavation characterization of surface soil at the base of the trees included the collection of one composite sample from the 0 to 1 foot depth interval and one composite sample from the 1 to 3 foot depth interval. Composite samples were prepared by collecting and combining aliquots of soil from the appropriate depth interval from the north, south, east and west of the tree base (i.e., four point composite), up to a distance of approximately five to seven feet from the tree. Composite samples were analyzed for the PCB Aroclors, arsenic, barium, cadmium, chromium and lead.

The sampling results for the three composite 0 to 1 foot samples are presented in Table 1. Total PCB Aroclors and metal concentrations were below the MCP Method 1 S-1/GW-2 and S-1/GW-3 standards and the Massachusetts Department of Environmental Protection (MassDEP) background concentrations for natural soil at two of the three tree island (i.e., TI-1 and TI-2). However, at Tree Island TI-3, a total PCB concentration of 20 mg/kg[1] was detected in the 0 to 1 foot interval. The detected concentration exceeded the "could pose" IH threshold of 10 mg/kg total PCBs. The potential IH condition was reported, a temporary fence was installed enclosing Tree Island TI-3 and an IH evaluation was initiated within 14 days of obtaining knowledge of the reporting condition.

Further sampling of the surface soil at Tree Island TI-3 was performed on September 26, 2011 to delineate the extent of total PCBs within this tree island. Four grab samples and one duplicate within the 0 to 1 foot depth interval were collected to the north (sample TI-3N), east (sample TI-3E and its duplicate), south (sample TI-3S) and west (samples TI-3W) of the base of the tree. Each sample was analyzed for PCB Aroclors (EPA Method 8082) by Pace/Northeast Analytical, Incorporated of Schenectady, New York.

The sampling results for the additional 0 to 1 foot grab samples are presented in Table 1. Three of the grab samples demonstrated total PCB results less than the MCP Method 1 S-1/GW-2 and S-1/GW-3 standards. Total PCBs were detected in the fourth sample (TI-3E) and the associated duplicate at a concentration of 3.5 mg/kg each.

[1] The laboratory erroneously reported the total PCB concentration in sample TI-3 as 100 mg/kg. A corrected analytical report was provided by the laboratory on October 4, 2011.

Evaluation and Assumptions

This IH evaluation reflects 0 to 1 foot surface soil sampling conducted to date for Tree Islands TI-1 through TI-3 (i.e., the exposure area). This IH evaluation assumes that these three tree islands will not be paved or otherwise covered with an exposure barrier. Only the 0 to 1 foot composite soil data have been considered in this IH evaluation, per 310 CMR 40.0321(b) of the Massachusetts Contingency Plan (MCP). The 0 to 1 foot surface soil sample results are summarized in Table 1. Arsenic was not considered further because its maximum detected concentration was less than the MassDEP background concentrations for natural soil at all three Tree Island locations. Arithmetic mean concentrations for the exposure area were used as exposure point concentrations (EPCs) for total PCBs, barium, cadmium, chromium and lead. Total chromium was assumed to be present as chromium (III) due to previous speciation studies performed for NBHS Campus soil. Table 2 presents the EPCs for the exposure area.

The Tree Islands are located within a triangular shaped tree belt along Hathaway Boulevard that is only accessed by pedestrians walking through the neighborhood or by children on their way to and from school. As part of RAM activities, with the exception of the areas surrounding the three Tree Islands, this area has been paved. Soil was excavated to a depth of 3 feet within an approximately 20 foot radius of the trees and backfilled with imported material. As described in the MassDEP approved RAM Plan Modification, these areas remain unpaved following backfilling and compaction activities. Following remedial activities, surface soil within the unpaved tree islands is sparsely vegetated and accessible to pedestrians.

For the purposes of this IH evaluation, exposures are assumed to occur over 24 weeks, during the spring and fall when the ground is not frozen and school is in session. During this 24-week period, exposures are assumed to occur 5 days per week for 1 hour per day. Use of these exposure assumptions and arithmetic mean concentrations as EPCs is conservative because their use assumes that: (1) children contact these small tree island areas when passing by the school and incurs their entire daily soil exposure during this contact; (2) children go to this area even during inclement weather; and (3) children remain at this location for 1 hour per day which is unlikely to occur due to small size and lack of attractive potential of this area.

To estimate exposures, a young child (age 1 to 6) was selected for evaluation because this age group may be present at this location, accompanying parents or older siblings on their way to and from school or through the neighborhood. Incidental ingestion of and dermal contact with impacted soils are assumed to occur while the young child plays at this location. The inhalation of fugitive dust generated while the child plays at this location is also considered a complete exposure pathway. Older children may also exposed to surface soil within the exposure area, but a young child is evaluated as the most sensitive receptor due to their higher soil intake rate, lower body weight, and sensitive developmental stage.

Exposure assumptions applicable to the young child are provided on the risk calculation spreadsheets (Tables 3 through 6). Exposure assumptions selected for use are consistent with those used by MassDEP in the park visitor IH shortform, adjusted to be applicable to the 24-week exposure period of concern. For the fugitive dust pathway, methods and assumptions consistent with the MassDEP Technical Update "Characterization of Risks Due to Inhalation of

Particulates by Construction Workers" (July 2008) were used including a PM_{10} of 60 ug/m^3. Inhalation rates used are age-specific values provided by MassDEP in the 1995 risk assessment guidance document.

Conclusion

The hazard index (HI) of 2 does not exceed the MCP noncarcinogenic IH limit of 10. The HI is associated primarily with total PCBs and lead in surface soil (HIs of 0.9 and 1, respectively). In addition, the excess lifetime cancer risk (ELCR) of 2E-06 (due entirely to total PCBs) does not exceed the MCP carcinogenic IH limit of 1E-05. In addition, as shown on Tables 7 through 10, even if the maximum detected total PCB concentration (20 mg/kg) was used as the EPC, the HI of 6 and the ELCR of 1E-05 would not exceed the MassDEP IH limit. Therefore, an IH condition does not exist at the exposure area (Tree Islands TI-1 through TI-3) of the NBHS campus.

Table 1
Summary of Analytical Results for Surface Soil -- Tree Islands TI-1 through TI-3
New Bedford High School
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:			Tree-TI-1	TREE-TI-2	TREE-TI-3	TI-3E		TI-3N	TI-3S	TI-3W
		Sample Depth (ft.):			0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
		Sample Date:			8/22/2011	8/25/2011	8/25/2011	9/26/2011	9/26/2011	9/26/2011	9/26/2011	9/26/2011
					Composite	Composite	Composite	Grab	Grab Field Dup	Grab	Grab	Grab
		S-1/GW-3	S-2/GW-3	S-3/GW-3								
PCBs												
(mg/kg)	Aroclor-1016	2	3	3	0.12 U	0.11 U	2.2 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1221	2	3	3	0.12 U	0.11 U	2.2 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1232	2	3	3	0.12 U	0.11 U	2.2 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1242	2	3	3	0.12 U	0.11 U	2.2 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1248	2	3	3	0.12 U	0.11 U	2.2 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1254	2	3	3	0.12 U	**0.15**	**20**	**2.5**	**2.5**	**0.115**	**0.906**	**0.179**
	Aroclor-1260	2	3	3	0.12 U	0.11 U	2.2 U	**1.07**	**0.933**	0.0549 U	**0.261**	**0.0911**
	Aroclor-1262	2	3	3	0.12 U	0.11 U	2.2 U	NA	NA	NA	NA	NA
	Aroclor-1268	2	3	3	0.12 U	0.11 U	2.2 U	NA	NA	NA	NA	NA
	Total PCBs	2	3	3	0.12 U	**0.15**	**20**	**3.5**	**3.5**	**0.115**	**1.167**	**0.270**
Metals, total												
(mg/kg)	Arsenic	20	20	20	2.8 U	2.7 U	**6.7**	NA	NA	NA	NA	NA
	Barium	1,000	3,000	5,000	**15**	**46**	**2,500**	NA	NA	NA	NA	NA
	Cadmium	2	30	30	0.28 U	0.27 U	**5.3**	NA	NA	NA	NA	NA
	Chromium (III)	1,000	3,000	5,000	**5.0**	**8.6**	**260**	NA	NA	NA	NA	NA
	Lead	300	300	300	**16**	**49**	**790**	NA	NA	NA	NA	NA

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

PCBs - Polychlorinated Biphenyls.

Table 2
Summary Statistics for Surface Soil -- Tree Islands TI-1 through TI-3
New Bedford High School
New Bedford, Massachusetts

Analysis	Analyte	S-1/GW-3	S-2/GW-3	Background	# of Samples	# of Detects	Freq. of Detects	Min. of Detects (mg/kg)	Max. of Detects (mg/kg)	Location of Max. Detected	Min. of Non-Detects (mg/kg)	Max. of Non-Detects (mg/kg)
PCBs												
	Total PCBs	2	3	NA	8	7	87.5%	0.115	**20**	TREE-TI-3	0.12	0.12
Metals, total												
	Arsenic	20	20	20	3	1	33.3%	6.7	6.7	TREE-TI-3	2.7	2.8
	Barium	1,000	3,000	50	3	3	100.0%	15	**2500**	TREE-TI-3	--	--
	Cadmium	2	30	2	3	1	33.3%	5.3	**5.3**	TREE-TI-3	0.27	0.28
	Chromium (III)	1,000	1,000	30	3	3	100.0%	5	260	TREE-TI-3	--	--
	Lead	300	300	100	3	3	100.0%	16	**790**	TREE-TI-3	--	--

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

PCBs - Polychlorinated Biphenyls.

NA - Not applicable or not available.

Background - Background Concentration for natural soil.

EPC - Exposure point concentration.

Table 2
Summary Statistics for Surface Soil -- Tree Islands TI-1 through TI-3
New Bedford High School
New Bedford, Massachusetts

Analysis	Analyte	S-1/GW-3	S-2/GW-3	Background	Mean Concentration (mg/kg)	EPC (mg/kg)	EPC Rationale
PCBs							
	Total PCBs	2	3	NA	3.6E+00	3.6E+00	Mean
Metals, total							
	Arsenic	20	20	20	NA	NA	Below background
	Barium	1,000	3,000	50	8.5E+02	8.5E+02	Mean
	Cadmium	2	30	2	1.9E+00	1.9E+00	Mean
	Chromium (III)	1,000	1,000	30	9.1E+01	9.1E+01	Mean
	Lead	300	300	100	2.9E+02	2.9E+02	Mean

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standard

PCBs - Polychlorinated Biphenyls.

NA - Not applicable or not available.

Background - Background Concentration for natural soil.

EPC - Exposure point concentration.

Table 3
Pedestrian - Child - Average Concentrations
Incidential Ingestion of Surface Soil
New Bedford High School - Tree Islands TI-1 through TI-3 (0-1')
New Bedford, Massachusetts

		EPC	Exposure Estimates				Toxicity Values		Risk Estimates	
Constituent		Surface Soil Concentration (mg/kg)	RAF Ingestion Cancer (--)	LADD Cancer (mg/kg-d)	RAF Ingestion Noncancer (--)	ADD Noncancer (mg/kg-d)	Cancer Slope Factor (Oral) (mg/kg-d)-1	Subchronic Noncancer Reference Dose (Oral) (mg/kg-d)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs										
1336-36-3	Total PCBs	3.6	8.5E-01	3.6E-07	8.5E-01	2.0E-05	2.0E+00	5.0E-05	7E-07	4.1E-01
Metals										
7440-39-3	Barium	854	NC	NA	1.0E+00	5.7E-03	NA	7.0E-02	NA	8.1E-02
7440-43-9	Cadmium	1.9	NC	NA	1.0E+00	1.3E-05	NA	5.0E-04	NA	2.5E-02
16065-83-1	Chromium (III)	91.2	NC	NA	1.0E+00	6.1E-04	NA	1.5E+00	NA	4.1E-04
7439-92-1	Lead	285	NC	NA	5.0E-01	9.5E-04	NA	7.5E-04	NA	1.3E+00

	Cancer Risk	Hazard Index
TOTAL:	7E-07	**2E+00**

NA = Not Applicable
NC = No Criteria
Where:

LADDcancer = [Soil Concentration x UC x RAF x IR x EF x ED x EP] / [BW x APcancer]
ADDnon-cancer = [Soil Concentration x UC x RAF x IR x EF x ED x EP] / [BW x APnon-cancer]
Cancer Risk = LADDcancer x Slope Factor
Hazard Quotient = ADDnon-cancer / Reference Dose

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Unit Conversion (UC) =	1.0E-06	kg/mg
Relative Absorption Factor (RAF) =	CS	(unitless) [1]
Ingestion Rate (IR) =	100	mg/d [1]
Exposure Duration (ED) =	1	day/event [1]
Exposure Frequency (EF) - Noncancer =	0.714	event/day [2] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [2] - 5 days/week for 18 weeks
Exposure Period (EP) - Noncancer =	0.345	years [2] - 18 weeks
Exposure Period (EP) - Cancer =	5	years [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	15	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	70	years [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	0.345	years [2]

[1] MassDEP, 2008; Park User Soil Imminent Hazard Short-form
[2] Site-specific information

Table 4
Pedestrian - Child - Average Concentrations
Dermal Contact with Surface Soil
New Bedford High School - Tree Islands TI-1 through TI-3 (0-1')
New Bedford, Massachusetts

		EPC	Exposure Estimates				Toxicity Values		Risk Estimates	
Constituent		Surface Soil Concentration (mg/kg)	RAF Dermal Cancer (--)	LADD Cancer (mg/kg-d)	RAF Dermal Noncancer (--)	ADD Noncancer (mg/kg-d)	Cancer Slope Factor (Oral) (mg/kg-d)-1	Subchronic Noncancer Reference Dose (Oral) (mg/kg-d)	Cancer Risk (--)	Hazard Quotient (--)
PCBs										
1336-36-3	Total PCBs	4	0.16	5.4E-07	0.16	2.2E-05	2.0E+00	5.0E-05	1E-06	4.5E-01
Metals										
7440-39-3	Barium	854	NC	NA	0.05	1.7E-03	NA	7.0E-02	NA	2.4E-02
7440-43-9	Cadmium	1.9	NC	NA	0.14	1.0E-05	NA	5.0E-04	NA	2.1E-02
16065-83-1	Chromium (III)	91	NC	NA	0.04	1.4E-04	NA	1.5E+00	NA	9.5E-05
7439-92-1	Lead	285	NC	NA	0.006	6.7E-05	NA	7.5E-04	NA	8.9E-02

	Cancer Risk	Hazard Index
TOTAL:	1E-06	6E-01

NA = Not Applicable
NC = No Criteria

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Where:

LADDcancer = Soil Concentration x UC1 x SA x SAF x RAF x EF x ED x EP / (BW x APcancer)
ADDnon-cancer = Soil Concentration x UC1 x SA x SAF x RAF x EF x ED x EP / (BW x APnon-cancer)
Cancer Risk = LADDcancer x Slope Factor
Hazard Quotient = ADDnon-cancer / Reference Dose

Unit Conversion (UC1) =	1E-06	kg/mg
Skin Surface Area (SA) - Noncancer =	1670	cm2/d [1] - (1-2 year old)
Skin Surface Area (SA) - Cancer =	2231	cm2/d [1] - (1-6 year old)
Soil Adherence Factor (SAF) =	0.35	mg/cm2 [1]
Relative Absorption Factor (RAF) =	CS	(unitless) [1]
Exposure Duration (ED) =	1	day/event [1]
Exposure Frequency (EF) - Noncancer =	0.714	event/day [2] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [2] - 5 days/week for 18 weeks
Exposure Period (EP) - Noncancer =	0.345	years [2] - 18 weeks
Exposure Period (EP) - Cancer =	5	years [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	15	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	70	years [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	0.345	years [2]

[1] MassDEP, 2008; Park User Soil Imminent Hazard Short-form
[2] Site-specific information

Table 5
Pedestrian - Child - Average Concentrations
Inhalation of Fugitive Dusts - Exposure Via the Lungs
New Bedford High School - Tree Islands TI-1 through TI-3 (0-1')
New Bedford, Massachusetts

			Exposure Estimates		Toxicity Values		Risk Estimates	
	Constituent	Surface Soil Concentration (mg/kg)	$LADE_{Inh}$ Cancer (ug/m^3)	ADE_{Inh} Noncancer (ug/m^3)	Unit Risk Factor (Inh) $(ug/m^3)^{-1}$	Subchronic Noncancer Reference Conc. (Inh) (ug/m^3)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs								
1336-36-3	Total PCBs	4	4.0E-07	1.4E-05	1.0E-04	2.0E-02	4E-11	6.8E-04
Metals								
7440-39-3	Barium	854	9.5E-05	3.2E-03	NA	5.0E+00	NA	6.4E-04
7440-43-9	Cadmium	1.9	2.1E-07	7.1E-06	1.8E-03	2.0E-02	4E-10	3.6E-04
16065-83-1	Chromium (III)	91	1.0E-05	3.4E-04	NA	3.0E-01	NA	1.1E-03
7439-92-1	Lead	285	3.2E-05	1.1E-03	NA	1.0E+00	NA	1.1E-03

	Cancer Risk	Hazard Index
TOTAL:	4E-10	4E-03

NA = Not Applicable

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Where:

LADEcancer = (OHM x 0.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / (APcancer x BW)) x (BW assumed/IR assumed)
ADEnon-cancer = (OHM x 0.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / APnon-cancer x BW) x (BW assumed/IR assumed)
Cancer Risk = LADEcancer x Cancer Slope Factor
Hazard Quotient = ADEnon-cancer / Reference Dose

Respirable Dust (PM_{10}) =	60	ug/m3 [4]
Relative Absorption Factor (RAF) =	1	unitless
Inhalation Rate (IR) - Noncancer (1-2 year old) =	8.92	l/min [4] - heavy exertion; 1-2 year old
Inhalation Rate (IR) - Cancer (1-6 year old) =	14.77	l/min [4] - heavy exertion; 1-6 year old
Exposure Frequency (EF) - Noncancer =	0.714	event/day [5] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [5] - 5 days/week for 18 weeks
Exposure Duration (ED) =	1	hours/event [3]
Exposure Period (EP) - Noncancer =	126	days [5] - 18 weeks
Exposure Period (EP) - Cancer =	1825	days [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	14.8	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	25550	days [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	126	days [5]
Inhalation Rate assumed (IR assumed) =	20	m3/day [2] - for adjustment of toxicity value
Body Weight (BW assumed) =	70	kg [2] - for adjustment of toxicity value
Unit Conversion (UC) =	6.00E-11	(60 min/hour; 1x 10-9 kg/ug; 0.001 m3/l)

[1] MassDEP, 2008; Park User Soil Imminent Hazard Short-form
[2] MassDEP, 2008; Characterization of Risk Due to Inhalation of Particulats by Construction Workers
[3] Professional Judgment
[4] MassDEP, 1995; Guidance for Disposal Site Risk Characterization
[5] Site-specific information

Table 6
Pedestrian - Child - Average Concentrations
Inhalation of Fugitive Dusts - Exposure Via the GI Tract
New Bedford High School - Tree Islands TI-1 through TI-3 (0-1')
New Bedford, Massachusetts

			Exposure Estimates				Toxicity Values		Risk Estimates	
Constituent		Surface Soil Concentration (mg/kg)	RAF Cancer Ing (--)	$LADD_{GI-Inh}$ Cancer (mg/kg-day)	RAF Noncancer Ing (--)	ADD_{GI-Inh} Noncancer (mg/kg-day)	Cancer Slope Factor (Oral) $(mg/kg\text{-}day)^{-1}$	Subchronic Noncancer Reference Dose (Oral) (mg/kg-day)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs										
1336-36-3	Total PCBs	4	8.5E-01	2.90E-10	8.50E-01	9.84E-09	2.0E+00	5.0E-05	6E-10	2.0E-04
Metals										
7440-39-3	Barium	854	NC	NA	1.00E+00	2.75E-06	NA	7.0E-02	NA	3.9E-05
7440-43-9	Cadmium	1.9	NC	NA	1.00E+00	6.11E-09	NA	5.0E-04	NA	1.2E-05
16065-83-1	Chromium (III)	91	NC	NA	1.00E+00	2.93E-07	NA	1.5E+00	NA	2.0E-07
7439-92-1	Lead	285	NC	NA	5.00E-01	4.58E-07	NA	7.5E-04	NA	6.1E-04

NA = Not Applicable

	Cancer Risk	Hazard Index
TOTAL:	6E-10	9E-04

Where:

LADDcancer = (OHM x 1.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / (APcancer x BW))
ADDEnon-cancer = (OHM x 1.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / APnon-cancer x BW)
Cancer Risk = LADEcancer x Cancer Slope Factor
Hazard Quotient = ADEnon-cancer / Reference Dose

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Respirable Dust (PM_{10}) =	60	ug/m3 [1]
Inhalation Rate (IR) - Noncancer (1-2 year old) =	8.92	l/min [4] - heavy exertion; 1-2 year old
Inhalation Rate (IR) - Cancer (1-6 year old) =	14.77	l/min [4] - heavy exertion; 1-6 year old
Exposure Frequency (EF) - Noncancer =	0.714	event/day [5] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [5] - 5 days/week for 18 weeks
Exposure Duration (ED) =	1	hours/event [3]
Exposure Period (EP) - Noncancer =	126	days [5] - 18 weeks
Exposure Period (EP) - Cancer =	1825	days [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	14.8	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	25550	days [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	126	days [5]
Unit Conversion (UC1)=	6.00E-11	(60 min/hour; 1x 10-9 kg/ug; 0.001 m3/l)

[1] MassDEP, 2008; Park User Soil Imminent Hazard Short-form
[2] MassDEP, 2008; Characterization of Risk Due to Inhalation of Particulats by Construction Workers
[3] Professional Judgment
[4] MassDEP, 1995; Guidance for Disposal Site Risk Characterization
[5] Site-specific information

Table 7
Pedestrian - Child - Maximum PCB Concentration
Incidential Ingestion of Surface Soil
New Bedford High School - Tree Islands TI-1 through TI-3 (0-1')
New Bedford, Massachusetts

		EPC	Exposure Estimates				Toxicity Values		Risk Estimates	
Constituent		Surface Soil Concentration (mg/kg)	RAF Ingestion Cancer (--)	LADD Cancer (mg/kg-d)	RAF Ingestion Noncancer (--)	ADD Noncancer (mg/kg-d)	Cancer Slope Factor (Oral) (mg/kg-d)-1	Subchronic Noncancer Reference Dose (Oral) (mg/kg-d)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs										
1336-36-3	Total PCBs	20	8.5E-01	2.0E-06	8.5E-01	1.1E-04	2.0E+00	5.0E-05	4E-06	2.3E+00
Metals										
7440-39-3	Barium	854	NC	NA	1.0E+00	5.7E-03	NA	7.0E-02	NA	8.1E-02
7440-43-9	Cadmium	1.9	NC	NA	1.0E+00	1.3E-05	NA	5.0E-04	NA	2.5E-02
16065-83-1	Chromium (III)	91.2	NC	NA	1.0E+00	6.1E-04	NA	1.5E+00	NA	4.1E-04
7439-92-1	Lead	285	NC	NA	5.0E-01	9.5E-04	NA	7.5E-04	NA	1.3E+00

	Cancer Risk	Hazard Index
TOTAL:	4E-06	**4E+00**

NA = Not Applicable
NC = No Criteria
Where:

LADDcancer = [Soil Concentration x UC x RAF x IR x EF x ED x EP] / [BW x APcancer]
ADDnon-cancer = [Soil Concentration x UC x RAF x IR x EF x ED x EP] / [BW x APnon-cancer]
Cancer Risk = LADDcancer x Slope Factor
Hazard Quotient = ADDnon-cancer / Reference Dose

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Unit Conversion (UC) =	1.0E-06	kg/mg
Relative Absorption Factor (RAF) =	CS	(unitless) [1]
Ingestion Rate (IR) =	100	mg/d [1]
Exposure Duration (ED) =	1	day/event [1]
Exposure Frequency (EF) - Noncancer =	0.714	event/day [2] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [2] - 5 days/week for 18 weeks
Exposure Period (EP) - Noncancer =	0.345	years [2] - 18 weeks
Exposure Period (EP) - Cancer =	5	years [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	15	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	70	years [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	0.345	years [2]

[1] MassDEP, 2008; Park User Soil Imminent Hazard Short-form
[2] Site-specific information

Table 8
Pedestrian - Child - Maximum PCB Concentration
Dermal Contact with Surface Soil
New Bedford High School - Tree Islands TI-1 through TI-3 (0-1')
New Bedford, Massachusetts

		EPC	Exposure Estimates				Toxicity Values		Risk Estimates	
Constituent		Surface Soil Concentration (mg/kg)	RAF Dermal Cancer (--)	LADD Cancer (mg/kg-d)	RAF Dermal Noncancer (--)	ADD Noncancer (mg/kg-d)	Cancer Slope Factor (Oral) (mg/kg-d)-1	Subchronic Noncancer Reference Dose (Oral) (mg/kg-d)	Cancer Risk (--)	Hazard Quotient (--)
PCBs										
1336-36-3	Total PCBs	20	0.16	3.0E-06	0.16	1.2E-04	2.0E+00	5.0E-05	6E-06	2.5E+00
Metals										
7440-39-3	Barium	854	NC	NA	0.05	1.7E-03	NA	7.0E-02	NA	2.4E-02
7440-43-9	Cadmium	1.9	NC	NA	0.14	1.0E-05	NA	5.0E-04	NA	2.1E-02
16065-83-1	Chromium (III)	91	NC	NA	0.04	1.4E-04	NA	1.5E+00	NA	9.5E-05
7439-92-1	Lead	285	NC	NA	0.006	6.7E-05	NA	7.5E-04	NA	8.9E-02

	Cancer Risk	Hazard Index
TOTAL:	6E-06	**3E+00**

NA = Not Applicable
NC = No Criteria

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Where:

LADDcancer = Soil Concentration x UC1 x SA x SAF x RAF x EF x ED x EP / (BW x APcancer)
ADDnon-cancer = Soil Concentration x UC1 x SA x SAF x RAF x EF x ED x EP / (BW x APnon-cancer)
Cancer Risk = LADDcancer x Slope Factor
Hazard Quotient = ADDnon-cancer / Reference Dose

Unit Conversion (UC1) =	1E-06	kg/mg
Skin Surface Area (SA) - Noncancer =	1670	cm2/d [1] - (1-2 year old)
Skin Surface Area (SA) - Cancer =	2231	cm2/d [1] - (1-6 year old)
Soil Adherence Factor (SAF) =	0.35	mg/cm2 [1]
Relative Absorption Factor (RAF) =	CS	(unitless) [1]
Exposure Duration (ED) =	1	day/event [1]
Exposure Frequency (EF) - Noncancer =	0.714	event/day [2] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [2] - 5 days/week for 18 weeks
Exposure Period (EP) - Noncancer =	0.345	years [2] - 18 weeks
Exposure Period (EP) - Cancer =	5	years [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	15	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	70	years [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	0.345	years [2]

[1] MassDEP, 2008; Park User Soil Imminent Hazard Short-form
[2] Site-specific information

Table 9
Pedestrian - Child - Maximum PCB Concentration
Inhalation of Fugitive Dusts - Exposure Via the Lungs
New Bedford High School - Tree Islands TI-1 through TI-3 (0-1')
New Bedford, Massachusetts

			Exposure Estimates		Toxicity Values		Risk Estimates	
	Constituent	Surface Soil Concentration (mg/kg)	$LADE_{Inh}$ Cancer (ug/m^3)	ADE_{Inh} Noncancer (ug/m^3)	Unit Risk Factor (Inh) $(ug/m^3)^{-1}$	Subchronic Noncancer Reference Conc. (Inh) (ug/m^3)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs								
1336-36-3	Total PCBs	20	2.2E-06	7.5E-05	1.0E-04	2.0E-02	2E-10	3.8E-03
Metals								
7440-39-3	Barium	854	9.5E-05	3.2E-03	NA	5.0E+00	NA	6.4E-04
7440-43-9	Cadmium	1.9	2.1E-07	7.1E-06	1.8E-03	2.0E-02	4E-10	3.6E-04
16065-83-1	Chromium (III)	91	1.0E-05	3.4E-04	NA	3.0E-01	NA	1.1E-03
7439-92-1	Lead	285	3.2E-05	1.1E-03	NA	1.0E+00	NA	1.1E-03

	Cancer Risk	Hazard Index
TOTAL:	6E-10	7E-03

NA = Not Applicable

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Where:

LADEcancer = (OHM x 0.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / (APcancer x BW)) x (BW assumed/IR assumed)
ADEnon-cancer = (OHM x 0.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / APnon-cancer x BW) x (BW assumed/IR assumed)
Cancer Risk = LADEcancer x Cancer Slope Factor
Hazard Quotient = ADEnon-cancer / Reference Dose

Respirable Dust (PM_{10}) =	60	ug/m3 [4]
Relative Absorption Factor (RAF) =	1	unitless
Inhalation Rate (IR) - Noncancer (1-2 year old) =	8.92	l/min [4] - heavy exertion; 1-2 year old
Inhalation Rate (IR) - Cancer (1-6 year old) =	14.77	l/min [4] - heavy exertion; 1-6 year old
Exposure Frequency (EF) - Noncancer =	0.714	event/day [5] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [5] - 5 days/week for 18 weeks
Exposure Duration (ED) =	1	hours/event [3]
Exposure Period (EP) - Noncancer =	126	days [5] - 18 weeks
Exposure Period (EP) - Cancer =	1825	days [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	14.8	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	25550	days [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	126	days [5]
Inhalation Rate assumed (IR assumed) =	20	m3/day [2] - for adjustment of toxicity value
Body Weight (BW assumed) =	70	kg [2] - for adjustment of toxicity value
Unit Conversion (UC) =	6.00E-11	(60 min/hour; 1x 10-9 kg/ug; 0.001 m3/l)

[1] MassDEP, 2008; Park User Soil Imminent Hazard Short-form
[2] MassDEP, 2008; Characterization of Risk Due to Inhalation of Particulats by Construction Workers
[3] Professional Judgment
[4] MassDEP, 1995; Guidance for Disposal Site Risk Characterization
[5] Site-specific information

Table 10
Pedestrian - Child - Maximum PCB Concentration
Inhalation of Fugitive Dusts - Exposure Via the GI Tract
New Bedford High School - Tree Islands TI-1 through TI-3 (0-1')
New Bedford, Massachusetts

			Exposure Estimates				Toxicity Values		Risk Estimates	
Constituent		Surface Soil Concentration (mg/kg)	RAF Cancer Ing (--)	$LADD_{GI-Inh}$ Cancer (mg/kg-day)	RAF Noncancer Ing (--)	ADD_{GI-Inh} Noncancer (mg/kg-day)	Cancer Slope Factor (Oral) $(mg/kg\text{-}day)^{-1}$	Subchronic Noncancer Reference Dose (Oral) (mg/kg-day)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs										
1336-36-3	Total PCBs	20	8.5E-01	1.61E-09	8.50E-01	5.47E-08	2.0E+00	5.0E-05	3E-09	1.1E-03
Metals										
7440-39-3	Barium	854	NC	NA	1.00E+00	2.75E-06	NA	7.0E-02	NA	3.9E-05
7440-43-9	Cadmium	1.9	NC	NA	1.00E+00	6.11E-09	NA	5.0E-04	NA	1.2E-05
16065-83-1	Chromium (III)	91	NC	NA	1.00E+00	2.93E-07	NA	1.5E+00	NA	2.0E-07
7439-92-1	Lead	285	NC	NA	5.00E-01	4.58E-07	NA	7.5E-04	NA	6.1E-04

NA = Not Applicable

	Cancer Risk	Hazard Index
TOTAL:	3E-09	2E-03

Where:

LADDcancer = (OHM x 1.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / (APcancer x BW))
ADDEnon-cancer = (OHM x 1.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / APnon-cancer x BW)
Cancer Risk = LADEcancer x Cancer Slope Factor
Hazard Quotient = ADEnon-cancer / Reference Dose

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Respirable Dust (PM_{10}) =	60	ug/m3 [1]
Inhalation Rate (IR) - Noncancer (1-2 year old) =	8.92	l/min [4] - heavy exertion; 1-2 year old
Inhalation Rate (IR) - Cancer (1-6 year old) =	14.77	l/min [4] - heavy exertion; 1-6 year old
Exposure Frequency (EF) - Noncancer =	0.714	event/day [5] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [5] - 5 days/week for 18 weeks
Exposure Duration (ED) =	1	hours/event [3]
Exposure Period (EP) - Noncancer =	126	days [5] - 18 weeks
Exposure Period (EP) - Cancer =	1825	days [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	14.8	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	25550	days [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	126	days [5]
Unit Conversion (UC1)=	6.00E-11	(60 min/hour; 1x 10-9 kg/ug; 0.001 m3/l)

[1] MassDEP, 2008; Park User Soil Imminent Hazard Short-form
[2] MassDEP, 2008; Characterization of Risk Due to Inhalation of Particulats by Construction Workers
[3] Professional Judgment
[4] MassDEP, 1995; Guidance for Disposal Site Risk Characterization
[5] Site-specific information

APPENDIX B

SOIL BORING LOGS

Wannalancit Mills
650 Suffolk Stree
Lowell, MA 01854
Phone: (978) 970-5600

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3E
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - East of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.17
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/29	S-1		0-15" Dark-brown SILTY FINE SAND, moist.	0.4	TI-3E (0-1) 1535	No Monitoring Wells Installed
1							TI-3E (1-1.3) 1540 (hold)	
					15-29" Brownish-yellow FILL (ash, glass, wood), moist.			
2						0.0	TI-3E (2-2.3) 1545 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3E-1
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/H. Rembijas
DATE DRILLED 9/27/2011
LOCATION NBHS - East (pos 1) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3E-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.20
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/30	S-1		0-6" Dark-brown SILTY VERY FINE SAND, moist.	1.6	TI-3E-1 (0-1) 1515 (hold)	No Monitoring Wells Installed
1					6-30" Brownish-yellow to dark-gray SILTY FILL (ash, coal, glass, wood, tile peices), moist.		TI-3E-1 (1-1.3) 1520 (hold)	
2							TI-3E-1 (2-2.3) 1525 (hold)	
3					End of Boring @ 3 feet			

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Phone: (978) 970-5600

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3E-2
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/H. Rembijas
DATE DRILLED 9/27/2011
LOCATION NBHS - East (pos 2) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3E-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.17
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/25	S-1		0-12" Dark-brown SILTY VERY FINE SAND, moist.	3.4	TI-3E-2 (0-1) 1530 (hold)	
1							TI-3E-2 (1-1.3) 1535 (hold)	
					12-25" Brownish-yellow FILL (glass, ash, coal, roofing shingles, wood, trace brick), moist.			No Monitoring Wells Installed
2						1.4	TI-3E-2 (2-2.3) 1540 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3E-3
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/H. Rembijas
DATE DRILLED 9/27/2011
LOCATION NBHS - East (pos 3) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3E-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.18
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/24	S-1		0-5" Dark-brown SILTY VERY FINE-MEDIUM SAND, moist.	0.1		
					5-21" Brown, gray and yellowish-brown SILTY FILL (ash, glass, coal, metallic paper, tar shingles).		TI-3E-3 (0-1) 1545 (hold)	
1							TI-3E-3 (1-1.3) 1550 (hold)	No Monitoring Wells Installed
2						0.7	TI-3E-3 (2-2.3) 1555 (hold)	
					21-24" Pulverized white rock.			
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3N
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - North of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.18
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/22	S-1		0-12" Dark-brown SILTY FINE-MEDIUM SAND, moist.	4.6		
						1.6	TI-3N (0-1) 1520	
1							TI-3N (1-1.3) 1525 (hold)	No Monitoring Wells Installed
					12-22" Brownish-yellow SILTY VERY FINE-COARSE SAND and FILL, moist.			
2						0.9	TI-3N (2-2.3) 1530 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3N-1
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - North (pos 1) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.11
REFERENCE ELEVATION (Feet) NA
NOTES Sampled for PCBs, composite of TI-3N-1, 2 & 3 collected for each depth interval.

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/26	S-1		0-6" Dark-brown SILTY VERY FINE-FINE SAND, moist.	1.1	TI-3N-1 (0-1) 1620 (hold)	
1					6-26" Brownish-yellow to gray FILL (ash, glass, coal in silty sand matrix), moist.		TI-3N-1 (1-1.3) 1625 (hold)	No Monitoring Wells Installed
2							TI-3N-1 (2-2.3) 1630 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3N-2
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - North (pos 2) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3N-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.15
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/22	S-1		0-5" Dark-brown SILTY FINE-MEDIUM SAND, moist.		TI-3N-2 (0-1) 1645 (hold)	No Monitoring Wells Installed
1					5-17" Brown SILTY VERY FINE-FINE SAND, moist.		TI-3N-2 (1-1.3) 1650 (hold)	
2					17-22" ROOTS and FILL (glass, ash), moist.		TI-3N-2 (2-2.3) 1655 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3N-3
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - North (pos 3) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3N-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.27
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/24	S-1		0-18" Dark-brown SILTY FINE SAND, moist.	0.0	TI-3N-3 (0-1) 1700 (hold)	No Monitoring Wells Installed
1							TI-3N-3 (1-1.3) 1705 (hold)	
2					18-24" Gray to brownish-yellow FILL (glass, ash, wood).		TI-3N-3 (2-2.3) 1710 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3S
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - South of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.34
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/18	S-1		0-6" Dark-brown SILTY SAND, moist.	0.0	TI-3S (0-1) 1550	
1					6-18" Brownish-yellow SILTY FINE-COARSE SAND, trace fill (glass, felt), moist.		TI-3S (1-1.3) 1555 (hold)	No Monitoring Wells Installed
2							TI-3S (2-2.3) 1600 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3S-1
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/H. Rembijas
DATE DRILLED 9/27/2011
LOCATION NBHS - South (pos 1) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3S-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.32
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/18	S-1		0-6" Dark-brown SILTY VERY FINE SAND, moist.	0.1	TI-3S-1 (0-1) 1645 (hold)	
1					6-18" Brown to reddish-brown SILTY FILL (brick, glass, ash, shingles, paper).		TI-3S-1 (1-1.3) 1650 (hold)	No Monitoring Wells Installed
2						0.1	TI-3S-1 (2-2.3) 1655 (hold)	
3					End of Boring @ 3 feet			

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650 Suffolk Stree
Lowell, MA 01854
Phone: (978) 970-5600

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3S-2
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/H. Rembijas
DATE DRILLED 9/27/2011
LOCATION NBHS - South (pos 2) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3S-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.37
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/20	S-1		0-4" Dark-brown SILTY FINE SAND, moist.	0.1	TI-3S-2 (0-1) 1630 (hold)	No Monitoring Wells Installed
1					4-20" Brown SILTY VERY FINE SAND with roots and wood, trace fill in bottom inch.		TI-3S-2 (1-1.3) 1635 (hold)	
2						0.2	TI-3S-2 (2-2.3) 1640 (hold)	
3					End of Boring @ 3 feet			

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650 Suffolk Stree
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Phone: (978) 970-5600

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3S-3
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/H. Rembijas
DATE DRILLED 9/27/2011
LOCATION NBHS - South (pos 3) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3S-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.21
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/16	S-1		0-4" Dark-brown SILTY FINE SAND.	0.3		
						0.2	TI-3S-3 (0-1) 1615 (hold)	
1					4-16" Brown SILTY SAND, some fill (ash, glass, trace wood), moist.		TI-3S-3 (1-1.3) 1620 (hold)	No Monitoring Wells Installed
2						0.4	TI-3S-3 (2-2.3) 1625 (hold)	
3					End of Boring @ 3 feet			

Wannalancit Mills
650 Suffolk Stree
Lowell, MA 01854
Phone: (978) 970-5600

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3W
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - West of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.34
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/21	S-1		0-8" Dark-brown SILTY FINE-MEDIUM SAND, moist.	10.1	TI-3W (0-1) 1605	No Monitoring Wells Installed
1					8-21" Brownish-yellow and gray FILL (glass, ash, coal, wood, some blue staining in paper), moist.		TI-3W (1-1.3) 1610 (hold)	
2						0.0	TI-3W (2-2.3) 1615 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3W-1
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - West (pos 1) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.20
REFERENCE ELEVATION (Feet) NA
NOTES Sampled for PCBs, composite of TI-3W-1, 2 & 3 collected for each depth interval.

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/26	S-1		0-6" Dark-brown SILTY VERY FINE SAND, moist.	0.0	TI-3W-1 (0-1) 1800 (hold)	No Monitoring Wells Installed
1					6-26" FILL (roots, brick, ash, glass, coal in silty matrix), moist.		TI-3W-1 (1-1.3) 1805 (hold)	
2							TI-3W-1 (2-2.3) 1810 (hold)	
3					End of Boring @ 3 feet			

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BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3W-2
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - West (pos 2) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.29
REFERENCE ELEVATION (Feet) NA
NOTES Sampled for PCBs, composite of TI-3W-1, 2 & 3 collected for each depth interval.

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/34	S-1		0-14" Dark-brown SILTY VERY FINE-FINE SAND and roots, moist.	0.3	TI-3W-2 (0-1) 1730 (hold)	
1					14-32" Brown to light-brown SILTY VERY FINE SAND, dry.		TI-3W-2 (1-1.3) 1735 (hold)	No Monitoring Wells Installed
2							TI-3W-2 (2-2.3) 1740 (hold)	
3					32-34" Red FILL (glass, ash). End of Boring @ 3 feet			

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Phone: (978) 970-5600

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford -115058
BORING/WELL NUMBER TI-3W-3
TRC GEOLOGIST A. Drouin
DRILLING CONTRACTOR/FOREMAN New England Geotech/Dan Regan
DATE DRILLED 9/26/2011
LOCATION NBHS - West (pos 3) of tree in NE corner of triangle island
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Power Probe VTR 9100 Track Rig
NOTES Sampled for PCBs, composite of TI-3W-1, 2 & 3 collected for each depth interval.

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 3
GROUND ELEVATION (Feet) 87.28
REFERENCE ELEVATION (Feet) NA

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
		36/24	S-1		0-12" Dark-brown SILTY FINE SAND, moist.	0.9	TI-3W-3 (0-1) 1745 (hold)	No Monitoring Wells Installed
1							TI-3W-3 (1-1.3) 1750 (hold)	
					12-24" Brownish-yellow FILL (ash, coal, glass, roots), moist.			
2							TI-3W-3 (2-2.3) 1755 (hold)	
3					End of Boring @ 3 feet			

APPENDIX C

LABORATORY ANALYTICAL DATA REPORTS

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

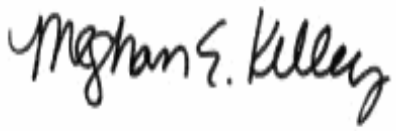
September 29, 2011

David Sullivan
TRC Solutions - Lowell
650 Suffolk Street
Lowell, MA 01852

Project Location: NBHS New Bedford
Client Job Number:
Project Number: 115058
Laboratory Work Order Number: 11H1096

Enclosed are results of analyses for samples received by the laboratory on August 26, 2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Meghan E. Kelley
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

TRC Solutions - Lowell
650 Suffolk Street
Lowell, MA 01852
ATTN: David Sullivan

REPORT DATE: 9/29/2011

PURCHASE ORDER NUMBER: 36223

PROJECT NUMBER: 115058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 11H1096

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: NBHS New Bedford

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TREE-TI 2 0-1 ft	11H1096-01	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 8082A	
TREE-TI 2 1-3 ft	11H1096-02	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 8082A	
TREE-TI 3 0-1 ft	11H1096-03	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 8082A	
TREE-TI 3 1-3 ft	11H1096-04	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 8082A	

con-test® ANALYTICAL LABORATORY

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT - 09/29/2011 - Revised sample receipt checklist scanned into report and sample -03 dilution factor and sample result were revised due to typographical error. .

For method 6010, only results for As, Ba, Cd, Cr and Pb were requested and reported.

SW-846 6010C

Qualifications:

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Barium

11H1096-01[TREE-TI 2 0-1 ft], B036443-MS1

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Barium

11H1096-01[TREE-TI 2 0-1 ft]

Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.

Analyte & Samples(s) Qualified:

Barium, Chromium

11H1096-01[TREE-TI 2 0-1 ft], B036443-DUP1

SW-846 8082A

Qualifications:

Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.

Analyte & Samples(s) Qualified:

Aroclor-1016, Aroclor-1016 [2C], Aroclor-1260, Aroclor-1260 [2C]

B036375-MS1, B036375-MSD1

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl, Decachlorobiphenyl [2C], Tetrachloro-m-xylene, Tetrachloro-m-xylene [2C]

11H1096-03[TREE-TI 3 0-1 ft]

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The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Daren J. Damboragian
Laboratory Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 2 0-1 ft | Sampled: 8/25/2011 09:50

Sample ID: 11H1096-01

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB
Aroclor-1254 [2]	0.15	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 21:57	JMB

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	109	30-150		8/30/11 21:57
Decachlorobiphenyl [2]	104	30-150		8/30/11 21:57
Tetrachloro-m-xylene [1]	109	30-150		8/30/11 21:57
Tetrachloro-m-xylene [2]	122	30-150		8/30/11 21:57

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 2 0-1 ft | Sampled: 8/25/2011 09:50

Sample ID: 11H1096-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	2.7	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 19:46	OP
Barium	46	2.7	mg/Kg dry	1	MS-11, MS-12, R-02	SW-846 6010C	8/30/11	8/31/11 19:46	OP
Cadmium	ND	0.27	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 19:46	OP
Chromium	8.6	0.54	mg/Kg dry	1	R-02	SW-846 6010C	8/30/11	8/31/11 19:46	OP
Lead	49	0.81	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 19:46	OP

con-test® ANALYTICAL LABORATORY
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Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 2 0-1 ft | Sampled: 8/25/2011 09:50

Sample ID: 11H1096-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.2		% Wt	1		SM 2540G	9/1/11	9/2/11 7:47	EAH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 2 1-3 ft | Sampled: 8/25/2011 09:55

Sample ID: 11H1096-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB
Aroclor-1254 [2]	0.16	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082A	8/29/11	8/30/11 22:10	JMB

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	107	30-150		8/30/11 22:10
Decachlorobiphenyl [2]	103	30-150		8/30/11 22:10
Tetrachloro-m-xylene [1]	107	30-150		8/30/11 22:10
Tetrachloro-m-xylene [2]	119	30-150		8/30/11 22:10

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Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 2 1-3 ft | Sampled: 8/25/2011 09:55

Sample ID: 11H1096-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	2.6	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:22	OP
Barium	14	2.6	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:22	OP
Cadmium	ND	0.26	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:22	OP
Chromium	3.4	0.52	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:22	OP
Lead	13	0.78	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:22	OP

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 2 1-3 ft | Sampled: 8/25/2011 09:55

Sample ID: 11H1096-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.5		% Wt	1		SM 2540G	9/1/11	9/2/11 7:47	EAH

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Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 3 0-1 ft | Sampled: 8/25/2011 13:05

Sample ID: 11H1096-03

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG
Aroclor-1221 [1]	ND	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG
Aroclor-1232 [1]	ND	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG
Aroclor-1242 [1]	ND	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG
Aroclor-1248 [1]	ND	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG
Aroclor-1254 [1]	20	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG
Aroclor-1260 [1]	ND	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG
Aroclor-1262 [1]	ND	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG
Aroclor-1268 [1]	ND	2.2	mg/Kg dry	20		SW-846 8082A	8/29/11	8/31/11 9:37	PJG

Surrogates	% Recovery	Recovery Limits	Flag	Date/Time Analyzed
Decachlorobiphenyl [1]	*	30-150	S-01	8/31/11 9:37
Decachlorobiphenyl [2]	*	30-150	S-01	8/31/11 9:37
Tetrachloro-m-xylene [1]	*	30-150	S-01	8/31/11 9:37
Tetrachloro-m-xylene [2]	*	30-150	S-01	8/31/11 9:37

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 3 0-1 ft | Sampled: 8/25/2011 13:05

Sample ID: 11H1096-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	6.7	2.7	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:43	OP
Barium	2500	2.7	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:43	OP
Cadmium	5.3	0.27	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:43	OP
Chromium	260	0.54	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:43	OP
Lead	790	0.81	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:43	OP

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Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 3 0-1 ft | Sampled: 8/25/2011 13:05

Sample ID: 11H1096-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.4		% Wt	1		SM 2540G	9/1/11	9/2/11 7:47	EAH

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Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 3 1-3 ft | Sampled: 8/25/2011 13:10

Sample ID: 11H1096-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB
Aroclor-1221 [1]	ND	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB
Aroclor-1232 [1]	ND	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB
Aroclor-1242 [1]	ND	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB
Aroclor-1248 [1]	ND	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB
Aroclor-1254 [1]	2.5	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB
Aroclor-1260 [1]	ND	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB
Aroclor-1262 [1]	ND	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB
Aroclor-1268 [1]	ND	0.25	mg/Kg dry	2		SW-846 8082A	8/29/11	8/31/11 9:50	JMB

Surrogates	% Recovery	Recovery Limits	Flag	
Decachlorobiphenyl [1]	94.8	30-150		8/31/11 9:50
Decachlorobiphenyl [2]	116	30-150		8/31/11 9:50
Tetrachloro-m-xylene [1]	83.1	30-150		8/31/11 9:50
Tetrachloro-m-xylene [2]	94.9	30-150		8/31/11 9:50

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Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 3 1-3 ft | Sampled: 8/25/2011 13:10

Sample ID: 11H1096-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	12	2.9	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:48	OP
Barium	7000	2.9	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:48	OP
Cadmium	5.2	0.29	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:48	OP
Chromium	390	0.58	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:48	OP
Lead	3000	0.86	mg/Kg dry	1		SW-846 6010C	8/30/11	8/31/11 21:48	OP

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Project Location: NBHS New Bedford | Sample Description: | Work Order: 11H1096

Date Received: 8/26/2011

Field Sample #: TREE-TI 3 1-3 ft | Sampled: 8/25/2011 13:10

Sample ID: 11H1096-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.6		% Wt	1		SM 2540G	9/1/11	9/2/11 7:47	EAH

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
11H1096-01 [TREE-TI 2 0-1 ft]	B036580	09/01/11
11H1096-02 [TREE-TI 2 1-3 ft]	B036580	09/01/11
11H1096-03 [TREE-TI 3 0-1 ft]	B036580	09/01/11
11H1096-04 [TREE-TI 3 1-3 ft]	B036580	09/01/11

Prep Method: SW-846 3050B-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
11H1096-01 [TREE-TI 2 0-1 ft]	B036443	1.03	50.0	08/30/11
11H1096-02 [TREE-TI 2 1-3 ft]	B036443	1.02	50.0	08/30/11
11H1096-03 [TREE-TI 3 0-1 ft]	B036443	1.03	50.0	08/30/11
11H1096-04 [TREE-TI 3 1-3 ft]	B036443	1.06	50.0	08/30/11

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
11H1096-01 [TREE-TI 2 0-1 ft]	B036375	10.1	50.0	08/29/11
11H1096-02 [TREE-TI 2 1-3 ft]	B036375	10.0	50.0	08/29/11
11H1096-03 [TREE-TI 3 0-1 ft]	B036375	10.1	50.0	08/29/11
11H1096-04 [TREE-TI 3 1-3 ft]	B036375	10.0	50.0	08/29/11

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B036375 - SW-846 3546										
Blank (B036375-BLK1)				Prepared & Analyzed: 08/29/11						
Aroclor-1016	ND	0.10	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1221	ND	0.10	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1232	ND	0.10	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1242	ND	0.10	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1248	ND	0.10	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1254	ND	0.10	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1260	ND	0.10	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1262	ND	0.10	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1268	ND	0.10	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.209*		mg/Kg wet	0.200		104	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.215*		mg/Kg wet	0.200		107	30-150			
Surrogate: Tetrachloro-m-xylene	*0.204*		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.215*		mg/Kg wet	0.200		107	30-150			
LCS (B036375-BS1)				Prepared & Analyzed: 08/29/11						
Aroclor-1016	0.23	0.10	mg/Kg wet	0.200		115	40-140			
Aroclor-1016 [2C]	0.25	0.10	mg/Kg wet	0.200		125	40-140			
Aroclor-1260	0.21	0.10	mg/Kg wet	0.200		107	40-140			
Aroclor-1260 [2C]	0.21	0.10	mg/Kg wet	0.200		103	40-140			
Surrogate: Decachlorobiphenyl	*0.215*		mg/Kg wet	0.200		108	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.220*		mg/Kg wet	0.200		110	30-150			
Surrogate: Tetrachloro-m-xylene	*0.218*		mg/Kg wet	0.200		109	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.226*		mg/Kg wet	0.200		113	30-150			
LCS Dup (B036375-BSD1)				Prepared & Analyzed: 08/29/11						
Aroclor-1016	0.26	0.10	mg/Kg wet	0.200		130	40-140	12.4	30	
Aroclor-1016 [2C]	0.27	0.10	mg/Kg wet	0.200		135	40-140	8.11	30	
Aroclor-1260	0.23	0.10	mg/Kg wet	0.200		113	40-140	5.06	30	
Aroclor-1260 [2C]	0.22	0.10	mg/Kg wet	0.200		109	40-140	5.17	30	
Surrogate: Decachlorobiphenyl	*0.210*		mg/Kg wet	0.200		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.215*		mg/Kg wet	0.200		108	30-150			
Surrogate: Tetrachloro-m-xylene	*0.229*		mg/Kg wet	0.200		114	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.238*		mg/Kg wet	0.200		119	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B036375 - SW-846 3546											
Matrix Spike (B036375-MS1)	**Source: 11H1096-03**			Prepared: 08/29/11 Analyzed: 08/30/11							
Aroclor-1016	2.2	0.11	mg/Kg dry	0.221	ND	**976**	*	40-140			MS-21
Aroclor-1016 [2C]	2.6	0.11	mg/Kg dry	0.221	ND	**1170**	*	40-140			MS-21
Aroclor-1260	2.8	0.11	mg/Kg dry	0.221	ND	**1250**	*	40-140			MS-21
Aroclor-1260 [2C]	2.1	0.11	mg/Kg dry	0.221	ND	**942**	*	40-140			MS-21
Surrogate: Decachlorobiphenyl	*0.240*		mg/Kg dry	0.221		109		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.245*		mg/Kg dry	0.221		111		30-150			
Surrogate: Tetrachloro-m-xylene	*0.228*		mg/Kg dry	0.221		103		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.247*		mg/Kg dry	0.221		112		30-150			
Matrix Spike Dup (B036375-MSD1)	**Source: 11H1096-03**			Prepared: 08/29/11 Analyzed: 08/30/11							
Aroclor-1016	1.8	0.11	mg/Kg dry	0.221	ND	**819**	*	40-140	17.5	50	MS-21
Aroclor-1016 [2C]	2.6	0.11	mg/Kg dry	0.221	ND	**1170**	*	40-140	0.219	50	MS-21
Aroclor-1260	2.5	0.11	mg/Kg dry	0.221	ND	**1140**	*	40-140	9.73	50	MS-21
Aroclor-1260 [2C]	1.9	0.11	mg/Kg dry	0.221	ND	**850**	*	40-140	10.2	50	MS-21
Surrogate: Decachlorobiphenyl	*0.196*		mg/Kg dry	0.221		88.5		30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.202*		mg/Kg dry	0.221		91.3		30-150			
Surrogate: Tetrachloro-m-xylene	*0.183*		mg/Kg dry	0.221		82.8		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.199*		mg/Kg dry	0.221		90.2		30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD		RPD Limit	Notes
Batch B036443 - SW-846 3050B												
Blank (B036443-BLK1)				Prepared: 08/30/11 Analyzed: 08/31/11								
Arsenic	ND	2.5	mg/Kg wet									
Barium	ND	2.5	mg/Kg wet									
Cadmium	ND	0.25	mg/Kg wet									
Chromium	ND	0.50	mg/Kg wet									
Lead	ND	0.74	mg/Kg wet									
LCS (B036443-BS1)				Prepared: 08/30/11 Analyzed: 08/31/11								
Arsenic	93.0	4.9	mg/Kg wet	92.6		100		83.2-117.4				
Barium	172	4.9	mg/Kg wet	169		102		83.1-116.9				
Cadmium	63.2	0.49	mg/Kg wet	61.8		102		80.7-119.1				
Chromium	71.6	0.98	mg/Kg wet	71.3		100		80.6-119.9				
Lead	91.9	1.5	mg/Kg wet	92.4		99.4		78.9-121.1				
LCS (B036443-BS2)				Prepared: 08/30/11 Analyzed: 09/01/11								
Lead	0.657	0.72	mg/Kg wet	0.724		90.7		80-120				
LCS Dup (B036443-BSD1)				Prepared: 08/30/11 Analyzed: 08/31/11								
Arsenic	94.8	4.8	mg/Kg wet	92.6		102		83.2-117.4	1.94		30	
Barium	173	4.8	mg/Kg wet	169		102		83.1-116.9	0.643		30	
Cadmium	62.8	0.48	mg/Kg wet	61.8		102		80.7-119.1	0.603		30	
Chromium	71.3	0.97	mg/Kg wet	71.3		100		80.6-119.9	0.384		30	
Lead	93.2	1.4	mg/Kg wet	92.4		101		78.9-121.1	1.45		30	
Duplicate (B036443-DUP1)	**Source: 11H1096-01**			Prepared: 08/30/11 Analyzed: 08/31/11								
Arsenic	ND	2.8	mg/Kg dry		ND				NC		35	
Barium	68.2	2.8	mg/Kg dry		45.9				**39.1**	*	35	R-02
Cadmium	ND	0.28	mg/Kg dry		ND				NC		35	
Chromium	5.79	0.56	mg/Kg dry		8.60				**39.1**	*	35	R-02
Lead	44.2	0.84	mg/Kg dry		48.7				9.77		35	
Matrix Spike (B036443-MS1)	**Source: 11H1096-01**			Prepared: 08/30/11 Analyzed: 08/31/11								
Arsenic	28.9	2.8	mg/Kg dry	27.9	1.53	98.1		75-125				
Barium	83.1	2.8	mg/Kg dry	27.9	45.9	**133**	*	75-125				MS-11
Cadmium	28.5	0.28	mg/Kg dry	27.9	0.241	101		75-125				
Chromium	35.4	0.56	mg/Kg dry	27.9	8.60	96.0		75-125				
Lead	72.3	0.84	mg/Kg dry	27.9	48.7	84.3		75-125				

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-12	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-21	Matrix spike and/or spike duplicate recovery bias high due to contribution of other Aroclors present in the source sample.
R-02	Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Arsenic	CT,NH,NY,ME,NC
Barium	CT,NH,NY,ME,NC
Cadmium	CT,NH,NY,ME,NC
Chromium	CT,NH,NY,ME,NC
Lead	CT,NH,NY,AIHA,ME,NC
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME
Aroclor-1016 [2C]	CT,NH,NY,NC,ME
Aroclor-1221	CT,NH,NY,NC,ME
Aroclor-1221 [2C]	CT,NH,NY,NC,ME
Aroclor-1232	CT,NH,NY,NC,ME
Aroclor-1232 [2C]	CT,NH,NY,NC,ME
Aroclor-1242	CT,NH,NY,NC,ME
Aroclor-1242 [2C]	CT,NH,NY,NC,ME
Aroclor-1248	CT,NH,NY,NC,ME
Aroclor-1248 [2C]	CT,NH,NY,NC,ME
Aroclor-1254	CT,NH,NY,NC,ME
Aroclor-1254 [2C]	CT,NH,NY,NC,ME
Aroclor-1260	CT,NH,NY,NC,ME
Aroclor-1260 [2C]	CT,NH,NY,NC,ME
Aroclor-1262	NC
Aroclor-1262 [2C]	NC
Aroclor-1268	NC
Aroclor-1268 [2C]	NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2012
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2012
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2012
RI	Rhode Island Department of Health	LAO00112	12/30/2011
NC	North Carolina Div. of Water Quality	652	12/31/2011
NJ	New Jersey DEP	MA007 NELAP	06/30/2012
FL	Florida Department of Health	E871027 NELAP	06/30/2012
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2012
WA	State of Washington Department of Ecology	C2065	02/23/2012
ME	State of Maine	2011028	06/9/2013

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 11H1096
Project Location: NBHS New Bedford	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

11H1096-01 thru 11H1096-04

Matrices: Soil

CAM Protocol (check all that below)

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]
	A response to questions G, H and I below is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]
	***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**		
H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature:  Position: Laboratory Director

Printed Name: Michael A. Erickson Date: 09/02/11

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East longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

11H1096

Page 1 of 1

Company Name: TRC
Address: 650 SUFFOLK ST. LOWELL MA.
Attention: DAVID SULLIVAN
Project Location: NBHS NEW BEDFORD.
Sampled By: JR : AD & JF

Telephone: 978-970-5600
Project # 115058
Client PO# 30223

DATA DELIVERY (check all that apply)
○ FAX ✓ EMAIL ✓ WEBSITE
Fax #
Email: DSULLIVAN@TRCSOLUTIONS.COM
Format: ✓ PDF ✓ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	PCB's	Total As, Ba, Cd, Cr, Pb	# of Containers	** Preservation	***Container Code
-01	TREE-TL2 0-1'	8/25	9:50	✓		S	L	✓	✓	2	-	A
-02	TREE-TL2 1-3'	8/25	9:55	✓		S	L	✓	✓	2	-	A
-03	TREE-TL3 0-1'	8/25	13:05	✓		S	L	✓	✓	2	-	A
-04	TREE-TL3 1-3'	8/25	13:10	✓		S	L	✓	✓	2	-	A

ANALYSIS REQUESTED

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other _____

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other _____

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:	Received by: (signature)	Date/Time:
	9/26 0905		9/26/11 0905
Relinquished by: (signature)	Date/Time:	Received by: (signature)	Date/Time:
	9/26/11 2110		9/27/11 2116

Turnaround ††
☐ 7-Day
☐ 10-Day
☑ Other 5 DAY
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts: MCP S-1
Connecticut:
Other:

Is your project MCP or RCP ?
✓ MCP Analytical Certification Form Required
○ RCP Analysis Certification Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA Certified
WBE/DBE Certified

†† TURNAROUND TIME (business days) STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: TRC RECEIVED BY: CEC DATE: 8/26/11

1) Was the chain(s) of custody relinquished and signed? (Yes) No No CoC Included

2) Does the chain agree with the samples? (Yes) No

If not, explain:

3) Are all the samples in good condition? (Yes) No

If not, explain:

4) How were the samples received:

On Ice ☑ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☑

Were the samples received in Temperature Compliance of (2-6°C)? (Yes) No N/A

Temperature °C by Temp blank 5.0C (EC#8) Temperature °C by Temp gun _____

5) Are there Dissolved samples for the lab to filter? Yes (No)

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes (No)

Who was notified _____ Date _____ Time _____

7) Location where samples are stored: 19

Permission to subcontract samples? Yes No

(Walk-in clients only) if not already approved

Client Signature:

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)	8	2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below		PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____

Bisulfate _____ # DI Water _____

Thiosulfate _____ Unpreserved _____

Time and Date Frozen: 08-26-11 21:09 IN

Do all samples have the proper Acid pH: Yes No N/A _____

Do all samples have the proper Base pH: Yes No N/A _____

Date: October 10, 2011-B

NEA PACE Analytical e-Report

Report prepared for:
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

Project ID: CITY OF NEW BEDFORD-115058
Sampling Date(s): September 26, 2011
NEA Report ID: 11090501
Client Service Contact: William Kotas (518) 346-4592 ext. 17

Analysis Included:
PCB Analysis (Solid)

Robert E. Wagner
Laboratory Director

Certifications: NYS (EPA: NY00906, ELAP: 11078), NJ (NY026), CT (PH-0337), MA(M-NY906), NC (668)

NEA - A Division of Pace Analytical Services| 2190 Technology Drive | Schenectady, NY 12308
Phone: 518.346.4592 | internet: www.nealab.com | Email: information@nealab.com

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Table of Contents

CASE NARRATIVE

October 10, 2011

CASE NARRATIVE

This data package (SDG ID: 11090501) consists of 4 soil samples received on 09/29/2011. The samples are from Project Name: CITY OF NEW BEDFORD-115058.

This sample delivery group consists of the following samples:

Lab Sample ID	Client ID	Collection Date
AO21617	TI-3N (0-1)	09/26/2011 15:20
AO21618*	TI-3N (1-1.3)	09/26/2011 15:25
AO21619*	TI-3N (2-2.3)	09/26/2011 15:30
AO21620	TI-3E (0-1)	09/26/2011 15:35
AO21621*	TI-3E (1-1.3)	09/26/2011 15:40
AO21622*	TI-3E (2-2.3)	09/26/2011 15:45
AO21623	TI-3S (0-1)	09/26/2011 15:50
AO21624*	TI-3S (1-1.3)	09/26/2011 15:55
AO21625*	TI-3S (2-2.3)	09/26/2011 16:00
AO21626	TI-3W (0-1)	09/26/2011 16:05
AO21627*	TI-3W (1-1.3)	09/26/2011 16:10
AO21628*	TI-3W (2-2.3)	09/26/2011 16:15

Sample Delivery and Receipt Conditions

(1.) All samples were delivered to the laboratory via FEDEX delivery service on 09/29/2011.

(2.) All samples were received at the laboratory intact and within holding times.

(3.) The following cooler temperatures were recorded at sample receipt (Control limits are between 0-6 Degrees Celsius): 4.4, 2.4 degrees Celsius. Please see Chain of Custody for details.

*Indicates samples were placed on hold by the client request.

PCB Aroclor Analysis

Analysis for PCB Aroclors was performed by method SW-846 8082A using a dual column GC system. Samples were extracted by Soxhlet Extraction Method (EPA - Method 3540C). The following technical and administrative items were noted for the analysis:

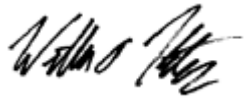
(1.) The concentration results for Aroclor 1254 were flagged (AF) to denote that an altered Aroclor pattern was observed. Please see Form 1 for details.

(2.) The concentration results for Aroclor 1260 were flagged (AG) to denote that an altered Aroclor pattern was observed. Please see Form 1 for details.

Qualifier Summary

(1.) B-Denotes analyte observed in associated method blank or extraction blank at a concentration exceeding the MDL.
(2.) J-Denotes concentration result greater than the MDL but less than the RL.
(3.) U-Denotes analyte not observed at a concentration greater than the MDL.

Respectfully submitted,



William A. Kotas
Client Services Manager

S:\Lims Data\1109\11090501\Package\CN_11090501_Rev00.doc

SAMPLE CHAIN OF CUSTODY

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<11090501P1>

110905011

Page: 1 of 10

1513203

Section A Required Client Information:

Company: TRC
Address: 650 Suffolk St. Lowell, MA 01854
Email To: dsullivan@trcsolutions.com
Phone: 978-656-3565 Fax: 978-453-1995
Requested Due Date/TAT: Standard 5-day

Section B Required Project Information:

Report To: David Sullivan
Copy To: pzhou@trcsolutions.com; jsaunder@trcsolutions.com
Purchase Order No.: 37117
Project Name: City of NB - TI-3
Project Number: 115058-000820-000007

Section C Invoice Information:

Attention: Accounts Payable
Company Name: TRC Companies Inc
Address: 21 Griffin Rd North Windsor CT 06095
Pace Quote Reference:
Pace Project Manager: William Kotas
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER MCP/TSCA

Site Location STATE: MA

Requested Analysis Filtered (Y/N)

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Grab ~~COMPOSITE~~ START DATE	COLLECTED Grab ~~COMPOSITE~~ START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved (Fa)	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	PCBs (soil 3oz jar)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TI-3N (0-1)		SL	G	9/26/11	1520				1	X									X		AO21617
2	TI-3N (1-1.3)	Hold		G		1525				1	X									X		AO21618
3	TI-3N (2-2.3)	Hold		G		1530				1	X									X		AO21619
4	TI-3E (0-1)			G		1535				1	X									X		AO21620
5	TI-3E (1-1.3)	Hold		G		1540				1	X									X		AO21621
6	TI-3E (2-2.3)	Hold		G		1545				1	X									X		AO21622
7	TI-3S (0-1)			G		1550				1	X									X		AO21623
8	TI-3S (1-1.3)	Hold		G		1555				1	X									X		AO21624
9	TI-3S (2-2.3)	Hold		G		1600				1	X									X		AO21625
10	TI-3W (0-1)			G		1605				1	X									X		AO21626
11	TI-3W (1-1.3)	Hold		G		1610				1	X									X		AO21627
12	TI-3W (2-2.3)	Hold	SL	G		1615				1	X									X		AO21628

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Allison Drouin - TRC	9/27/11	1730	Via Fedex						
	VIA FedEx			Jennifer Fuda / PACE	9/29/11	10:27				
							2.4	Y	Y	Y
							4.4	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Drouin / Jeff Robinson

SIGNATURE of SAMPLER: Allison Drouin DATE Signed (MM/DD/YY): 9/26/11

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07 15-May-2007

INTERNAL SAMPLE TRACKING RECORD

PCB EXTRACTION LOG

Prep Date: 09/30/11 **Batch ID: 15803**

													Initial for required Clean Up Steps						
													DKA	DKA	DKA				
	Prep ID	LAB Sample ID	Alt Sample ID	Matrix	pH	Analysis Required	Extract Type / Unit	Percent Total Solids	Sample Amount (g or mL)	Extract Time On - 1	Extract Time Off - 1	Extract Time On - 2	Extract Time Off - 2	Date Acid Cleaned (MM/DD)	Date TBA Cleaned (MM/DD)	Date Florisil Shake (MM/DD)	Date Hg Shake (MM/DD)	Final Ext. Vol (mL)	Date Conc (MM/DD)	Comments
1	151866	PBLK-28	AO21617B	Soil		E PCB S	SOX	N/A	10.480	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
2	151865	LCS-28	AO21617L	Soil		E PCB S	SOX	N/A	10.329	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
3	151860	11090501-01	AO21617	Soil		E PCB S	SOX	87.7	10.393	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
4	151861	11090501-04	AO21620	Soil		E PCB S	SOX	83.2	10.537	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
5	151862	11090501-07	AO21623	Soil		E PCB S	SOX	86.9	10.143	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
6	151863	11090501-10	AO21626	Soil		E PCB S	SOX	87.5	10.453	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
7	151864	11090504-01	AO21633	Soil		E PCB S	SOX	86.6	10.311	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	

Solvent, Surrogate, Spike, and Acid Information

Item	Lot Number	Amount (uL)	Conc (ug/mL)	B	L	LD	S	D	M	K
Sulfuric Acid (Main Lab)	E49039	NA	NA	☑	☑	☐	☑	☐	☐	☐
Aroclor 1242 @ 12.5PPM SPIKE	042011B030P104B	1000	12.5	☐	☑	☐	☐	☐	☐	☐
Thimbles (Cellulose)	N08433x80MM	NA		☑	☑	☐	☑	☐	☐	☐
Sodium Sulfate CURRENT	K10624	NA		☑	☑	☐	☑	☐	☐	☐
Acetone (Dewar) CURRENT	DE473	NA		☑	☑	☐	☑	☐	☐	☐
Hexane (Dewar)	DE749B	NA		☑	☑	☐	☑	☐	☐	☐
TBA Solution	091411MLB2P83C	NA		☑	☑	☐	☑	☐	☐	☐
10% Florisil Main Lab CURRENT	091411MLB2P82B	NA		☑	☑	☐	☑	☐	☐	☐
0.50ppm TCMX/ 5.0ppm DCBP in Hexan	071911B030P193B1-10	500	0.50/5.0	☑	☑	☐	☑	☐	☐	☐

3

Analyst Review: _____
Diyana Azhari

Peer Review: _____
Timothy Holton

Print Date: 10/10/2011
Lims Version : 5.0.6.1
_EXT - LOGBOOK_GC-SV; Rev 02; 1.18.2010; EXTRACTION

PCB SCREEN SHEET

LRF: 11090501 **Batch ID:15803**

NEA Sample ID	File ID	Matrix	Prep Date	Wet Weight (g or mL)	Percent Solids	Dry Weight (g or mL)	Set Volume (mL)	Screen Dilution	Screen Result	Bench Dilution	Dilution Sequence	Final Multiplier	Dilution Analyst
AO21617B	GC18B-1423-45	Soil	**09/30/11**	10.480	N/A	10.480	25	25	0.0065895	1	NA	25x	Michael Abrahamson
	GC18F-1449-45	Soil	**09/30/11**	10.480	N/A	10.480	25	25	0.0065895	1	NA	25x	Michael Abrahamson
AO21617L	GC18B-1423-46	Soil	**09/30/11**	10.329	N/A	10.329	25	25	0.49795	1	NA	25x	Michael Abrahamson
	GC18F-1449-46	Soil	**09/30/11**	10.329	N/A	10.329	25	25	0.49795	1	NA	25x	Michael Abrahamson
AO21617	GC18B-1423-47	Soil	**09/30/11**	10.393	87.7	9.1147	25	250	0.011185	1	NA	25x	Michael Abrahamson
	GC18F-1449-47	Soil	**09/30/11**	10.393	87.7	9.1147	25	250	0.011185	1	NA	25x	Michael Abrahamson
AO21620	GC18B-1423-48	Soil	**09/30/11**	10.537	83.2	8.7668	25	250	0.11631	2	2>4	50x	Michael Abrahamson
	GC18F-1449-48	Soil	**09/30/11**	10.537	83.2	8.7668	25	250	0.11631	2	2>4	50x	Michael Abrahamson
AO21623	GC18B-1423-49	Soil	**09/30/11**	10.143	86.9	8.8143	25	250	0.060341	1	NA	25x	Michael Abrahamson
	GC18F-1449-49	Soil	**09/30/11**	10.143	86.9	8.8143	25	250	0.060341	1	NA	25x	Michael Abrahamson
AO21626	GC18B-1423-50	Soil	**09/30/11**	10.453	87.5	9.1464	25	250	0.015675	1	NA	25x	Michael Abrahamson
	GC18F-1449-50	Soil	**09/30/11**	10.453	87.5	9.1464	25	250	0.015675	1	NA	25x	Michael Abrahamson
AO21633	GC18B-1423-51	Soil	**09/30/11**	10.311	86.6	8.9293	25	250	0.16248	2	2>4	50x	Michael Abrahamson
	GC18F-1449-51	Soil	**09/30/11**	10.311	86.6	8.9293	25	250	0.16248	2	2>4	50x	Michael Abrahamson

COMMENTS: _____

LABORATORY CONTROL SPIKE SUMMARY

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: NEA - A Division of PACE

ELAP ID No: 11078 SDG No: 11090501

LCS Lab ID: LCS-28 Blank Sample ID: PBLK-28

LCS File ID: GC18F-1449-46 Method Blank File ID: GC18F-1449-45

LCS Inj Date: 10/03/2011 10:29:10 Method Blank Inj Date: 10/03/2011 09:56:23

LCS ID: AO21617L Method Blank ID: AO21617B

LCS Matrix: SODIUM SULFATE Method Blank Matrix: SODIUM SULFATE

COMPOUND	SPIKE ADDED (ug/g)	LCS CONCENTRATION (ug/g)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	1.21	1.05	86.9	70.0-130

4

Column to be used to flag recovery values

* Values outside of QC limits

[1]QC Limits based upon laboratory defaults.

Spike Recovery: 0 out of 1 outside limits.

COMMENTS: _____

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: NEA - A Division of PACE

ELAP ID No: 11078 SDG No: 11090501

LCS Lab ID: LCS-28 Blank Sample ID: PBLK-28

LCS File ID: GC18B-1423-46 Method Blank File ID: GC18B-1423-45

LCS Inj Date: 10/03/2011 10:29:14 Method Blank Inj Date: 10/03/2011 09:56:27

LCS ID: AO21617L Method Blank ID: AO21617B

LCS Matrix: SODIUM SULFATE Method Blank Matrix: SODIUM SULFATE

COMPOUND	SPIKE ADDED (ug/g)	LCS CONCENTRATION (ug/g)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	1.21	1.43	118	70.0-130

4

Column to be used to flag recovery values

* Values outside of QC limits

[1]QC Limits based upon laboratory defaults.

Spike Recovery: 0 out of 1 outside limits.

COMMENTS:

METHOD BLANK SUMMARY

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Blank Sample ID:	PBLK-28
Matrix:	SODIUM SULFATE	Method Blank Nea ID No:	AO21617B
Instrument ID:	GC18F	Lab File ID:	GC18F-1449-45
Extraction Type:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
GC Column (1):	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	Date Analyzed:	10/03/2011
		Time Analyzed:	09:56:23

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-28(LAB CONTROL SPIKE)	AO21617L	GC18F-1449-46	10/03/2011 10:29:10
TI-3N (0-1)	AO21617	GC18F-1449-47	10/03/2011 11:01:56
TI-3E (0-1)	AO21620	GC18F-1449-48	10/03/2011 11:34:41
TI-3S (0-1)	AO21623	GC18F-1449-49	10/03/2011 12:07:27
TI-3W (0-1)	AO21626	GC18F-1449-50	10/03/2011 12:40:13

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Blank Sample ID:	PBLK-28
Matrix:	SODIUM SULFATE	Method Blank Nea ID No:	AO21617B
Instrument ID:	GC18B	Lab File ID:	GC18B-1423-45
Extraction Type:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
GC Column (1):	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	Date Analyzed:	10/03/2011
		Time Analyzed:	09:56:27

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-28(LAB CONTROL SPIKE)	AO21617L	GC18B-1423-46	10/03/2011 10:29:14
TI-3N (0-1)	AO21617	GC18B-1423-47	10/03/2011 11:02:00
TI-3E (0-1)	AO21620	GC18B-1423-48	10/03/2011 11:34:45
TI-3S (0-1)	AO21623	GC18B-1423-49	10/03/2011 12:07:31
TI-3W (0-1)	AO21626	GC18B-1423-50	10/03/2011 12:40:17

SAMPLE ANALYSIS DATA

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	LRF ID:	11090501-01
Matrix:	Soil	Client ID:	TI-3N (0-1)
Sample wt(Dry)/vol:	9.1147 g	Lab Sample ID:	AO21617
Percent Moisture:	12.3	Date Received:	09/29/2011
Extraction:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
Conc. Extract Volume:	25000 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18B-1423-47

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18F-1449-47

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0549	U
1	11104-28-2	Aroclor 1221	0.0549	U
1	11141-16-5	Aroclor 1232	0.0549	U
1	53469-21-9	Aroclor 1242	0.0549	U
1	12672-29-6	Aroclor 1248	0.0549	U
1	11097-69-1	Aroclor 1254	0.115	AF
1	11096-82-5	Aroclor 1260	0.0549	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

10-B
PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	TI-3N (0-1)
LRF Sample ID:	11090501-01	Lab Sample ID:	AO21617
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 11:02:00 AM	Date Analyzed:	10/03/2011 11:01:56 AM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-47	Lab File ID 2:	GC18F-1449-47
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1016	1	1	NA	7.83	7.99			
		2	NA	8.22	8.38			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.21	9.37			
	2	1	7.27	7.17	7.33			
		2	NA	7.55	7.71			
		3	NA	8.14	8.30			
		4	8.43	8.35	8.51			
		5	NA	8.48	8.64			
Aroclor 1221	1	1	NA	5.06	5.22			
		2	NA	6.19	6.35			
		3	NA	6.66	6.82			
		4	NA	6.87	7.03			
		5	NA	6.99	7.15			
	2	1	NA	4.21	4.37			
		2	NA	5.42	5.58			
		3	NA	5.97	6.13			
		4	NA	6.17	6.33			
		5	NA	6.29	6.45			
Aroclor 1232	1	1	NA	6.99	7.15			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	NA	6.28	6.44			
		2	NA	7.54	7.70			
		3	NA	8.14	8.30			
		4	8.43	8.34	8.50			
		5	NA	8.48	8.64			
Aroclor 1242	1	1	NA	7.83	7.99			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	7.27	7.18	7.34			
		2	NA	7.55	7.71			
		3	NA	8.14	8.30			
		4	8.43	8.35	8.51			
		5	NA	8.48	8.64			

Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(NEA-PACE)

Print Date: 10/10/2011
Lims Version : 5.0.6.1

10-B
PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	TI-3N (0-1)
LRF Sample ID:	11090501-01	Lab Sample ID:	AO21617
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 11:02:00 AM	Date Analyzed:	10/03/2011 11:01:56 AM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-47	Lab File ID 2:	GC18F-1449-47
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1248	1	1	NA	9.73	9.89			
		2	NA	10.44	10.60			
		3	NA	11.04	11.20			
		4	NA	11.24	11.40			
		5	NA	11.70	11.86			
	2	1	NA	9.03	9.19			
		2	NA	9.65	9.81			
		3	NA	10.27	10.43			
		4	NA	10.43	10.59			
		5	10.91	10.82	10.98			
Aroclor 1254	1	1	11.95	11.88	12.04			
		2	12.70	12.64	12.80			
		3	12.99	12.93	13.09			
		4	14.44	14.38	14.54			
		5	15.30	15.24	15.40	0.115		
	2	1	11.21	11.12	11.28			
		2	11.82	11.76	11.92			
		3	12.10	12.03	12.19			
		4	13.54	13.46	13.62			
		5	14.34	14.26	14.42	0.0901	24.3	
Aroclor 1260	1	1	15.30	15.24	15.40			
		2	17.50	17.44	17.60			
		3	18.61	18.55	18.71			
		4	19.21	19.16	19.32			
		5	NA	21.63	21.79			
	2	1	14.34	14.26	14.42			
		2	16.52	16.44	16.60			
		3	17.32	17.25	17.41			
		4	18.01	17.94	18.10			
		5	19.95	19.89	20.05			

Relative Percent Difference Limit = 40.0%

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	LRF ID:	11090501-04
Matrix:	Soil	Client ID:	TI-3E (0-1)
Sample wt(Dry)/vol:	8.7668 g	Lab Sample ID:	AO21620
Percent Moisture:	16.8	Date Received:	09/29/2011
Extraction:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
Conc. Extract Volume:	25000 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	2
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18B-1423-48

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18F-1449-48

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.114	U
1	11104-28-2	Aroclor 1221	0.114	U
1	11141-16-5	Aroclor 1232	0.114	U
1	53469-21-9	Aroclor 1242	0.114	U
1	12672-29-6	Aroclor 1248	0.114	U
1	11097-69-1	Aroclor 1254	2.46	AF
1	11096-82-5	Aroclor 1260	1.07	AG

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
AG-Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

10-B
PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	TI-3E (0-1)
LRF Sample ID:	11090501-04	Lab Sample ID:	AO21620
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 11:34:45 AM	Date Analyzed:	10/03/2011 11:34:41 AM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-48	Lab File ID 2:	GC18F-1449-48
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1016	1	1	NA	7.83	7.99			
		2	NA	8.22	8.38			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.21	9.37			
	2	1	7.27	7.17	7.33			
		2	NA	7.55	7.71			
		3	8.22	8.14	8.30			
		4	8.43	8.35	8.51			
		5	8.54	8.48	8.64			
Aroclor 1221	1	1	NA	5.06	5.22			
		2	NA	6.19	6.35			
		3	NA	6.66	6.82			
		4	NA	6.87	7.03			
		5	NA	6.99	7.15			
	2	1	NA	4.21	4.37			
		2	NA	5.42	5.58			
		3	NA	5.97	6.13			
		4	NA	6.17	6.33			
		5	NA	6.29	6.45			
Aroclor 1232	1	1	NA	6.99	7.15			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	NA	6.28	6.44			
		2	NA	7.54	7.70			
		3	8.22	8.14	8.30			
		4	8.43	8.34	8.50			
		5	8.54	8.48	8.64			
Aroclor 1242	1	1	NA	7.83	7.99			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	7.27	7.18	7.34			
		2	NA	7.55	7.71			
		3	8.22	8.14	8.30			
		4	8.43	8.35	8.51			
		5	8.54	8.48	8.64			

Relative Percent Difference Limit = 40.0%

10-B

PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	TI-3E (0-1)
LRF Sample ID:	11090501-04	Lab Sample ID:	AO21620
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 11:34:45 AM	Date Analyzed:	10/03/2011 11:34:41 AM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-48	Lab File ID 2:	GC18F-1449-48
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1248	1	1	NA	9.73	9.89			
		2	NA	10.44	10.60			
		3	NA	11.04	11.20			
		4	NA	11.24	11.40			
		5	NA	11.70	11.86			
	2	1	9.12	9.03	9.19			
		2	9.74	9.65	9.81			
		3	NA	10.27	10.43			
		4	10.54	10.43	10.59			
		5	10.91	10.82	10.98			
Aroclor 1254	1	1	11.94	11.88	12.04			
		2	12.70	12.64	12.80			
		3	12.99	12.93	13.09			
		4	14.44	14.38	14.54			
		5	15.30	15.24	15.40	2.46		
	2	1	11.20	11.12	11.28			
		2	11.83	11.76	11.92			
		3	12.10	12.03	12.19			
		4	13.54	13.46	13.62			
		5	14.33	14.26	14.42	1.95	23.1	
Aroclor 1260	1	1	15.30	15.24	15.40			
		2	17.49	17.44	17.60			
		3	18.60	18.55	18.71			
		4	19.20	19.16	19.32			
		5	21.66	21.63	21.79	1.07		
	2	1	14.33	14.26	14.42			
		2	16.51	16.44	16.60			
		3	17.32	17.25	17.41			
		4	18.01	17.94	18.10			
		5	19.96	19.89	20.05	0.886	18.8	

Relative Percent Difference Limit = 40.0%

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	LRF ID:	11090501-07
Matrix:	Soil	Client ID:	TI-3S (0-1)
Sample wt(Dry)/vol:	8.8143 g	Lab Sample ID:	AO21623
Percent Moisture:	13.1	Date Received:	09/29/2011
Extraction:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
Conc. Extract Volume:	25000 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18B-1423-49

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18F-1449-49

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0567	U
1	11104-28-2	Aroclor 1221	0.0567	U
1	11141-16-5	Aroclor 1232	0.0567	U
1	53469-21-9	Aroclor 1242	0.0567	U
1	12672-29-6	Aroclor 1248	0.0567	U
1	11097-69-1	Aroclor 1254	0.906	AF
1	11096-82-5	Aroclor 1260	0.261	AG

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
AG-Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

10-B

PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	TI-3S (0-1)
LRF Sample ID:	11090501-07	Lab Sample ID:	AO21623
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 12:07:31 PM	Date Analyzed:	10/03/2011 12:07:27 PM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-49	Lab File ID 2:	GC18F-1449-49
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1016	1	1	NA	7.83	7.99			
		2	NA	8.22	8.38			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.21	9.37			
	2	1	7.26	7.17	7.33			
		2	NA	7.55	7.71			
		3	8.24	8.14	8.30			
		4	8.43	8.35	8.51			
		5	NA	8.48	8.64			
Aroclor 1221	1	1	NA	5.06	5.22			
		2	NA	6.19	6.35			
		3	NA	6.66	6.82			
		4	NA	6.87	7.03			
		5	NA	6.99	7.15			
	2	1	NA	4.21	4.37			
		2	NA	5.42	5.58			
		3	NA	5.97	6.13			
		4	NA	6.17	6.33			
		5	NA	6.29	6.45			
Aroclor 1232	1	1	NA	6.99	7.15			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	NA	6.28	6.44			
		2	NA	7.54	7.70			
		3	8.24	8.14	8.30			
		4	8.43	8.34	8.50			
		5	NA	8.48	8.64			
Aroclor 1242	1	1	NA	7.83	7.99			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	7.26	7.18	7.34			
		2	NA	7.55	7.71			
		3	8.24	8.14	8.30			
		4	8.43	8.35	8.51			
		5	NA	8.48	8.64			

Relative Percent Difference Limit = 40.0%

10-B

PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	TI-3S (0-1)
LRF Sample ID:	11090501-07	Lab Sample ID:	AO21623
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 12:07:31 PM	Date Analyzed:	10/03/2011 12:07:27 PM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-49	Lab File ID 2:	GC18F-1449-49
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1248	1	1	NA	9.73	9.89			
		2	NA	10.44	10.60			
		3	NA	11.04	11.20			
		4	NA	11.24	11.40			
		5	NA	11.70	11.86			
	2	1	9.11	9.03	9.19			
		2	9.74	9.65	9.81			
		3	NA	10.27	10.43			
		4	10.54	10.43	10.59			
		5	10.91	10.82	10.98			
Aroclor 1254	1	1	11.94	11.88	12.04			
		2	12.70	12.64	12.80			
		3	12.99	12.93	13.09			
		4	14.44	14.38	14.54			
		5	15.29	15.24	15.40	0.906		
	2	1	11.19	11.12	11.28			
		2	11.83	11.76	11.92			
		3	12.10	12.03	12.19			
		4	13.53	13.46	13.62			
		5	14.33	14.26	14.42	0.707	24.7	
Aroclor 1260	1	1	15.29	15.24	15.40			
		2	17.49	17.44	17.60			
		3	18.60	18.55	18.71			
		4	19.20	19.16	19.32			
		5	21.67	21.63	21.79	0.261		
	2	1	14.33	14.26	14.42			
		2	16.51	16.44	16.60			
		3	17.31	17.25	17.41			
		4	18.00	17.94	18.10			
		5	19.96	19.89	20.05	0.218	18.0	

Relative Percent Difference Limit = 40.0%

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	LRF ID:	11090501-10
Matrix:	Soil	Client ID:	TI-3W (0-1)
Sample wt(Dry)/vol:	9.1464 g	Lab Sample ID:	AO21626
Percent Moisture:	12.5	Date Received:	09/29/2011
Extraction:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
Conc. Extract Volume:	25000 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18B-1423-50

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18F-1449-50

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0547	U
1	11104-28-2	Aroclor 1221	0.0547	U
1	11141-16-5	Aroclor 1232	0.0547	U
1	53469-21-9	Aroclor 1242	0.0547	U
1	12672-29-6	Aroclor 1248	0.0547	U
1	11097-69-1	Aroclor 1254	0.179	AF
1	11096-82-5	Aroclor 1260	0.0911	AG

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
AG-Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

10-B

PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	TI-3W (0-1)
LRF Sample ID:	11090501-10	Lab Sample ID:	AO21626
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 12:40:17 PM	Date Analyzed:	10/03/2011 12:40:13 PM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-50	Lab File ID 2:	GC18F-1449-50
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1016	1	1	NA	7.83	7.99			
		2	NA	8.22	8.38			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.21	9.37			
	2	1	NA	7.17	7.33			
		2	NA	7.55	7.71			
		3	NA	8.14	8.30			
		4	NA	8.35	8.51			
		5	NA	8.48	8.64			
Aroclor 1221	1	1	NA	5.06	5.22			
		2	NA	6.19	6.35			
		3	NA	6.66	6.82			
		4	NA	6.87	7.03			
		5	NA	6.99	7.15			
	2	1	NA	4.21	4.37			
		2	NA	5.42	5.58			
		3	NA	5.97	6.13			
		4	NA	6.17	6.33			
		5	NA	6.29	6.45			
Aroclor 1232	1	1	NA	6.99	7.15			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	NA	6.28	6.44			
		2	NA	7.54	7.70			
		3	NA	8.14	8.30			
		4	NA	8.34	8.50			
		5	NA	8.48	8.64			
Aroclor 1242	1	1	NA	7.83	7.99			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	NA	7.18	7.34			
		2	NA	7.55	7.71			
		3	NA	8.14	8.30			
		4	NA	8.35	8.51			
		5	NA	8.48	8.64			

Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(NEA-PACE)

Print Date: 10/10/2011
Lims Version : 5.0.6.1

10-B

PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	TI-3W (0-1)
LRF Sample ID:	11090501-10	Lab Sample ID:	AO21626
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 12:40:17 PM	Date Analyzed:	10/03/2011 12:40:13 PM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-50	Lab File ID 2:	GC18F-1449-50
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1248	1	1	NA	9.73	9.89			
		2	NA	10.44	10.60			
		3	NA	11.04	11.20			
		4	NA	11.24	11.40			
		5	NA	11.70	11.86			
	2	1	NA	9.03	9.19			
		2	NA	9.65	9.81			
		3	NA	10.27	10.43			
		4	NA	10.43	10.59			
		5	10.91	10.82	10.98			
Aroclor 1254	1	1	11.95	11.88	12.04			
		2	12.70	12.64	12.80			
		3	12.99	12.93	13.09			
		4	14.44	14.38	14.54			
		5	15.30	15.24	15.40	0.179		
	2	1	11.20	11.12	11.28			
		2	11.83	11.76	11.92			
		3	12.10	12.03	12.19			
		4	13.54	13.46	13.62			
		5	14.33	14.26	14.42	0.131	31.0	
Aroclor 1260	1	1	15.30	15.24	15.40			
		2	17.50	17.44	17.60			
		3	18.61	18.55	18.71			
		4	19.20	19.16	19.32			
		5	21.68	21.63	21.79	0.0911		
	2	1	14.33	14.26	14.42			
		2	16.51	16.44	16.60			
		3	17.31	17.25	17.41			
		4	18.01	17.94	18.10			
		5	19.96	19.89	20.05	0.0716	24.0	

Relative Percent Difference Limit = 40.0%

ANALYTICAL SEQUENCE (GC18F)

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: NEA - A Division of PACE SDG No: 11090501

ELAP ID No: 11078

Instrument ID: GC18F Init. Calib. Date(s): 09/21/11,09/22/11,09/23/11,09/26/11

GC Column (1): Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 5.65 DCBP RT: 23.97

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
01	A1016 20 PPB	092116A	GC18F-1441-3	09/21/2011 19:13:56		
02	A1016 100 PPB	092116B	GC18F-1441-4	09/21/2011 19:46:42		
03	A1016 250 PPB	092116C	GC18F-1441-5	09/21/2011 20:19:30		
04	A1016 500 PPB	092116D	GC18F-1441-6	09/21/2011 20:52:16		
05	A1016 1000 PPB	092116E	GC18F-1441-7	09/21/2011 21:25:02		
06	A1221 20 PPB	092121A	GC18F-1441-8	09/21/2011 21:57:48		
07	A1221 100 PPB	092121B	GC18F-1441-9	09/21/2011 22:30:34		
08	A1221 250 PPB	092121C	GC18F-1441-10	09/21/2011 23:03:20		
09	A1221 1000 PPB	092121E	GC18F-1441-12	09/22/2011 00:08:51		
10	A1232 20 PPB	092132A	GC18F-1441-13	09/22/2011 00:41:36		
11	A1232 100 PPB	092132B	GC18F-1441-14	09/22/2011 01:14:22		
12	A1232 250 PPB	092132C	GC18F-1441-15	09/22/2011 01:47:09		
13	A1232 500 PPB	092132D	GC18F-1441-16	09/22/2011 02:19:55		
14	A1232 1000 PPB	092132E	GC18F-1441-17	09/22/2011 02:52:41		
15	A1242 20 PPB	092142A	GC18F-1441-18	09/22/2011 03:25:27		
16	A1242 100 PPB	092142B	GC18F-1441-19	09/22/2011 03:58:18		
17	A1242 250 PPB	092142C	GC18F-1441-20	09/22/2011 04:31:03		
18	A1242 500 PPB	092142D	GC18F-1441-21	09/22/2011 05:03:49		
19	A1242 1000 PPB	092142E	GC18F-1441-22	09/22/2011 05:36:40		
20	A1248 20 PPB	092148A	GC18F-1441-23	09/22/2011 06:09:26		
21	A1248 100 PPB	092148B	GC18F-1441-24	09/22/2011 06:42:13		
22	A1248 250 PPB	092148C	GC18F-1441-25	09/22/2011 07:14:59		
23	A1248 1000 PPB	092148E	GC18F-1441-27	09/22/2011 08:20:32		
24	A1221 500 PPB	092221D	GC18F-1441-65	09/22/2011 16:50:17		
25	A1254 20 PPB	092254A	GC18F-1441-66	09/22/2011 17:23:03	5.65	23.96
26	A1254 100 PPB	092254B	GC18F-1441-67	09/22/2011 17:55:50	5.65	23.97
27	A1254 250 PPB	092254C	GC18F-1441-68	09/22/2011 18:28:36	5.65	23.97
28	A1254 500 PPB	092254D	GC18F-1441-69	09/22/2011 19:01:22	5.66	23.96
29	A1254 1000 PPB	092254E	GC18F-1441-70	09/22/2011 19:34:09	5.65	23.97
30	A1260 20 PPB	092260A	GC18F-1441-71	09/22/2011 20:06:56		
31	A1260 100 PPB	092260B	GC18F-1441-72	09/22/2011 20:39:41		
32	A1260 250 PPB	092260C	GC18F-1441-73	09/22/2011 21:12:28		
33	A1260 500 PPB	092260D	GC18F-1441-74	09/22/2011 21:45:14		
34	A1260 1000 PPB	092260E	GC18F-1441-75	09/22/2011 22:18:01		
35	A1262 20 PPB	092262A	GC18F-1441-76	09/22/2011 22:50:48		
36	A1262 100 PPB	092262B	GC18F-1441-77	09/22/2011 23:23:35		
37	A1262 250 PPB	092262C	GC18F-1441-78	09/22/2011 23:56:27		
38	A1262 500 PPB	092262D	GC18F-1441-79	09/23/2011 00:29:13		

Column used to flag surrogate retention times outside expected range.

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: NEA - A Division of PACE SDG No: 11090501

ELAP ID No: 11078

Instrument ID: GC18F Init. Calib. Date(s): 09/21/11,09/22/11,09/23/11,09/26/11

GC Column (1): Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 5.65 DCBP RT: 23.97

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
39	A1262 1000 PPB	092262E	GC18F-1441-80	09/23/2011 01:02:00		
40	A1268 20 PPB	092268A	GC18F-1441-81	09/23/2011 01:34:45		
41	A1268 100 PPB	092268B	GC18F-1441-82	09/23/2011 02:07:31		
42	A1268 250 PPB	092268C	GC18F-1441-83	09/23/2011 02:40:17		
43	A1268 500 PPB	092268D	GC18F-1441-84	09/23/2011 03:13:03		
44	A1268 1000 PPB	092268E	GC18F-1441-85	09/23/2011 03:45:49		
45	IUPAC 15 20 PPB	0922FSA	GC18F-1441-86	09/23/2011 04:18:35		
46	IUPAC 15 50 PPB	0922FSB	GC18F-1441-87	09/23/2011 04:51:21		
47	IUPAC 15 80 PPB	0922FSC	GC18F-1441-88	09/23/2011 05:24:09		
48	IUPAC 15 100 PPB	0922FSD	GC18F-1441-89	09/23/2011 05:56:55		
49	IUPAC 15 200 PPB	0922FSE	GC18F-1441-90	09/23/2011 06:29:41		
50	A1248 500 PPB	092648D	GC18F-1441-102	09/26/2011 09:47:29		
51	A1016 500 PPB	CS160926A	GC18F-1441-104	09/26/2011 10:53:01	5.65	23.92
52	A1221 500 PPB	CS210926A	GC18F-1441-105	09/26/2011 11:25:47	5.65	23.93
53	A1232 500 PPB	CS320926A	GC18F-1441-106	09/26/2011 11:58:34	5.65	23.93
54	A1242 500 PPB	CS420926A	GC18F-1441-107	09/26/2011 12:31:21	5.66	23.92
55	A1248 500 PPB	CS480926A	GC18F-1441-108	09/26/2011 13:04:07	5.65	23.92
56	A1254 500 PPB	CS540926A	GC18F-1441-109	09/26/2011 13:36:53	5.66	23.93
57	A1260 500 PPB	CS600926A	GC18F-1441-110	09/26/2011 14:09:38	5.66	23.92
58	A1262 500 PPB	CS620926A	GC18F-1441-111	09/26/2011 14:42:25	5.66	23.93
59	A1268 500 PPB	CS680926A	GC18F-1441-112	09/26/2011 15:15:11	5.65	23.93
60	SURR IUPAC 15	110926FS01	GC18F-1441-113	09/26/2011 15:47:57	5.65	23.97
61	A1242 500 PPB	CS421002B	GC18F-1449-44	10/03/2011 09:23:37	5.65	23.90
62	PBLK-28(METHOD BLANK)	AO21617B	GC18F-1449-45	10/03/2011 09:56:23	5.65	23.90
63	LCS-28(LAB CONTROL SPIKE)	AO21617L	GC18F-1449-46	10/03/2011 10:29:10	5.65	23.91
64	TI-3N (0-1)	AO21617	GC18F-1449-47	10/03/2011 11:01:56	5.66	23.91
65	TI-3E (0-1)	AO21620	GC18F-1449-48	10/03/2011 11:34:41	5.66	23.90
66	TI-3S (0-1)	AO21623	GC18F-1449-49	10/03/2011 12:07:27	5.65	23.90
67	TI-3W (0-1)	AO21626	GC18F-1449-50	10/03/2011 12:40:13	5.65	23.91
68	ZZZZZ	ZZZZZ	GC18F-1449-51	10/03/2011 13:12:59	5.66	23.91
69	A1248 500 PPB	CS481002B	GC18F-1449-52	10/03/2011 13:45:45	5.66	23.91

Column used to flag surrogate retention times outside expected range.

INITIAL CALIBRATION DATA (GC18F)

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: NEA - A Division of PACE
SDG NO: 11090501
ELAP ID No: 11078
Date(s) Analyzed: 09/21/11,09/22/11,09/23/11,09/26/11
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1016	GC18F-1441-3	092116A	20.0	85.147		
	GC18F-1441-4	092116B	100	87.183		
	GC18F-1441-5	092116C	250	84.913		
	GC18F-1441-6	092116D	500	86.228		
	GC18F-1441-7	092116E	1000	86.192	85.933	1.1
Aroclor 1221	GC18F-1441-8	092121A	20.0	24.562		
	GC18F-1441-9	092121B	100	23.567		
	GC18F-1441-10	092121C	250	21.731		
	GC18F-1441-65	092221D	500	25.010		
	GC18F-1441-12	092121E	1000	22.592	23.492	5.8
Aroclor 1232	GC18F-1441-13	092132A	20.0	35.717		
	GC18F-1441-14	092132B	100	43.056		
	GC18F-1441-15	092132C	250	40.760		
	GC18F-1441-16	092132D	500	41.401		
	GC18F-1441-17	092132E	1000	39.357	40.058	6.9
Aroclor 1242	GC18F-1441-18	092142A	20.0	90.398		
	GC18F-1441-19	092142B	100	79.523		
	GC18F-1441-20	092142C	250	81.759		
	GC18F-1441-21	092142D	500	82.207		
	GC18F-1441-22	092142E	1000	77.797	82.337	5.9
Aroclor 1248	GC18F-1441-23	092148A	20.0	79.564		
	GC18F-1441-24	092148B	100	77.860		
	GC18F-1441-25	092148C	250	74.518		
	GC18F-1441-102	092648D	500	72.180		
	GC18F-1441-27	092148E	1000	73.311	75.487	4.1
Aroclor 1254	GC18F-1441-66	092254A	20.0	119.600		
	GC18F-1441-67	092254B	100	121.705		
	GC18F-1441-68	092254C	250	111.547		
	GC18F-1441-69	092254D	500	126.199		
	GC18F-1441-70	092254E	1000	113.908	118.592	5.0
Aroclor 1260	GC18F-1441-71	092260A	20.0	171.441		
	GC18F-1441-72	092260B	100	174.807		
	GC18F-1441-73	092260C	250	165.812		
	GC18F-1441-74	092260D	500	163.492		
	GC18F-1441-75	092260E	1000	158.447	166.800	3.9
Aroclor 1262	GC18F-1441-76	092262A	20.0	196.914		
	GC18F-1441-77	092262B	100	179.716		
	GC18F-1441-78	092262C	250	172.531		
	GC18F-1441-79	092262D	500	175.165		
	GC18F-1441-80	092262E	1000	177.074	180.280	5.4

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: NEA - A Division of PACE
SDG NO: 11090501
ELAP ID No: 11078
Date(s) Analyzed: 09/21/11,09/22/11,09/23/11,09/26/11
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1268	GC18F-1441-81	092268A	20.0	341.565		
	GC18F-1441-82	092268B	100	308.014		
	GC18F-1441-83	092268C	250	300.294		
	GC18F-1441-84	092268D	500	298.134		
	GC18F-1441-85	092268E	1000	276.944	304.990	7.7
TCMX	GC18F-1441-66	092254A	2.00	533.752		
	GC18F-1441-67	092254B	5.00	510.287		
	GC18F-1441-68	092254C	8.00	475.046		
	GC18F-1441-69	092254D	10.0	534.585		
	GC18F-1441-70	092254E	20.0	462.037	503.142	6.6
4,4'-Dibromobiphenyl	GC18F-1441-86	0922FSA	20.0	291.874		
	GC18F-1441-87	0922FSB	50.0	286.906		
	GC18F-1441-88	0922FSC	80.0	274.644		
	GC18F-1441-89	0922FSD	100	279.870		
	GC18F-1441-90	0922FSE	200	270.939	280.847	3.1
DCBP	GC18F-1441-66	092254A	20.0	550.680		
	GC18F-1441-67	092254B	50.0	522.940		
	GC18F-1441-68	092254C	80.0	517.290		
	GC18F-1441-69	092254D	100	506.032		
	GC18F-1441-70	092254E	200	472.565	513.902	5.5

% RSD Limit <= 20%
TCMX=TETRACHLOROMETAXYLENE
DCBP=DECACHLOROBIPHENYL

[1] Response factor calculated using total area of 5 peaks used to quantitate each Aroclor. Mean response factor not used in Aroclor quantitation, calibration curve by linear regression used for quantitation. Concentrations are nominal values, please see Calibration Curve Report Point Table for actual values.

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INITIAL/CONTINUING CALIBRATION DATA (GC18F)

7E-1
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SDG NO: 11090501

ELAP ID No: 11078

Instrument ID: GC18F

GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	CALIB TYPE	CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	PERCENT DIFFERENCE	Q	DATE / TIME ANALYZED
Aroclor 1016	GC18F-1441-10	CS160926A	ICV	502	500	0.392		09/26/2011 10:53:01
Aroclor 1221	GC18F-1441-10	CS210926A	ICV	493	500	-1.44		09/26/2011 11:25:47
Aroclor 1232	GC18F-1441-10	CS320926A	ICV	500	500	-0.0138		09/26/2011 11:58:34
Aroclor 1242	GC18F-1441-10	CS420926A	ICV	457	500	-8.67		09/26/2011 12:31:21
Aroclor 1248	GC18F-1441-10	CS480926A	ICV	535	500	7.04		09/26/2011 13:04:07
Aroclor 1254	GC18F-1441-10	CS540926A	ICV	513	500	2.69		09/26/2011 13:36:53
Aroclor 1260	GC18F-1441-11	CS600926A	ICV	452	500	-9.62		09/26/2011 14:09:38
Aroclor 1262	GC18F-1441-11	CS620926A	ICV	464	500	-7.26		09/26/2011 14:42:25
Aroclor 1268	GC18F-1441-11	CS680926A	ICV	504	500	0.843		09/26/2011 15:15:11
Aroclor 1242	GC18F-1449-44	CS421002B	CCV	437	500	-12.6		10/03/2011 09:23:37
Aroclor 1248	GC18F-1449-52	CS481002B	CCV	528	500	5.59		10/03/2011 13:45:45

% Difference must be less than or equal to +/- 15 percent

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

9

PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090501

ELAP ID No: 11078

Instrument ID: GC18F

GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1016	GC18F-1441-104	CS160926A	ICV	1	7.25	7.17	7.33
		CS160926A	ICV	2	7.63	7.55	7.71
		CS160926A	ICV	3	8.22	8.14	8.30
		CS160926A	ICV	4	8.43	8.35	8.51
		CS160926A	ICV	5	8.56	8.48	8.64
Aroclor 1221	GC18F-1441-105	CS210926A	ICV	1	4.29	4.21	4.37
		CS210926A	ICV	2	5.50	5.42	5.58
		CS210926A	ICV	3	6.05	5.97	6.13
		CS210926A	ICV	4	6.25	6.17	6.33
		CS210926A	ICV	5	6.37	6.29	6.45
Aroclor 1232	GC18F-1441-106	CS320926A	ICV	1	6.36	6.28	6.44
		CS320926A	ICV	2	7.62	7.54	7.70
		CS320926A	ICV	3	8.22	8.14	8.30
		CS320926A	ICV	4	8.42	8.34	8.50
		CS320926A	ICV	5	8.56	8.48	8.64
Aroclor 1242	GC18F-1441-107	CS420926A	ICV	1	7.26	7.18	7.34
		CS420926A	ICV	2	7.63	7.55	7.71
		CS420926A	ICV	3	8.22	8.14	8.30
		CS420926A	ICV	4	8.43	8.35	8.51
		CS420926A	ICV	5	8.56	8.48	8.64
Aroclor 1248	GC18F-1441-108	CS480926A	ICV	1	9.11	9.03	9.19
		CS480926A	ICV	2	9.73	9.65	9.81
		CS480926A	ICV	3	10.35	10.27	10.43
		CS480926A	ICV	4	10.51	10.43	10.59
		CS480926A	ICV	5	10.90	10.82	10.98
Aroclor 1254	GC18F-1441-109	CS540926A	ICV	1	11.20	11.12	11.28
		CS540926A	ICV	2	11.84	11.76	11.92
		CS540926A	ICV	3	12.11	12.03	12.19
		CS540926A	ICV	4	13.54	13.46	13.62
		CS540926A	ICV	5	14.34	14.26	14.42
Aroclor 1260	GC18F-1441-110	CS600926A	ICV	1	14.34	14.26	14.42
		CS600926A	ICV	2	16.52	16.44	16.60
		CS600926A	ICV	3	17.33	17.25	17.41
		CS600926A	ICV	4	18.02	17.94	18.10
		CS600926A	ICV	5	19.97	19.89	20.05
Aroclor 1262	GC18F-1441-111	CS620926A	ICV	1	14.34	14.26	14.42
		CS620926A	ICV	2	16.52	16.44	16.60
		CS620926A	ICV	3	17.32	17.24	17.40

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090501
ELAP ID No: 11078
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1262		CS620926A	ICV	4	18.02	17.94	18.10
		CS620926A	ICV	5	19.98	19.90	20.06
Aroclor 1268	GC18F-1441-112	CS680926A	ICV	1	18.02	17.94	18.10
		CS680926A	ICV	2	19.98	19.90	20.06
		CS680926A	ICV	3	17.82	17.74	17.90
		CS680926A	ICV	4	19.18	19.10	19.26
		CS680926A	ICV	5	19.50	19.42	19.58

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090501
ELAP ID No: 11078
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1242	GC18F-1449-44	CS421002B	CCV	1	7.25	7.18	7.34
		CS421002B	CCV	2	7.62	7.55	7.71
		CS421002B	CCV	3	8.22	8.14	8.30
		CS421002B	CCV	4	8.42	8.35	8.51
		CS421002B	CCV	5	8.55	8.48	8.64
Aroclor 1248	GC18F-1449-52	CS481002B	CCV	1	9.11	9.03	9.19
		CS481002B	CCV	2	9.73	9.65	9.81
		CS481002B	CCV	3	10.35	10.27	10.43
		CS481002B	CCV	4	10.51	10.43	10.59
		CS481002B	CCV	5	10.89	10.82	10.98

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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ANALYTICAL SEQUENCE (GC18B)

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: NEA - A Division of PACE SDG No: 11090501

ELAP ID No: 11078

Instrument ID: GC18B Init. Calib. Date(s): 09/21/11,09/22/11,09/23/11,09/26/11

GC Column (1): Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 6.30 DCBP RT: 26.35

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
01	A1016 20 PPB	092116A	GC18B-1415-3	09/21/2011 19:14:00		
02	A1016 100 PPB	092116B	GC18B-1415-4	09/21/2011 19:46:46		
03	A1016 250 PPB	092116C	GC18B-1415-5	09/21/2011 20:19:34		
04	A1016 500 PPB	092116D	GC18B-1415-6	09/21/2011 20:52:20		
05	A1016 1000 PPB	092116E	GC18B-1415-7	09/21/2011 21:25:06		
06	A1221 20 PPB	092121A	GC18B-1415-8	09/21/2011 21:57:52		
07	A1221 100 PPB	092121B	GC18B-1415-9	09/21/2011 22:30:38		
08	A1221 250 PPB	092121C	GC18B-1415-10	09/21/2011 23:03:24		
09	A1221 1000 PPB	092121E	GC18B-1415-12	09/22/2011 00:08:55		
10	A1232 20 PPB	092132A	GC18B-1415-13	09/22/2011 00:41:40		
11	A1232 100 PPB	092132B	GC18B-1415-14	09/22/2011 01:14:26		
12	A1232 250 PPB	092132C	GC18B-1415-15	09/22/2011 01:47:13		
13	A1232 500 PPB	092132D	GC18B-1415-16	09/22/2011 02:19:59		
14	A1232 1000 PPB	092132E	GC18B-1415-17	09/22/2011 02:52:45		
15	A1242 20 PPB	092142A	GC18B-1415-18	09/22/2011 03:25:31		
16	A1242 100 PPB	092142B	GC18B-1415-19	09/22/2011 03:58:22		
17	A1242 250 PPB	092142C	GC18B-1415-20	09/22/2011 04:31:07		
18	A1242 500 PPB	092142D	GC18B-1415-21	09/22/2011 05:03:53		
19	A1242 1000 PPB	092142E	GC18B-1415-22	09/22/2011 05:36:44		
20	A1248 20 PPB	092148A	GC18B-1415-23	09/22/2011 06:09:30		
21	A1248 100 PPB	092148B	GC18B-1415-24	09/22/2011 06:42:17		
22	A1248 250 PPB	092148C	GC18B-1415-25	09/22/2011 07:15:03		
23	A1248 1000 PPB	092148E	GC18B-1415-27	09/22/2011 08:20:36		
24	A1221 500 PPB	092221D	GC18B-1415-65	09/22/2011 16:50:21		
25	A1254 20 PPB	092254A	GC18B-1415-66	09/22/2011 17:23:07	6.30	26.35
26	A1254 100 PPB	092254B	GC18B-1415-67	09/22/2011 17:55:54	6.30	26.35
27	A1254 250 PPB	092254C	GC18B-1415-68	09/22/2011 18:28:40	6.30	26.34
28	A1254 500 PPB	092254D	GC18B-1415-69	09/22/2011 19:01:26	6.30	26.35
29	A1254 1000 PPB	092254E	GC18B-1415-70	09/22/2011 19:34:13	6.30	26.35
30	A1260 20 PPB	092260A	GC18B-1415-71	09/22/2011 20:07:00		
31	A1260 100 PPB	092260B	GC18B-1415-72	09/22/2011 20:39:45		
32	A1260 250 PPB	092260C	GC18B-1415-73	09/22/2011 21:12:32		
33	A1260 500 PPB	092260D	GC18B-1415-74	09/22/2011 21:45:18		
34	A1260 1000 PPB	092260E	GC18B-1415-75	09/22/2011 22:18:05		
35	A1262 20 PPB	092262A	GC18B-1415-76	09/22/2011 22:50:52		
36	A1262 100 PPB	092262B	GC18B-1415-77	09/22/2011 23:23:39		
37	A1262 250 PPB	092262C	GC18B-1415-78	09/22/2011 23:56:31		
38	A1262 500 PPB	092262D	GC18B-1415-79	09/23/2011 00:29:17		

Column used to flag surrogate retention times outside expected range.

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: NEA - A Division of PACE SDG No: 11090501

ELAP ID No: 11078

Instrument ID: GC18B Init. Calib. Date(s): 09/21/11,09/22/11,09/23/11,09/26/11

GC Column (1): Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 6.30 DCBP RT: 26.35

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
39	A1262 1000 PPB	092262E	GC18B-1415-80	09/23/2011 01:02:04		
40	A1268 20 PPB	092268A	GC18B-1415-81	09/23/2011 01:34:49		
41	A1268 100 PPB	092268B	GC18B-1415-82	09/23/2011 02:07:35		
42	A1268 250 PPB	092268C	GC18B-1415-83	09/23/2011 02:40:21		
43	A1268 500 PPB	092268D	GC18B-1415-84	09/23/2011 03:13:07		
44	A1268 1000 PPB	092268E	GC18B-1415-85	09/23/2011 03:45:53		
45	IUPAC 15 20 PPB	0922FSA	GC18B-1415-86	09/23/2011 04:18:39		
46	IUPAC 15 50 PPB	0922FSB	GC18B-1415-87	09/23/2011 04:51:25		
47	IUPAC 15 80 PPB	0922FSC	GC18B-1415-88	09/23/2011 05:24:13		
48	IUPAC 15 100 PPB	0922FSD	GC18B-1415-89	09/23/2011 05:56:59		
49	IUPAC 15 200 PPB	0922FSE	GC18B-1415-90	09/23/2011 06:29:45		
50	A1248 500 PPB	092648D	GC18B-1415-91	09/26/2011 09:47:33		
51	A1016 500 PPB	CS160926A	GC18B-1415-92	09/26/2011 10:53:05	6.30	26.30
52	A1221 500 PPB	CS210926A	GC18B-1415-93	09/26/2011 11:25:51	6.30	26.31
53	A1232 500 PPB	CS320926A	GC18B-1415-94	09/26/2011 11:58:38	6.30	26.31
54	A1242 500 PPB	CS420926A	GC18B-1415-95	09/26/2011 12:31:25	6.30	26.31
55	A1248 500 PPB	CS480926A	GC18B-1415-96	09/26/2011 13:04:11	6.30	26.31
56	A1254 500 PPB	CS540926A	GC18B-1415-97	09/26/2011 13:36:57	6.30	26.31
57	A1260 500 PPB	CS600926A	GC18B-1415-98	09/26/2011 14:09:42	6.30	26.31
58	A1262 500 PPB	CS620926A	GC18B-1415-99	09/26/2011 14:42:29	6.30	26.31
59	A1268 500 PPB	CS680926A	GC18B-1415-100	09/26/2011 15:15:15	6.30	26.31
60	SURR IUPAC 15	110926FS01	GC18B-1415-101	09/26/2011 15:48:01	6.30	26.35
61	A1242 500 PPB	CS421002B	GC18B-1423-44	10/03/2011 09:23:41	6.30	26.27
62	PBLK-28(METHOD BLANK)	AO21617B	GC18B-1423-45	10/03/2011 09:56:27	6.30	26.27
63	LCS-28(LAB CONTROL SPIKE)	AO21617L	GC18B-1423-46	10/03/2011 10:29:14	6.30	26.27
64	TI-3N (0-1)	AO21617	GC18B-1423-47	10/03/2011 11:02:00	6.30	26.28
65	TI-3E (0-1)	AO21620	GC18B-1423-48	10/03/2011 11:34:45	6.30	26.28
66	TI-3S (0-1)	AO21623	GC18B-1423-49	10/03/2011 12:07:31	6.30	26.27
67	TI-3W (0-1)	AO21626	GC18B-1423-50	10/03/2011 12:40:17	6.30	26.27
68	ZZZZZ	ZZZZZ	GC18B-1423-51	10/03/2011 13:13:03	6.30	26.27
69	A1248 500 PPB	CS481002B	GC18B-1423-52	10/03/2011 13:45:49	6.30	26.27

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Column used to flag surrogate retention times outside expected range.

INITIAL CALIBRATION DATA (GC18B)

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: NEA - A Division of PACE
SDG NO: 11090501
ELAP ID No: 11078
Date(s) Analyzed: 09/21/11,09/22/11,09/23/11,09/26/11
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1016	GC18B-1415-3	092116A	20.0	64.574		
	GC18B-1415-4	092116B	100	54.507		
	GC18B-1415-5	092116C	250	55.126		
	GC18B-1415-6	092116D	500	54.344		
	GC18B-1415-7	092116E	1000	53.065	56.323	8.3
Aroclor 1221	GC18B-1415-8	092121A	20.0	15.466		
	GC18B-1415-9	092121B	100	15.780		
	GC18B-1415-10	092121C	250	16.302		
	GC18B-1415-65	092221D	500	16.141		
	GC18B-1415-12	092121E	1000	15.581	15.854	2.3
Aroclor 1232	GC18B-1415-13	092132A	20.0	31.601		
	GC18B-1415-14	092132B	100	28.204		
	GC18B-1415-15	092132C	250	27.900		
	GC18B-1415-16	092132D	500	27.275		
	GC18B-1415-17	092132E	1000	26.859	28.368	6.6
Aroclor 1242	GC18B-1415-18	092142A	20.0	49.411		
	GC18B-1415-19	092142B	100	55.622		
	GC18B-1415-20	092142C	250	53.189		
	GC18B-1415-21	092142D	500	52.525		
	GC18B-1415-22	092142E	1000	47.437	51.637	6.3
Aroclor 1248	GC18B-1415-23	092148A	20.0	55.782		
	GC18B-1415-24	092148B	100	53.483		
	GC18B-1415-25	092148C	250	51.424		
	GC18B-1415-91	092648D	500	52.633		
	GC18B-1415-27	092148E	1000	47.630	52.191	5.8
Aroclor 1254	GC18B-1415-66	092254A	20.0	76.951		
	GC18B-1415-67	092254B	100	81.568		
	GC18B-1415-68	092254C	250	71.454		
	GC18B-1415-69	092254D	500	76.934		
	GC18B-1415-70	092254E	1000	72.550	75.891	5.3
Aroclor 1260	GC18B-1415-71	092260A	20.0	92.990		
	GC18B-1415-72	092260B	100	91.530		
	GC18B-1415-73	092260C	250	91.813		
	GC18B-1415-74	092260D	500	87.889		
	GC18B-1415-75	092260E	1000	87.517	90.348	2.7
Aroclor 1262	GC18B-1415-76	092262A	20.0	91.389		
	GC18B-1415-77	092262B	100	94.530		
	GC18B-1415-78	092262C	250	91.908		
	GC18B-1415-79	092262D	500	87.297		
	GC18B-1415-80	092262E	1000	90.500	91.125	2.9

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: NEA - A Division of PACE
SDG NO: 11090501
ELAP ID No: 11078
Date(s) Analyzed: 09/21/11,09/22/11,09/23/11,09/26/11
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1268	GC18B-1415-81	092268A	20.0	137.231		
	GC18B-1415-82	092268B	100	150.403		
	GC18B-1415-83	092268C	250	151.439		
	GC18B-1415-84	092268D	500	147.468		
	GC18B-1415-85	092268E	1000	142.667	145.842	4.0
TCMX	GC18B-1415-66	092254A	2.00	316.948		
	GC18B-1415-67	092254B	5.00	303.960		
	GC18B-1415-68	092254C	8.00	311.170		
	GC18B-1415-69	092254D	10.0	308.997		
	GC18B-1415-70	092254E	20.0	300.538	308.323	2.1
4,4'-Dibromobiphenyl	GC18B-1415-86	0922FSA	20.0	209.537		
	GC18B-1415-87	0922FSB	50.0	209.088		
	GC18B-1415-88	0922FSC	80.0	192.095		
	GC18B-1415-89	0922FSD	100	208.087		
	GC18B-1415-90	0922FSE	200	195.935	202.948	4.1
DCBP	GC18B-1415-66	092254A	20.0	338.212		
	GC18B-1415-67	092254B	50.0	308.390		
	GC18B-1415-68	092254C	80.0	313.155		
	GC18B-1415-69	092254D	100	300.425		
	GC18B-1415-70	092254E	200	285.350	309.106	6.3

% RSD Limit <= 20%
TCMX=TETRACHLOROMETAXYLENE
DCBP=DECACHLOROBIPHENYL

[1] Response factor calculated using total area of 5 peaks used to quantitate each Aroclor. Mean response factor not used in Aroclor quantitation, calibration curve by linear regression used for quantitation. Concentrations are nominal values, please see Calibration Curve Report Point Table for actual values.

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INITIAL/CONTINUING CALIBRATION DATA (GC18B)

7E-1
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SDG NO: 11090501

ELAP ID No: 11078

Instrument ID: GC18B

GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	CALIB TYPE	CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	PERCENT DIFFERENCE	Q	DATE / TIME ANALYZED
Aroclor 1016	GC18B-1415-92	CS160926A	ICV	554	500	10.9		09/26/2011 10:53:05
Aroclor 1221	GC18B-1415-93	CS210926A	ICV	545	500	8.92		09/26/2011 11:25:51
Aroclor 1232	GC18B-1415-94	CS320926A	ICV	538	500	7.59		09/26/2011 11:58:38
Aroclor 1242	GC18B-1415-95	CS420926A	ICV	469	500	-6.28		09/26/2011 12:31:25
Aroclor 1248	GC18B-1415-96	CS480926A	ICV	529	500	5.84		09/26/2011 13:04:11
Aroclor 1254	GC18B-1415-97	CS540926A	ICV	555	500	10.9		09/26/2011 13:36:57
Aroclor 1260	GC18B-1415-98	CS600926A	ICV	479	500	-4.27		09/26/2011 14:09:42
Aroclor 1262	GC18B-1415-99	CS620926A	ICV	489	500	-2.25		09/26/2011 14:42:29
Aroclor 1268	GC18B-1415-10	CS680926A	ICV	532	500	6.35		09/26/2011 15:15:15
Aroclor 1242	GC18B-1423-44	CS421002B	CCV	492	500	-1.52		10/03/2011 09:23:41
Aroclor 1248	GC18B-1423-52	CS481002B	CCV	560	500	12.0		10/03/2011 13:45:49

% Difference must be less than or equal to +/- 15 percent

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

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7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE
SGD NO: 11090501
ELAP ID No: 11078
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1016	GC18B-1415-92	CS160926A	ICV	1	7.90	7.82	7.98
		CS160926A	ICV	2	8.30	8.22	8.38
		CS160926A	ICV	3	8.89	8.81	8.97
		CS160926A	ICV	4	9.11	9.03	9.19
		CS160926A	ICV	5	9.29	9.21	9.37
Aroclor 1221	GC18B-1415-93	CS210926A	ICV	1	5.13	5.05	5.21
		CS210926A	ICV	2	6.27	6.19	6.35
		CS210926A	ICV	3	6.74	6.66	6.82
		CS210926A	ICV	4	6.94	6.86	7.02
		CS210926A	ICV	5	7.06	6.98	7.14
Aroclor 1232	GC18B-1415-94	CS320926A	ICV	1	7.06	6.98	7.14
		CS320926A	ICV	2	8.30	8.22	8.38
		CS320926A	ICV	3	8.89	8.81	8.97
		CS320926A	ICV	4	9.11	9.03	9.19
		CS320926A	ICV	5	9.29	9.21	9.37
Aroclor 1242	GC18B-1415-95	CS420926A	ICV	1	7.90	7.82	7.98
		CS420926A	ICV	2	8.30	8.22	8.38
		CS420926A	ICV	3	8.89	8.81	8.97
		CS420926A	ICV	4	9.11	9.03	9.19
		CS420926A	ICV	5	9.29	9.21	9.37
Aroclor 1248	GC18B-1415-96	CS480926A	ICV	1	9.80	9.72	9.88
		CS480926A	ICV	2	10.51	10.43	10.59
		CS480926A	ICV	3	11.11	11.03	11.19
		CS480926A	ICV	4	11.31	11.23	11.39
		CS480926A	ICV	5	11.77	11.69	11.85
Aroclor 1254	GC18B-1415-97	CS540926A	ICV	1	11.96	11.88	12.04
		CS540926A	ICV	2	12.71	12.63	12.79
		CS540926A	ICV	3	13.00	12.92	13.08
		CS540926A	ICV	4	14.46	14.38	14.54
		CS540926A	ICV	5	15.31	15.23	15.39
Aroclor 1260	GC18B-1415-98	CS600926A	ICV	1	15.31	15.23	15.39
		CS600926A	ICV	2	17.51	17.43	17.59
		CS600926A	ICV	3	18.62	18.54	18.70
		CS600926A	ICV	4	19.22	19.14	19.30
		CS600926A	ICV	5	21.69	21.61	21.77
Aroclor 1262	GC18B-1415-99	CS620926A	ICV	1	15.31	15.23	15.39
		CS620926A	ICV	2	17.51	17.43	17.59
		CS620926A	ICV	3	18.62	18.54	18.70

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090501

ELAP ID No: 11078

Instrument ID: GC18B

GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1262		CS620926A	ICV	4	19.22	19.14	19.30
		CS620926A	ICV	5	21.69	21.61	21.77
Aroclor 1268	GC18B-1415-100	CS680926A	ICV	1	19.21	19.13	19.29
		CS680926A	ICV	2	21.69	21.61	21.77
		CS680926A	ICV	3	18.99	18.91	19.07
		CS680926A	ICV	4	20.55	20.47	20.63
		CS680926A	ICV	5	20.96	20.88	21.04

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090501
ELAP ID No: 11078
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1242	GC18B-1423-44	CS421002B	CCV	1	7.90	7.82	7.98
		CS421002B	CCV	2	8.30	8.22	8.38
		CS421002B	CCV	3	8.89	8.81	8.97
		CS421002B	CCV	4	9.11	9.03	9.19
		CS421002B	CCV	5	9.28	9.21	9.37
Aroclor 1248	GC18B-1423-52	CS481002B	CCV	1	9.79	9.72	9.88
		CS481002B	CCV	2	10.51	10.43	10.59
		CS481002B	CCV	3	11.11	11.03	11.19
		CS481002B	CCV	4	11.30	11.23	11.39
		CS481002B	CCV	5	11.76	11.69	11.85

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

12

QC SAMPLE RAW DATA

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	LRF ID:	PBLK-28
Matrix:	SODIUM SULFATE	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	10.480 g	Lab Sample ID:	AO21617B
Percent Moisture:	0.0	Lab File ID:	GC18F-1449-45
Extraction:	Soxhlet Method (3540C)	Date Received:	
Conc. Extract Volume:	25000 uL	Date Extracted:	09/30/2011
Injection Volume:	1.0 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	0.0500	U
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	LRF ID:	PBLK-28
Matrix:	SODIUM SULFATE	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	10.480 g	Lab Sample ID:	AO21617B
Percent Moisture:	0.0	Lab File ID:	GC18B-1423-45
Extraction:	Soxhlet Method (3540C)	Date Received:	
Conc. Extract Volume:	25000 uL	Date Extracted:	09/30/2011
Injection Volume:	1.0 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	0.0500	U
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	LRF ID:	LCS-28
Matrix:	SODIUM SULFATE	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	10.329 g	Lab Sample ID:	AO21617L
Percent Moisture:	0.0	Lab File ID:	GC18F-1449-46
Extraction:	Soxhlet Method (3540C)	Date Received:	
Conc. Extract Volume:	25000 uL	Date Extracted:	09/30/2011
Injection Volume:	1.0 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	1.05	
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	LRF ID:	LCS-28
Matrix:	SODIUM SULFATE	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	10.329 g	Lab Sample ID:	AO21617L
Percent Moisture:	0.0	Lab File ID:	GC18B-1423-46
Extraction:	Soxhlet Method (3540C)	Date Received:	
Conc. Extract Volume:	25000 uL	Date Extracted:	09/30/2011
Injection Volume:	1.0 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	1.43	
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

10-B
PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	LCS-28(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-28	Lab Sample ID:	AO21617L
Instrument 1 ID:	GC18F	Instrument 2 ID:	GC18B
Date Analyzed:	10/03/2011 10:29:10 AM	Date Analyzed:	10/03/2011 10:29:14 AM
GC Column 1:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18F-1449-46	Lab File ID 2:	GC18B-1423-46
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1016	1	1	7.25	7.17	7.33			
		2	7.62	7.55	7.71			
		3	8.22	8.14	8.30			
		4	8.42	8.35	8.51			
		5	8.56	8.48	8.64			
	2	1	7.90	7.83	7.99			
		2	8.30	8.22	8.38			
		3	8.89	8.82	8.98			
		4	9.11	9.04	9.20			
		5	9.28	9.21	9.37			
Aroclor 1221	1	1	NA	4.21	4.37			
		2	NA	5.42	5.58			
		3	NA	5.97	6.13			
		4	NA	6.17	6.33			
		5	NA	6.29	6.45			
	2	1	NA	5.06	5.22			
		2	NA	6.19	6.35			
		3	NA	6.66	6.82			
		4	NA	6.87	7.03			
		5	NA	6.99	7.15			
Aroclor 1232	1	1	NA	6.28	6.44			
		2	7.62	7.54	7.70			
		3	8.22	8.14	8.30			
		4	8.42	8.34	8.50			
		5	8.56	8.48	8.64			
	2	1	NA	6.99	7.15			
		2	8.30	8.23	8.39			
		3	8.89	8.82	8.98			
		4	9.11	9.04	9.20			
		5	9.28	9.22	9.38			
Aroclor 1242	1	1	7.25	7.18	7.34			
		2	7.62	7.55	7.71			
		3	8.22	8.14	8.30			
		4	8.42	8.35	8.51			
		5	8.56	8.48	8.64	1.05		
	2	1	7.90	7.83	7.99			
		2	8.30	8.23	8.39			
		3	8.89	8.82	8.98			
		4	9.11	9.04	9.20			
		5	9.28	9.22	9.38	1.43	30.6	

Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(NEA-PACE)

Print Date: 10/10/2011
Lims Version : 5.0.6.1

10-B

PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090501
ELAP ID No:	11078	Client ID:	LCS-28(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-28	Lab Sample ID:	AO21617L
Instrument 1 ID:	GC18F	Instrument 2 ID:	GC18B
Date Analyzed:	10/03/2011 10:29:10 AM	Date Analyzed:	10/03/2011 10:29:14 AM
GC Column 1:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18F-1449-46	Lab File ID 2:	GC18B-1423-46
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1248	1	1	NA	9.03	9.19			
		2	NA	9.65	9.81			
		3	NA	10.27	10.43			
		4	NA	10.43	10.59			
		5	NA	10.82	10.98			
	2	1	NA	9.73	9.89			
		2	NA	10.44	10.60			
		3	NA	11.04	11.20			
		4	NA	11.24	11.40			
		5	NA	11.70	11.86			
Aroclor 1254	1	1	NA	11.12	11.28			
		2	NA	11.76	11.92			
		3	NA	12.03	12.19			
		4	NA	13.46	13.62			
		5	NA	14.26	14.42			
	2	1	NA	11.88	12.04			
		2	NA	12.64	12.80			
		3	NA	12.93	13.09			
		4	NA	14.38	14.54			
		5	NA	15.24	15.40			
Aroclor 1260	1	1	NA	14.26	14.42			
		2	NA	16.44	16.60			
		3	NA	17.25	17.41			
		4	NA	17.94	18.10			
		5	NA	19.89	20.05			
	2	1	NA	15.24	15.40			
		2	NA	17.44	17.60			
		3	NA	18.55	18.71			
		4	NA	19.16	19.32			
		5	NA	21.63	21.79			

Relative Percent Difference Limit = 40.0%

Date: October 10, 2011-C

NEA PACE Analytical e-Report

Report prepared for:
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

Project ID: CITY OF NEW BEDFORD-115058
Sampling Date(s): September 26, 2011
NEA Report ID: 11090504
Client Service Contact: William Kotas (518) 346-4592 ext. 17

Analysis Included:
PCB Analysis (Solid)

Robert E. Wagner
Laboratory Director

Certifications: NYS (EPA: NY00906, ELAP: 11078), NJ (NY026), CT (PH-0337), MA(M-NY906), NC (668)

NEA - A Division of Pace Analytical Services| 2190 Technology Drive | Schenectady, NY 12308
Phone: 518.346.4592 | internet: www.nealab.com | Email: information@nealab.com

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Table of Contents

CASE NARRATIVE

October 10, 2011

CASE NARRATIVE

This data package (SDG ID: 11090504) consists of 1 soil sample received on 09/29/2011. The sample is from Project Name: CITY OF NEW BEDFORD-115058.

This sample delivery group consists of the following samples:

Lab Sample ID	Client ID	Collection Date
AO21633	TI-3 DUP	09/26/2011
AO21634*	TI-3N1 (0-1)	09/26/2011 16:20
AO21635*	TI-3N1 (1-1.3)	09/26/2011 16:25
AO21636*	TI-3N1 (2-2.3)	09/26/2011 16:30
AO21637*	TI-3N2 (0-1)	09/26/2011 16:45
AO21638*	TI-3N2 (1-1.3)	09/26/2011 16:50
AO21639*	TI-3N2 (2-2.3)	09/26/2011 16:55
AO21640*	TI-3N3 (0-1)	09/26/2011 17:00
AO21641*	TI-3N3 (1-1.3)	09/26/2011 17:05
AO21642*	TI-3N3 (2-2.3)	09/26/2011 17:10
AO21643*	TI-3N COMP (0-1)	09/26/2011 17:15
AO21644*	TI-3N COMP (1-1.3)	09/26/2011 17:20

*Indicates samples were placed on hold per client request.

Sample Delivery and Receipt Conditions

(1.) All samples were delivered to the laboratory via FEDEX delivery service on 09/29/2011.

(2.) All samples were received at the laboratory intact and within holding times.

(3.) The following cooler temperatures were recorded at sample receipt (Control limits are between 0-6 Degrees Celsius): 2.4, 4.4 degrees Celsius. Please see Chain of Custody for details.

PCB Aroclor Analysis

Analysis for PCB Aroclors was performed by method SW-846 8082A using a dual column GC system. Samples were extracted by Soxhlet Extraction Method (EPA - Method 3540C). The following technical and administrative items were noted for the analysis:

(1.) The concentration results for Aroclor 1254 were flagged (AF) to denote that an altered Aroclor pattern was observed. Please see Form 1 for details.

(2.) The concentration results for Aroclor 1260 were flagged (AG) to denote that an altered Aroclor pattern was observed. Please see Form 1 for details.

Qualifier Summary

(1.) B-Denotes analyte observed in associated method blank or extraction blank at a concentration exceeding the MDL.
(2.) J-Denotes concentration result greater than the MDL but less than the RL.
(3.) U-Denotes analyte not observed at a concentration greater than the MDL.

Respectfully submitted,

William A. Kotas
Client Services Manager
S:\Lims Data\1109\11090504\Package\CN_11090504_Rev00.doc

SAMPLE CHAIN OF CUSTODY

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<11090504P1>

110905041

Page: 2 of 10

1513204

Section A Required Client Information:

Company: TRC
Address: 650 Suffolk Street
Lowell MA 01854
Email To: dsullivan@trcsolutions.com
Phone: 978-656-3565 Fax: 978-453-1995
Requested Due Date/TAT: Standard 5-day

Section B Required Project Information:

Report To: David Sullivan
Copy To: pzhou@trcsolutions.com
jsaunders@trcsolutions.com
Purchase Order No.: 37117
Project Name: City of NB - TI-3
Project Number: 115058-000820-000007

Section C Invoice Information:

Attention: Accounts Payable
Company Name: TRC Companies Inc.
Address: 21 Griffin Rd North
Windsor, CT 06095
Pace Quote Reference:
Pace Project Manager: William Kotas
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER MCP/TSCA

Site Location STATE: MA

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved (4oz)	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	PCBs (8082 Soxhlet)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TI-3 DUP	SL	G	9/26/11	—				1	X								Y	X		A021633
2	TI-3N1 (0-1) hold				1620				1	X									X		A021634
3	TI-3N1 (1-1.3) hold				1625				1	X									X		A021635
4	TI-3N1 (2-2.3) hold				1630				1	X									X		A021636
5	TI-3N2 (0-1) hold				1645				1	X									X		A021637
6	TI-3N2 (1-1.3) hold				1650				1	X									X		A021638
7	TI-3N2 (2-2.3) hold				1655				1	X									X		A021639
8	TI-3N3 (0-1) hold				1700				1	X									X		A021640
9	TI 3N3 (1-1.3) hold				1705				1	X									X		A021641
10	TI3N3 (2-2.3) hold,				1710				1	X									X		A021642
11	TI-3NCOMP (0-1) hold		C		1620	9/26/11	1715		1	X									X		A021643
12	TI-3NCOMP (1-1.3) hold	SL	C		1625	"	1720		1	X									X		A021644

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Allison Drouin - TRC	9/27/11	1730	Via Fedex						
	VIA FedEx			Jeff Robinson / PACE	9/29/11	10:27				
							2.4	Y	Y	Y
							4.4	Y	Y	Y

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Allison Drouin / Jeff Robinson

SIGNATURE of SAMPLER: Allison Drouin DATE Signed (MM/DD/YY): 9-26-11

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

INTERNAL SAMPLE TRACKING RECORD

PCB EXTRACTION LOG

Prep Date: 09/30/11 **Batch ID: 15803**

	Prep ID	LAB Sample ID	Alt Sample ID	Matrix	pH	Analysis Required	Extract Type / Unit	Percent Total Solids	Sample Amount (g or mL)	Extract Time On - 1	Extract Time Off - 1	Extract Time On - 2	Extract Time Off - 2	Initial for required Clean Up Steps: Date Acid Cleaned (MM/DD) DKA	Date TBA Cleaned (MM/DD) DKA	Date Florisil Shake (MM/DD) DKA	Date Hg Shake (MM/DD)	Final Ext. Vol (mL)	Date Conc (MM/DD)	Comments
1	151866	PBLK-28	AO21617B	Soil		E PCB S	SOX	N/A	10.480	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
2	151865	LCS-28	AO21617L	Soil		E PCB S	SOX	N/A	10.329	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
3	151860	11090501-01	AO21617	Soil		E PCB S	SOX	87.7	10.393	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
4	151861	11090501-04	AO21620	Soil		E PCB S	SOX	83.2	10.537	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
5	151862	11090501-07	AO21623	Soil		E PCB S	SOX	86.9	10.143	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
6	151863	11090501-10	AO21626	Soil		E PCB S	SOX	87.5	10.453	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	
7	151864	11090504-01	AO21633	Soil		E PCB S	SOX	86.6	10.311	12:30	06:00	NA	NA	10/01	10/01	10/01	NA	25	10/01	

Solvent, Surrogate, Spike, and Acid Information

Item	Lot Number	Amount (uL)	Conc (ug/mL)	B	L	LD	S	D	M	K
Sulfuric Acid (Main Lab)	E49039	NA	NA	☑	☑	☐	☑	☐	☐	☐
Aroclor 1242 @ 12.5PPM SPIKE	042011B030P104B	1000	12.5	☐	☑	☐	☐	☐	☐	☐
Thimbles (Cellulose)	N08433x80MM	NA		☑	☑	☐	☑	☐	☐	☐
Sodium Sulfate CURRENT	K10624	NA		☑	☑	☐	☑	☐	☐	☐
Acetone (Dewar) CURRENT	DE473	NA		☑	☑	☐	☑	☐	☐	☐
Hexane (Dewar)	DE749B	NA		☑	☑	☐	☑	☐	☐	☐
TBA Solution	091411MLB2P83C	NA		☑	☑	☐	☑	☐	☐	☐
10% Florisil Main Lab CURRENT	091411MLB2P82B	NA		☑	☑	☐	☑	☐	☐	☐
0.50ppm TCMX/ 5.0ppm DCBP in Hexan	071911B030P193B1-10	500	0.50/5.0	☑	☑	☐	☑	☐	☐	☐

3

Analyst Review: Diyana Azhari

Peer Review: Timothy Holton

Print Date: 10/10/2011
Lims Version : 5.0.6.1
_EXT - LOGBOOK_GC-SV; Rev 02; 1.18.2010; EXTRACTION

PCB SCREEN SHEET

LRF: 11090504 **Batch ID:15803**

NEA Sample ID	File ID	Matrix	Prep Date	Wet Weight (g or mL)	Percent Solids	Dry Weight (g or mL)	Set Volume (mL)	Screen Dilution	Screen Result	Bench Dilution	Dilution Sequence	Final Multiplier	Dilution Analyst
AO21617B	GC18B-1423-45	Soil	**09/30/11**	10.480	N/A	10.480	25	25	0.0065895	1	NA	25x	Michael Abrahamson
	GC18F-1449-45	Soil	**09/30/11**	10.480	N/A	10.480	25	25	0.0065895	1	NA	25x	Michael Abrahamson
AO21617L	GC18B-1423-46	Soil	**09/30/11**	10.329	N/A	10.329	25	25	0.49795	1	NA	25x	Michael Abrahamson
	GC18F-1449-46	Soil	**09/30/11**	10.329	N/A	10.329	25	25	0.49795	1	NA	25x	Michael Abrahamson
AO21617	GC18B-1423-47	Soil	**09/30/11**	10.393	87.7	9.1147	25	250	0.011185	1	NA	25x	Michael Abrahamson
	GC18F-1449-47	Soil	**09/30/11**	10.393	87.7	9.1147	25	250	0.011185	1	NA	25x	Michael Abrahamson
AO21620	GC18B-1423-48	Soil	**09/30/11**	10.537	83.2	8.7668	25	250	0.11631	2	2>4	50x	Michael Abrahamson
	GC18F-1449-48	Soil	**09/30/11**	10.537	83.2	8.7668	25	250	0.11631	2	2>4	50x	Michael Abrahamson
AO21623	GC18B-1423-49	Soil	**09/30/11**	10.143	86.9	8.8143	25	250	0.060341	1	NA	25x	Michael Abrahamson
	GC18F-1449-49	Soil	**09/30/11**	10.143	86.9	8.8143	25	250	0.060341	1	NA	25x	Michael Abrahamson
AO21626	GC18B-1423-50	Soil	**09/30/11**	10.453	87.5	9.1464	25	250	0.015675	1	NA	25x	Michael Abrahamson
	GC18F-1449-50	Soil	**09/30/11**	10.453	87.5	9.1464	25	250	0.015675	1	NA	25x	Michael Abrahamson
AO21633	GC18B-1423-51	Soil	**09/30/11**	10.311	86.6	8.9293	25	250	0.16248	2	2>4	50x	Michael Abrahamson
	GC18F-1449-51	Soil	**09/30/11**	10.311	86.6	8.9293	25	250	0.16248	2	2>4	50x	Michael Abrahamson

COMMENTS: _____

SURROGATE % RECOVERY SUMMARY

2F-1
PCB SURROGATE RECOVERY

Laboratory Name: NEA - A Division of PACE SDG: 11090504

ELAP ID No: 11078

GC Column (1): Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

GC Column (2): Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

LRF ID	LAB SAMPLE ID	LAB FILE ID	SURR 1 (Col 1) % REC #	SURR 2 (Col 1) % REC #	SURR 1 (Col 2) % REC #	SURR 2 (Col 2) % REC #	OTHER (1)	OTHER (2)	TOTAL OUT
PBLK-28	AO21617B	GC18F-1449-45	90.7	96.2					0
PBLK-28	AO21617B	GC18B-1423-45			119	116			0
LCS-28	AO21617L	GC18F-1449-46	89.8	97.0					0
LCS-28	AO21617L	GC18B-1423-46			119	116			0
11090504-01	AO21633	GC18F-1449-51	94.5	84.9					0
11090504-01	AO21633	GC18B-1423-51			119	106			0

4

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

	Advisory QC Limits.
SURR1 = TETRACHLORO-META-XYLENE	(60.0-140)
SURR2 = DECACHLOROBIPHENYL	(60.0-140)

LABORATORY CONTROL SPIKE SUMMARY

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: NEA - A Division of PACE

ELAP ID No: 11078 SDG No: 11090504

LCS Lab ID: LCS-28 Blank Sample ID: PBLK-28

LCS File ID: GC18F-1449-46 Method Blank File ID: GC18F-1449-45

LCS Inj Date: 10/03/2011 10:29:10 Method Blank Inj Date: 10/03/2011 09:56:23

LCS ID: AO21617L Method Blank ID: AO21617B

LCS Matrix: SODIUM SULFATE Method Blank Matrix: SODIUM SULFATE

COMPOUND	SPIKE ADDED (ug/g)	LCS CONCENTRATION (ug/g)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	1.21	1.05	86.9	70.0-130

Column to be used to flag recovery values

* Values outside of QC limits

[1]QC Limits based upon laboratory defaults.

Spike Recovery: 0 out of 1 outside limits.

5

COMMENTS:

Form III-CLP-PCB (NEA-PACE)

Lims Version : 5.0.6.1

3F-2
LABORATORY CONTROL SPIKE (LCS) RECOVERY

Laboratory Name: NEA - A Division of PACE

ELAP ID No: 11078 SDG No: 11090504

LCS Lab ID: LCS-28 Blank Sample ID: PBLK-28

LCS File ID: GC18B-1423-46 Method Blank File ID: GC18B-1423-45

LCS Inj Date: 10/03/2011 10:29:14 Method Blank Inj Date: 10/03/2011 09:56:27

LCS ID: AO21617L Method Blank ID: AO21617B

LCS Matrix: SODIUM SULFATE Method Blank Matrix: SODIUM SULFATE

COMPOUND	SPIKE ADDED (ug/g)	LCS CONCENTRATION (ug/g)	LCS PERCENT RECOVERY #	QC LIMITS[1] PERCENT RECOVERY
Aroclor 1242	1.21	1.43	118	70.0-130

Column to be used to flag recovery values

* Values outside of QC limits

[1]QC Limits based upon laboratory defaults.

Spike Recovery: 0 out of 1 outside limits.

5

COMMENTS:

Form III-CLP-PCB (NEA-PACE)

Lims Version : 5.0.6.1

METHOD BLANK SUMMARY

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	Blank Sample ID:	PBLK-28
Matrix:	SODIUM SULFATE	Method Blank Nea ID No:	AO21617B
Instrument ID:	GC18F	Lab File ID:	GC18F-1449-45
Extraction Type:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
GC Column (1):	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	Date Analyzed:	10/03/2011
		Time Analyzed:	09:56:23

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-28(LAB CONTROL SPIKE)	AO21617L	GC18F-1449-46	10/03/2011 10:29:10
TI-3 DUP	AO21633	GC18F-1449-51	10/03/2011 13:12:59

6

4C-1
PCB METHOD BLANK SUMMARY

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	Blank Sample ID:	PBLK-28
Matrix:	SODIUM SULFATE	Method Blank Nea ID No:	AO21617B
Instrument ID:	GC18B	Lab File ID:	GC18B-1423-45
Extraction Type:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
GC Column (1):	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	Date Analyzed:	10/03/2011
		Time Analyzed:	09:56:27

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES AND QC:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED
LCS-28(LAB CONTROL SPIKE)	AO21617L	GC18B-1423-46	10/03/2011 10:29:14
TI-3 DUP	AO21633	GC18B-1423-51	10/03/2011 13:13:03

6

SAMPLE ANALYSIS DATA

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	LRF ID:	11090504-01
Matrix:	Soil	Client ID:	TI-3 DUP
Sample wt(Dry)/vol:	8.9293 g	Lab Sample ID:	AO21633
Percent Moisture:	13.4	Date Received:	09/29/2011
Extraction:	Soxhlet Method (3540C)	Date Extracted:	09/30/2011
Conc. Extract Volume:	25000 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	2
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18B-1423-51

Column 2 Information:

GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

Injection Volume: 1.0 uL

Lab File ID: GC18F-1449-51

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.112	U
1	11104-28-2	Aroclor 1221	0.112	U
1	11141-16-5	Aroclor 1232	0.112	U
1	53469-21-9	Aroclor 1242	0.112	U
1	12672-29-6	Aroclor 1248	0.112	U
1	11097-69-1	Aroclor 1254	2.54	AF
1	11096-82-5	Aroclor 1260	0.933	AG

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
AG-Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

10-B
PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	Client ID:	TI-3 DUP
LRF Sample ID:	11090504-01	Lab Sample ID:	AO21633
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 1:13:03 PM	Date Analyzed:	10/03/2011 1:12:59 PM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-51	Lab File ID 2:	GC18F-1449-51
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1016	1	1	NA	7.83	7.99			
		2	NA	8.22	8.38			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.21	9.37			
	2	1	NA	7.17	7.33			
		2	NA	7.55	7.71			
		3	NA	8.14	8.30			
		4	NA	8.35	8.51			
		5	NA	8.48	8.64			
Aroclor 1221	1	1	NA	5.06	5.22			
		2	NA	6.19	6.35			
		3	NA	6.66	6.82			
		4	NA	6.87	7.03			
		5	NA	6.99	7.15			
	2	1	NA	4.21	4.37			
		2	NA	5.42	5.58			
		3	NA	5.97	6.13			
		4	NA	6.17	6.33			
		5	NA	6.29	6.45			
Aroclor 1232	1	1	NA	6.99	7.15			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	NA	6.28	6.44			
		2	NA	7.54	7.70			
		3	NA	8.14	8.30			
		4	NA	8.34	8.50			
		5	NA	8.48	8.64			
Aroclor 1242	1	1	NA	7.83	7.99			
		2	NA	8.23	8.39			
		3	NA	8.82	8.98			
		4	NA	9.04	9.20			
		5	NA	9.22	9.38			
	2	1	NA	7.18	7.34			
		2	NA	7.55	7.71			
		3	NA	8.14	8.30			
		4	NA	8.35	8.51			
		5	NA	8.48	8.64			

Relative Percent Difference Limit = 40.0%

10-B

PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	Client ID:	TI-3 DUP
LRF Sample ID:	11090504-01	Lab Sample ID:	AO21633
Instrument 1 ID:	GC18B	Instrument 2 ID:	GC18F
Date Analyzed:	10/03/2011 1:13:03 PM	Date Analyzed:	10/03/2011 1:12:59 PM
GC Column 1:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18B-1423-51	Lab File ID 2:	GC18F-1449-51
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1248	1	1	NA	9.73	9.89			
		2	NA	10.44	10.60			
		3	NA	11.04	11.20			
		4	NA	11.24	11.40			
		5	NA	11.70	11.86			
	2	1	NA	9.03	9.19			
		2	NA	9.65	9.81			
		3	10.37	10.27	10.43			
		4	10.55	10.43	10.59			
		5	10.91	10.82	10.98			
Aroclor 1254	1	1	11.95	11.88	12.04			
		2	12.70	12.64	12.80			
		3	12.99	12.93	13.09			
		4	14.45	14.38	14.54			
		5	15.30	15.24	15.40	2.54		
	2	1	11.20	11.12	11.28			
		2	11.83	11.76	11.92			
		3	12.11	12.03	12.19			
		4	13.54	13.46	13.62			
		5	14.34	14.26	14.42	2.09	19.4	
Aroclor 1260	1	1	15.30	15.24	15.40			
		2	17.50	17.44	17.60			
		3	18.60	18.55	18.71			
		4	19.20	19.16	19.32			
		5	21.67	21.63	21.79	0.933		
	2	1	14.34	14.26	14.42			
		2	16.52	16.44	16.60			
		3	17.32	17.25	17.41			
		4	18.01	17.94	18.10			
		5	19.97	19.89	20.05	0.778	18.1	

Relative Percent Difference Limit = 40.0%

ANALYTICAL SEQUENCE (GC18F)

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: NEA - A Division of PACE SDG No: 11090504

ELAP ID No: 11078

Instrument ID: GC18F Init. Calib. Date(s): 09/21/11,09/22/11,09/23/11,09/26/11

GC Column (1): Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 5.65 DCBP RT: 23.97

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
01	A1016 20 PPB	092116A	GC18F-1441-3	09/21/2011 19:13:56		
02	A1016 100 PPB	092116B	GC18F-1441-4	09/21/2011 19:46:42		
03	A1016 250 PPB	092116C	GC18F-1441-5	09/21/2011 20:19:30		
04	A1016 500 PPB	092116D	GC18F-1441-6	09/21/2011 20:52:16		
05	A1016 1000 PPB	092116E	GC18F-1441-7	09/21/2011 21:25:02		
06	A1221 20 PPB	092121A	GC18F-1441-8	09/21/2011 21:57:48		
07	A1221 100 PPB	092121B	GC18F-1441-9	09/21/2011 22:30:34		
08	A1221 250 PPB	092121C	GC18F-1441-10	09/21/2011 23:03:20		
09	A1221 1000 PPB	092121E	GC18F-1441-12	09/22/2011 00:08:51		
10	A1232 20 PPB	092132A	GC18F-1441-13	09/22/2011 00:41:36		
11	A1232 100 PPB	092132B	GC18F-1441-14	09/22/2011 01:14:22		
12	A1232 250 PPB	092132C	GC18F-1441-15	09/22/2011 01:47:09		
13	A1232 500 PPB	092132D	GC18F-1441-16	09/22/2011 02:19:55		
14	A1232 1000 PPB	092132E	GC18F-1441-17	09/22/2011 02:52:41		
15	A1242 20 PPB	092142A	GC18F-1441-18	09/22/2011 03:25:27		
16	A1242 100 PPB	092142B	GC18F-1441-19	09/22/2011 03:58:18		
17	A1242 250 PPB	092142C	GC18F-1441-20	09/22/2011 04:31:03		
18	A1242 500 PPB	092142D	GC18F-1441-21	09/22/2011 05:03:49		
19	A1242 1000 PPB	092142E	GC18F-1441-22	09/22/2011 05:36:40		
20	A1248 20 PPB	092148A	GC18F-1441-23	09/22/2011 06:09:26		
21	A1248 100 PPB	092148B	GC18F-1441-24	09/22/2011 06:42:13		
22	A1248 250 PPB	092148C	GC18F-1441-25	09/22/2011 07:14:59		
23	A1248 1000 PPB	092148E	GC18F-1441-27	09/22/2011 08:20:32		
24	A1221 500 PPB	092221D	GC18F-1441-65	09/22/2011 16:50:17		
25	A1254 20 PPB	092254A	GC18F-1441-66	09/22/2011 17:23:03	5.65	23.96
26	A1254 100 PPB	092254B	GC18F-1441-67	09/22/2011 17:55:50	5.65	23.97
27	A1254 250 PPB	092254C	GC18F-1441-68	09/22/2011 18:28:36	5.65	23.97
28	A1254 500 PPB	092254D	GC18F-1441-69	09/22/2011 19:01:22	5.66	23.96
29	A1254 1000 PPB	092254E	GC18F-1441-70	09/22/2011 19:34:09	5.65	23.97
30	A1260 20 PPB	092260A	GC18F-1441-71	09/22/2011 20:06:56		
31	A1260 100 PPB	092260B	GC18F-1441-72	09/22/2011 20:39:41		
32	A1260 250 PPB	092260C	GC18F-1441-73	09/22/2011 21:12:28		
33	A1260 500 PPB	092260D	GC18F-1441-74	09/22/2011 21:45:14		
34	A1260 1000 PPB	092260E	GC18F-1441-75	09/22/2011 22:18:01		
35	A1262 20 PPB	092262A	GC18F-1441-76	09/22/2011 22:50:48		
36	A1262 100 PPB	092262B	GC18F-1441-77	09/22/2011 23:23:35		
37	A1262 250 PPB	092262C	GC18F-1441-78	09/22/2011 23:56:27		
38	A1262 500 PPB	092262D	GC18F-1441-79	09/23/2011 00:29:13		

Column used to flag surrogate retention times outside expected range.

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: NEA - A Division of PACE SDG No: 11090504

ELAP ID No: 11078

Instrument ID: GC18F Init. Calib. Date(s): 09/21/11,09/22/11,09/23/11,09/26/11

GC Column (1): Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 5.65 DCBP RT: 23.97

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
39	A1262 1000 PPB	092262E	GC18F-1441-80	09/23/2011 01:02:00		
40	A1268 20 PPB	092268A	GC18F-1441-81	09/23/2011 01:34:45		
41	A1268 100 PPB	092268B	GC18F-1441-82	09/23/2011 02:07:31		
42	A1268 250 PPB	092268C	GC18F-1441-83	09/23/2011 02:40:17		
43	A1268 500 PPB	092268D	GC18F-1441-84	09/23/2011 03:13:03		
44	A1268 1000 PPB	092268E	GC18F-1441-85	09/23/2011 03:45:49		
45	IUPAC 15 20 PPB	0922FSA	GC18F-1441-86	09/23/2011 04:18:35		
46	IUPAC 15 50 PPB	0922FSB	GC18F-1441-87	09/23/2011 04:51:21		
47	IUPAC 15 80 PPB	0922FSC	GC18F-1441-88	09/23/2011 05:24:09		
48	IUPAC 15 100 PPB	0922FSD	GC18F-1441-89	09/23/2011 05:56:55		
49	IUPAC 15 200 PPB	0922FSE	GC18F-1441-90	09/23/2011 06:29:41		
50	A1248 500 PPB	092648D	GC18F-1441-102	09/26/2011 09:47:29		
51	A1016 500 PPB	CS160926A	GC18F-1441-104	09/26/2011 10:53:01	5.65	23.92
52	A1221 500 PPB	CS210926A	GC18F-1441-105	09/26/2011 11:25:47	5.65	23.93
53	A1232 500 PPB	CS320926A	GC18F-1441-106	09/26/2011 11:58:34	5.65	23.93
54	A1242 500 PPB	CS420926A	GC18F-1441-107	09/26/2011 12:31:21	5.66	23.92
55	A1248 500 PPB	CS480926A	GC18F-1441-108	09/26/2011 13:04:07	5.65	23.92
56	A1254 500 PPB	CS540926A	GC18F-1441-109	09/26/2011 13:36:53	5.66	23.93
57	A1260 500 PPB	CS600926A	GC18F-1441-110	09/26/2011 14:09:38	5.66	23.92
58	A1262 500 PPB	CS620926A	GC18F-1441-111	09/26/2011 14:42:25	5.66	23.93
59	A1268 500 PPB	CS680926A	GC18F-1441-112	09/26/2011 15:15:11	5.65	23.93
60	SURR IUPAC 15	110926FS01	GC18F-1441-113	09/26/2011 15:47:57	5.65	23.97
61	A1242 500 PPB	CS421002B	GC18F-1449-44	10/03/2011 09:23:37	5.65	23.90
62	PBLK-28(METHOD BLANK)	AO21617B	GC18F-1449-45	10/03/2011 09:56:23	5.65	23.90
63	LCS-28(LAB CONTROL SPIKE)	AO21617L	GC18F-1449-46	10/03/2011 10:29:10	5.65	23.91
64	ZZZZZ	ZZZZZ	GC18F-1449-47	10/03/2011 11:01:56	5.66	23.91
65	ZZZZZ	ZZZZZ	GC18F-1449-48	10/03/2011 11:34:41	5.66	23.90
66	ZZZZZ	ZZZZZ	GC18F-1449-49	10/03/2011 12:07:27	5.65	23.90
67	ZZZZZ	ZZZZZ	GC18F-1449-50	10/03/2011 12:40:13	5.65	23.91
68	TI-3 DUP	AO21633	GC18F-1449-51	10/03/2011 13:12:59	5.66	23.91
69	A1248 500 PPB	CS481002B	GC18F-1449-52	10/03/2011 13:45:45	5.66	23.91

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Column used to flag surrogate retention times outside expected range.

INITIAL CALIBRATION DATA (GC18F)

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: NEA - A Division of PACE
SDG NO: 11090504
ELAP ID No: 11078
Date(s) Analyzed: 09/21/11,09/22/11,09/23/11,09/26/11
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1016	GC18F-1441-3	092116A	20.0	85.147		
	GC18F-1441-4	092116B	100	87.183		
	GC18F-1441-5	092116C	250	84.913		
	GC18F-1441-6	092116D	500	86.228		
	GC18F-1441-7	092116E	1000	86.192	85.933	1.1
Aroclor 1221	GC18F-1441-8	092121A	20.0	24.562		
	GC18F-1441-9	092121B	100	23.567		
	GC18F-1441-10	092121C	250	21.731		
	GC18F-1441-65	092221D	500	25.010		
	GC18F-1441-12	092121E	1000	22.592	23.492	5.8
Aroclor 1232	GC18F-1441-13	092132A	20.0	35.717		
	GC18F-1441-14	092132B	100	43.056		
	GC18F-1441-15	092132C	250	40.760		
	GC18F-1441-16	092132D	500	41.401		
	GC18F-1441-17	092132E	1000	39.357	40.058	6.9
Aroclor 1242	GC18F-1441-18	092142A	20.0	90.398		
	GC18F-1441-19	092142B	100	79.523		
	GC18F-1441-20	092142C	250	81.759		
	GC18F-1441-21	092142D	500	82.207		
	GC18F-1441-22	092142E	1000	77.797	82.337	5.9
Aroclor 1248	GC18F-1441-23	092148A	20.0	79.564		
	GC18F-1441-24	092148B	100	77.860		
	GC18F-1441-25	092148C	250	74.518		
	GC18F-1441-102	092648D	500	72.180		
	GC18F-1441-27	092148E	1000	73.311	75.487	4.1
Aroclor 1254	GC18F-1441-66	092254A	20.0	119.600		
	GC18F-1441-67	092254B	100	121.705		
	GC18F-1441-68	092254C	250	111.547		
	GC18F-1441-69	092254D	500	126.199		
	GC18F-1441-70	092254E	1000	113.908	118.592	5.0
Aroclor 1260	GC18F-1441-71	092260A	20.0	171.441		
	GC18F-1441-72	092260B	100	174.807		
	GC18F-1441-73	092260C	250	165.812		
	GC18F-1441-74	092260D	500	163.492		
	GC18F-1441-75	092260E	1000	158.447	166.800	3.9
Aroclor 1262	GC18F-1441-76	092262A	20.0	196.914		
	GC18F-1441-77	092262B	100	179.716		
	GC18F-1441-78	092262C	250	172.531		
	GC18F-1441-79	092262D	500	175.165		
	GC18F-1441-80	092262E	1000	177.074	180.280	5.4

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: NEA - A Division of PACE
SDG NO: 11090504
ELAP ID No: 11078
Date(s) Analyzed: 09/21/11,09/22/11,09/23/11,09/26/11
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1268	GC18F-1441-81	092268A	20.0	341.565		
	GC18F-1441-82	092268B	100	308.014		
	GC18F-1441-83	092268C	250	300.294		
	GC18F-1441-84	092268D	500	298.134		
	GC18F-1441-85	092268E	1000	276.944	304.990	7.7
TCMX	GC18F-1441-66	092254A	2.00	533.752		
	GC18F-1441-67	092254B	5.00	510.287		
	GC18F-1441-68	092254C	8.00	475.046		
	GC18F-1441-69	092254D	10.0	534.585		
	GC18F-1441-70	092254E	20.0	462.037	503.142	6.6
4,4'-Dibromobiphenyl	GC18F-1441-86	0922FSA	20.0	291.874		
	GC18F-1441-87	0922FSB	50.0	286.906		
	GC18F-1441-88	0922FSC	80.0	274.644		
	GC18F-1441-89	0922FSD	100	279.870		
	GC18F-1441-90	0922FSE	200	270.939	280.847	3.1
DCBP	GC18F-1441-66	092254A	20.0	550.680		
	GC18F-1441-67	092254B	50.0	522.940		
	GC18F-1441-68	092254C	80.0	517.290		
	GC18F-1441-69	092254D	100	506.032		
	GC18F-1441-70	092254E	200	472.565	513.902	5.5

% RSD Limit <= 20%
TCMX=TETRACHLOROMETAXYLENE
DCBP=DECACHLOROBIPHENYL

[1] Response factor calculated using total area of 5 peaks used to quantitate each Aroclor. Mean response factor not used in Aroclor quantitation, calibration curve by linear regression used for quantitation. Concentrations are nominal values, please see Calibration Curve Report Point Table for actual values.

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INITIAL/CONTINUING CALIBRATION DATA (GC18F)

7E-1
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SDG NO: 11090504

ELAP ID No: 11078

Instrument ID: GC18F

GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	CALIB TYPE	CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	PERCENT DIFFERENCE	Q	DATE / TIME ANALYZED
Aroclor 1016	GC18F-1441-10	CS160926A	ICV	502	500	0.392		09/26/2011 10:53:01
Aroclor 1221	GC18F-1441-10	CS210926A	ICV	493	500	-1.44		09/26/2011 11:25:47
Aroclor 1232	GC18F-1441-10	CS320926A	ICV	500	500	-0.0138		09/26/2011 11:58:34
Aroclor 1242	GC18F-1441-10	CS420926A	ICV	457	500	-8.67		09/26/2011 12:31:21
Aroclor 1248	GC18F-1441-10	CS480926A	ICV	535	500	7.04		09/26/2011 13:04:07
Aroclor 1254	GC18F-1441-10	CS540926A	ICV	513	500	2.69		09/26/2011 13:36:53
Aroclor 1260	GC18F-1441-11	CS600926A	ICV	452	500	-9.62		09/26/2011 14:09:38
Aroclor 1262	GC18F-1441-11	CS620926A	ICV	464	500	-7.26		09/26/2011 14:42:25
Aroclor 1268	GC18F-1441-11	CS680926A	ICV	504	500	0.843		09/26/2011 15:15:11
Aroclor 1242	GC18F-1449-44	CS421002B	CCV	437	500	-12.6		10/03/2011 09:23:37
Aroclor 1248	GC18F-1449-52	CS481002B	CCV	528	500	5.59		10/03/2011 13:45:45

% Difference must be less than or equal to +/- 15 percent

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

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7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090504
ELAP ID No: 11078
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1016	GC18F-1441-104	CS160926A	ICV	1	7.25	7.17	7.33
		CS160926A	ICV	2	7.63	7.55	7.71
		CS160926A	ICV	3	8.22	8.14	8.30
		CS160926A	ICV	4	8.43	8.35	8.51
		CS160926A	ICV	5	8.56	8.48	8.64
Aroclor 1221	GC18F-1441-105	CS210926A	ICV	1	4.29	4.21	4.37
		CS210926A	ICV	2	5.50	5.42	5.58
		CS210926A	ICV	3	6.05	5.97	6.13
		CS210926A	ICV	4	6.25	6.17	6.33
		CS210926A	ICV	5	6.37	6.29	6.45
Aroclor 1232	GC18F-1441-106	CS320926A	ICV	1	6.36	6.28	6.44
		CS320926A	ICV	2	7.62	7.54	7.70
		CS320926A	ICV	3	8.22	8.14	8.30
		CS320926A	ICV	4	8.42	8.34	8.50
		CS320926A	ICV	5	8.56	8.48	8.64
Aroclor 1242	GC18F-1441-107	CS420926A	ICV	1	7.26	7.18	7.34
		CS420926A	ICV	2	7.63	7.55	7.71
		CS420926A	ICV	3	8.22	8.14	8.30
		CS420926A	ICV	4	8.43	8.35	8.51
		CS420926A	ICV	5	8.56	8.48	8.64
Aroclor 1248	GC18F-1441-108	CS480926A	ICV	1	9.11	9.03	9.19
		CS480926A	ICV	2	9.73	9.65	9.81
		CS480926A	ICV	3	10.35	10.27	10.43
		CS480926A	ICV	4	10.51	10.43	10.59
		CS480926A	ICV	5	10.90	10.82	10.98
Aroclor 1254	GC18F-1441-109	CS540926A	ICV	1	11.20	11.12	11.28
		CS540926A	ICV	2	11.84	11.76	11.92
		CS540926A	ICV	3	12.11	12.03	12.19
		CS540926A	ICV	4	13.54	13.46	13.62
		CS540926A	ICV	5	14.34	14.26	14.42
Aroclor 1260	GC18F-1441-110	CS600926A	ICV	1	14.34	14.26	14.42
		CS600926A	ICV	2	16.52	16.44	16.60
		CS600926A	ICV	3	17.33	17.25	17.41
		CS600926A	ICV	4	18.02	17.94	18.10
		CS600926A	ICV	5	19.97	19.89	20.05
Aroclor 1262	GC18F-1441-111	CS620926A	ICV	1	14.34	14.26	14.42
		CS620926A	ICV	2	16.52	16.44	16.60
		CS620926A	ICV	3	17.32	17.24	17.40

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090504
ELAP ID No: 11078
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1262		CS620926A	ICV	4	18.02	17.94	18.10
		CS620926A	ICV	5	19.98	19.90	20.06
Aroclor 1268	GC18F-1441-112	CS680926A	ICV	1	18.02	17.94	18.10
		CS680926A	ICV	2	19.98	19.90	20.06
		CS680926A	ICV	3	17.82	17.74	17.90
		CS680926A	ICV	4	19.18	19.10	19.26
		CS680926A	ICV	5	19.50	19.42	19.58

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090504
ELAP ID No: 11078
Instrument ID: GC18F
GC Column: Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1242	GC18F-1449-44	CS421002B	CCV	1	7.25	7.18	7.34
		CS421002B	CCV	2	7.62	7.55	7.71
		CS421002B	CCV	3	8.22	8.14	8.30
		CS421002B	CCV	4	8.42	8.35	8.51
		CS421002B	CCV	5	8.55	8.48	8.64
Aroclor 1248	GC18F-1449-52	CS481002B	CCV	1	9.11	9.03	9.19
		CS481002B	CCV	2	9.73	9.65	9.81
		CS481002B	CCV	3	10.35	10.27	10.43
		CS481002B	CCV	4	10.51	10.43	10.59
		CS481002B	CCV	5	10.89	10.82	10.98

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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ANALYTICAL SEQUENCE (GC18B)

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: NEA - A Division of PACE SDG No: 11090504

ELAP ID No: 11078

Instrument ID: GC18B Init. Calib. Date(s): 09/21/11,09/22/11,09/23/11,09/26/11

GC Column (1): Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 6.30 DCBP RT: 26.35

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
01	A1016 20 PPB	092116A	GC18B-1415-3	09/21/2011 19:14:00		
02	A1016 100 PPB	092116B	GC18B-1415-4	09/21/2011 19:46:46		
03	A1016 250 PPB	092116C	GC18B-1415-5	09/21/2011 20:19:34		
04	A1016 500 PPB	092116D	GC18B-1415-6	09/21/2011 20:52:20		
05	A1016 1000 PPB	092116E	GC18B-1415-7	09/21/2011 21:25:06		
06	A1221 20 PPB	092121A	GC18B-1415-8	09/21/2011 21:57:52		
07	A1221 100 PPB	092121B	GC18B-1415-9	09/21/2011 22:30:38		
08	A1221 250 PPB	092121C	GC18B-1415-10	09/21/2011 23:03:24		
09	A1221 1000 PPB	092121E	GC18B-1415-12	09/22/2011 00:08:55		
10	A1232 20 PPB	092132A	GC18B-1415-13	09/22/2011 00:41:40		
11	A1232 100 PPB	092132B	GC18B-1415-14	09/22/2011 01:14:26		
12	A1232 250 PPB	092132C	GC18B-1415-15	09/22/2011 01:47:13		
13	A1232 500 PPB	092132D	GC18B-1415-16	09/22/2011 02:19:59		
14	A1232 1000 PPB	092132E	GC18B-1415-17	09/22/2011 02:52:45		
15	A1242 20 PPB	092142A	GC18B-1415-18	09/22/2011 03:25:31		
16	A1242 100 PPB	092142B	GC18B-1415-19	09/22/2011 03:58:22		
17	A1242 250 PPB	092142C	GC18B-1415-20	09/22/2011 04:31:07		
18	A1242 500 PPB	092142D	GC18B-1415-21	09/22/2011 05:03:53		
19	A1242 1000 PPB	092142E	GC18B-1415-22	09/22/2011 05:36:44		
20	A1248 20 PPB	092148A	GC18B-1415-23	09/22/2011 06:09:30		
21	A1248 100 PPB	092148B	GC18B-1415-24	09/22/2011 06:42:17		
22	A1248 250 PPB	092148C	GC18B-1415-25	09/22/2011 07:15:03		
23	A1248 1000 PPB	092148E	GC18B-1415-27	09/22/2011 08:20:36		
24	A1221 500 PPB	092221D	GC18B-1415-65	09/22/2011 16:50:21		
25	A1254 20 PPB	092254A	GC18B-1415-66	09/22/2011 17:23:07	6.30	26.35
26	A1254 100 PPB	092254B	GC18B-1415-67	09/22/2011 17:55:54	6.30	26.35
27	A1254 250 PPB	092254C	GC18B-1415-68	09/22/2011 18:28:40	6.30	26.34
28	A1254 500 PPB	092254D	GC18B-1415-69	09/22/2011 19:01:26	6.30	26.35
29	A1254 1000 PPB	092254E	GC18B-1415-70	09/22/2011 19:34:13	6.30	26.35
30	A1260 20 PPB	092260A	GC18B-1415-71	09/22/2011 20:07:00		
31	A1260 100 PPB	092260B	GC18B-1415-72	09/22/2011 20:39:45		
32	A1260 250 PPB	092260C	GC18B-1415-73	09/22/2011 21:12:32		
33	A1260 500 PPB	092260D	GC18B-1415-74	09/22/2011 21:45:18		
34	A1260 1000 PPB	092260E	GC18B-1415-75	09/22/2011 22:18:05		
35	A1262 20 PPB	092262A	GC18B-1415-76	09/22/2011 22:50:52		
36	A1262 100 PPB	092262B	GC18B-1415-77	09/22/2011 23:23:39		
37	A1262 250 PPB	092262C	GC18B-1415-78	09/22/2011 23:56:31		
38	A1262 500 PPB	092262D	GC18B-1415-79	09/23/2011 00:29:17		

Column used to flag surrogate retention times outside expected range.

8-D-1
PCB ANALYTICAL SEQUENCE

Laboratory Name: NEA - A Division of PACE SDG No: 11090504

ELAP ID No: 11078

Instrument ID: GC18B Init. Calib. Date(s): 09/21/11,09/22/11,09/23/11,09/26/11

GC Column (1): Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

THE ANALYTICAL SEQUENCE OF SAMPLES, QC, AND STANDARDS IS GIVEN BELOW:

SURROGATE RETENTION TIME (RT) FROM INITIAL OR CONTINUING CALIBRATION
TCMX RT: 6.30 DCBP RT: 26.35

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE / TIME ANALYZED	TCMX RT # (+/-0.05 min)	DCBP RT # (+/-0.10 min)
39	A1262 1000 PPB	092262E	GC18B-1415-80	09/23/2011 01:02:04		
40	A1268 20 PPB	092268A	GC18B-1415-81	09/23/2011 01:34:49		
41	A1268 100 PPB	092268B	GC18B-1415-82	09/23/2011 02:07:35		
42	A1268 250 PPB	092268C	GC18B-1415-83	09/23/2011 02:40:21		
43	A1268 500 PPB	092268D	GC18B-1415-84	09/23/2011 03:13:07		
44	A1268 1000 PPB	092268E	GC18B-1415-85	09/23/2011 03:45:53		
45	IUPAC 15 20 PPB	0922FSA	GC18B-1415-86	09/23/2011 04:18:39		
46	IUPAC 15 50 PPB	0922FSB	GC18B-1415-87	09/23/2011 04:51:25		
47	IUPAC 15 80 PPB	0922FSC	GC18B-1415-88	09/23/2011 05:24:13		
48	IUPAC 15 100 PPB	0922FSD	GC18B-1415-89	09/23/2011 05:56:59		
49	IUPAC 15 200 PPB	0922FSE	GC18B-1415-90	09/23/2011 06:29:45		
50	A1248 500 PPB	092648D	GC18B-1415-91	09/26/2011 09:47:33		
51	A1016 500 PPB	CS160926A	GC18B-1415-92	09/26/2011 10:53:05	6.30	26.30
52	A1221 500 PPB	CS210926A	GC18B-1415-93	09/26/2011 11:25:51	6.30	26.31
53	A1232 500 PPB	CS320926A	GC18B-1415-94	09/26/2011 11:58:38	6.30	26.31
54	A1242 500 PPB	CS420926A	GC18B-1415-95	09/26/2011 12:31:25	6.30	26.31
55	A1248 500 PPB	CS480926A	GC18B-1415-96	09/26/2011 13:04:11	6.30	26.31
56	A1254 500 PPB	CS540926A	GC18B-1415-97	09/26/2011 13:36:57	6.30	26.31
57	A1260 500 PPB	CS600926A	GC18B-1415-98	09/26/2011 14:09:42	6.30	26.31
58	A1262 500 PPB	CS620926A	GC18B-1415-99	09/26/2011 14:42:29	6.30	26.31
59	A1268 500 PPB	CS680926A	GC18B-1415-100	09/26/2011 15:15:15	6.30	26.31
60	SURR IUPAC 15	110926FS01	GC18B-1415-101	09/26/2011 15:48:01	6.30	26.35
61	A1242 500 PPB	CS421002B	GC18B-1423-44	10/03/2011 09:23:41	6.30	26.27
62	PBLK-28(METHOD BLANK)	AO21617B	GC18B-1423-45	10/03/2011 09:56:27	6.30	26.27
63	LCS-28(LAB CONTROL SPIKE)	AO21617L	GC18B-1423-46	10/03/2011 10:29:14	6.30	26.27
64	ZZZZZ	ZZZZZ	GC18B-1423-47	10/03/2011 11:02:00	6.30	26.28
65	ZZZZZ	ZZZZZ	GC18B-1423-48	10/03/2011 11:34:45	6.30	26.28
66	ZZZZZ	ZZZZZ	GC18B-1423-49	10/03/2011 12:07:31	6.30	26.27
67	ZZZZZ	ZZZZZ	GC18B-1423-50	10/03/2011 12:40:17	6.30	26.27
68	TI-3 DUP	AO21633	GC18B-1423-51	10/03/2011 13:13:03	6.30	26.27
69	A1248 500 PPB	CS481002B	GC18B-1423-52	10/03/2011 13:45:49	6.30	26.27

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Column used to flag surrogate retention times outside expected range.

INITIAL CALIBRATION DATA (GC18B)

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: NEA - A Division of PACE
SDG NO: 11090504
ELAP ID No: 11078
Date(s) Analyzed: 09/21/11,09/22/11,09/23/11,09/26/11
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1016	GC18B-1415-3	092116A	20.0	64.574		
	GC18B-1415-4	092116B	100	54.507		
	GC18B-1415-5	092116C	250	55.126		
	GC18B-1415-6	092116D	500	54.344		
	GC18B-1415-7	092116E	1000	53.065	56.323	8.3
Aroclor 1221	GC18B-1415-8	092121A	20.0	15.466		
	GC18B-1415-9	092121B	100	15.780		
	GC18B-1415-10	092121C	250	16.302		
	GC18B-1415-65	092221D	500	16.141		
	GC18B-1415-12	092121E	1000	15.581	15.854	2.3
Aroclor 1232	GC18B-1415-13	092132A	20.0	31.601		
	GC18B-1415-14	092132B	100	28.204		
	GC18B-1415-15	092132C	250	27.900		
	GC18B-1415-16	092132D	500	27.275		
	GC18B-1415-17	092132E	1000	26.859	28.368	6.6
Aroclor 1242	GC18B-1415-18	092142A	20.0	49.411		
	GC18B-1415-19	092142B	100	55.622		
	GC18B-1415-20	092142C	250	53.189		
	GC18B-1415-21	092142D	500	52.525		
	GC18B-1415-22	092142E	1000	47.437	51.637	6.3
Aroclor 1248	GC18B-1415-23	092148A	20.0	55.782		
	GC18B-1415-24	092148B	100	53.483		
	GC18B-1415-25	092148C	250	51.424		
	GC18B-1415-91	092648D	500	52.633		
	GC18B-1415-27	092148E	1000	47.630	52.191	5.8
Aroclor 1254	GC18B-1415-66	092254A	20.0	76.951		
	GC18B-1415-67	092254B	100	81.568		
	GC18B-1415-68	092254C	250	71.454		
	GC18B-1415-69	092254D	500	76.934		
	GC18B-1415-70	092254E	1000	72.550	75.891	5.3
Aroclor 1260	GC18B-1415-71	092260A	20.0	92.990		
	GC18B-1415-72	092260B	100	91.530		
	GC18B-1415-73	092260C	250	91.813		
	GC18B-1415-74	092260D	500	87.889		
	GC18B-1415-75	092260E	1000	87.517	90.348	2.7
Aroclor 1262	GC18B-1415-76	092262A	20.0	91.389		
	GC18B-1415-77	092262B	100	94.530		
	GC18B-1415-78	092262C	250	91.908		
	GC18B-1415-79	092262D	500	87.297		
	GC18B-1415-80	092262E	1000	90.500	91.125	2.9

6F-1
PCB INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Laboratory Name: NEA - A Division of PACE
SDG NO: 11090504
ELAP ID No: 11078
Date(s) Analyzed: 09/21/11,09/22/11,09/23/11,09/26/11
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	AMOUNT (ppb)	TOTAL[1] RF	MEAN RF	% RSD
Aroclor 1268	GC18B-1415-81	092268A	20.0	137.231		
	GC18B-1415-82	092268B	100	150.403		
	GC18B-1415-83	092268C	250	151.439		
	GC18B-1415-84	092268D	500	147.468		
	GC18B-1415-85	092268E	1000	142.667	145.842	4.0
TCMX	GC18B-1415-66	092254A	2.00	316.948		
	GC18B-1415-67	092254B	5.00	303.960		
	GC18B-1415-68	092254C	8.00	311.170		
	GC18B-1415-69	092254D	10.0	308.997		
	GC18B-1415-70	092254E	20.0	300.538	308.323	2.1
4,4'-Dibromobiphenyl	GC18B-1415-86	0922FSA	20.0	209.537		
	GC18B-1415-87	0922FSB	50.0	209.088		
	GC18B-1415-88	0922FSC	80.0	192.095		
	GC18B-1415-89	0922FSD	100	208.087		
	GC18B-1415-90	0922FSE	200	195.935	202.948	4.1
DCBP	GC18B-1415-66	092254A	20.0	338.212		
	GC18B-1415-67	092254B	50.0	308.390		
	GC18B-1415-68	092254C	80.0	313.155		
	GC18B-1415-69	092254D	100	300.425		
	GC18B-1415-70	092254E	200	285.350	309.106	6.3

% RSD Limit <= 20%
TCMX=TETRACHLOROMETAXYLENE
DCBP=DECACHLOROBIPHENYL

[1] Response factor calculated using total area of 5 peaks used to quantitate each Aroclor. Mean response factor not used in Aroclor quantitation, calibration curve by linear regression used for quantitation. Concentrations are nominal values, please see Calibration Curve Report Point Table for actual values.

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INITIAL/CONTINUING CALIBRATION DATA (GC18B)

7E-1
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SDG NO: 11090504

ELAP ID No: 11078

Instrument ID: GC18B

GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	LAB FILE ID	NEA SAMPLE ID	CALIB TYPE	CALC AMOUNT (ng/mL)	NOM AMOUNT (ng/mL)	PERCENT DIFFERENCE	Q	DATE / TIME ANALYZED
Aroclor 1016	GC18B-1415-92	CS160926A	ICV	554	500	10.9		09/26/2011 10:53:05
Aroclor 1221	GC18B-1415-93	CS210926A	ICV	545	500	8.92		09/26/2011 11:25:51
Aroclor 1232	GC18B-1415-94	CS320926A	ICV	538	500	7.59		09/26/2011 11:58:38
Aroclor 1242	GC18B-1415-95	CS420926A	ICV	469	500	-6.28		09/26/2011 12:31:25
Aroclor 1248	GC18B-1415-96	CS480926A	ICV	529	500	5.84		09/26/2011 13:04:11
Aroclor 1254	GC18B-1415-97	CS540926A	ICV	555	500	10.9		09/26/2011 13:36:57
Aroclor 1260	GC18B-1415-98	CS600926A	ICV	479	500	-4.27		09/26/2011 14:09:42
Aroclor 1262	GC18B-1415-99	CS620926A	ICV	489	500	-2.25		09/26/2011 14:42:29
Aroclor 1268	GC18B-1415-10	CS680926A	ICV	532	500	6.35		09/26/2011 15:15:15
Aroclor 1242	GC18B-1423-44	CS421002B	CCV	492	500	-1.52		10/03/2011 09:23:41
Aroclor 1248	GC18B-1423-52	CS481002B	CCV	560	500	12.0		10/03/2011 13:45:49

% Difference must be less than or equal to +/- 15 percent

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

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7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE
SGD NO: 11090504
ELAP ID No: 11078
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1016	GC18B-1415-92	CS160926A	ICV	1	7.90	7.82	7.98
		CS160926A	ICV	2	8.30	8.22	8.38
		CS160926A	ICV	3	8.89	8.81	8.97
		CS160926A	ICV	4	9.11	9.03	9.19
		CS160926A	ICV	5	9.29	9.21	9.37
Aroclor 1221	GC18B-1415-93	CS210926A	ICV	1	5.13	5.05	5.21
		CS210926A	ICV	2	6.27	6.19	6.35
		CS210926A	ICV	3	6.74	6.66	6.82
		CS210926A	ICV	4	6.94	6.86	7.02
		CS210926A	ICV	5	7.06	6.98	7.14
Aroclor 1232	GC18B-1415-94	CS320926A	ICV	1	7.06	6.98	7.14
		CS320926A	ICV	2	8.30	8.22	8.38
		CS320926A	ICV	3	8.89	8.81	8.97
		CS320926A	ICV	4	9.11	9.03	9.19
		CS320926A	ICV	5	9.29	9.21	9.37
Aroclor 1242	GC18B-1415-95	CS420926A	ICV	1	7.90	7.82	7.98
		CS420926A	ICV	2	8.30	8.22	8.38
		CS420926A	ICV	3	8.89	8.81	8.97
		CS420926A	ICV	4	9.11	9.03	9.19
		CS420926A	ICV	5	9.29	9.21	9.37
Aroclor 1248	GC18B-1415-96	CS480926A	ICV	1	9.80	9.72	9.88
		CS480926A	ICV	2	10.51	10.43	10.59
		CS480926A	ICV	3	11.11	11.03	11.19
		CS480926A	ICV	4	11.31	11.23	11.39
		CS480926A	ICV	5	11.77	11.69	11.85
Aroclor 1254	GC18B-1415-97	CS540926A	ICV	1	11.96	11.88	12.04
		CS540926A	ICV	2	12.71	12.63	12.79
		CS540926A	ICV	3	13.00	12.92	13.08
		CS540926A	ICV	4	14.46	14.38	14.54
		CS540926A	ICV	5	15.31	15.23	15.39
Aroclor 1260	GC18B-1415-98	CS600926A	ICV	1	15.31	15.23	15.39
		CS600926A	ICV	2	17.51	17.43	17.59
		CS600926A	ICV	3	18.62	18.54	18.70
		CS600926A	ICV	4	19.22	19.14	19.30
		CS600926A	ICV	5	21.69	21.61	21.77
Aroclor 1262	GC18B-1415-99	CS620926A	ICV	1	15.31	15.23	15.39
		CS620926A	ICV	2	17.51	17.43	17.59
		CS620926A	ICV	3	18.62	18.54	18.70

7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090504
ELAP ID No: 11078
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB* TYPE	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1262		CS620926A	ICV	4	19.22	19.14	19.30
		CS620926A	ICV	5	21.69	21.61	21.77
Aroclor 1268	GC18B-1415-100	CS680926A	ICV	1	19.21	19.13	19.29
		CS680926A	ICV	2	21.69	21.61	21.77
		CS680926A	ICV	3	18.99	18.91	19.07
		CS680926A	ICV	4	20.55	20.47	20.63
		CS680926A	ICV	5	20.96	20.88	21.04

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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7E-2
PCB CALIBRATION VERIFICATION SUMMARY

Laboratory Name: NEA - A Division of PACE SGD NO: 11090504
ELAP ID No: 11078
Instrument ID: GC18B
GC Column: Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm

COMPOUND	Lab File ID	NEA Sample ID	CALIB TYPE*	PEAK	RT	RT WINDOW FROM	RT WINDOW TO
Aroclor 1242	GC18B-1423-44	CS421002B	CCV	1	7.90	7.82	7.98
		CS421002B	CCV	2	8.30	8.22	8.38
		CS421002B	CCV	3	8.89	8.81	8.97
		CS421002B	CCV	4	9.11	9.03	9.19
		CS421002B	CCV	5	9.28	9.21	9.37
Aroclor 1248	GC18B-1423-52	CS481002B	CCV	1	9.79	9.72	9.88
		CS481002B	CCV	2	10.51	10.43	10.59
		CS481002B	CCV	3	11.11	11.03	11.19
		CS481002B	CCV	4	11.30	11.23	11.39
		CS481002B	CCV	5	11.76	11.69	11.85

* ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification

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QC SAMPLE RAW DATA

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	LRF ID:	PBLK-28
Matrix:	SODIUM SULFATE	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	10.480 g	Lab Sample ID:	AO21617B
Percent Moisture:	0.0	Lab File ID:	GC18F-1449-45
Extraction:	Soxhlet Method (3540C)	Date Received:	
Conc. Extract Volume:	25000 uL	Date Extracted:	09/30/2011
Injection Volume:	1.0 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	0.0500	U
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	LRF ID:	PBLK-28
Matrix:	SODIUM SULFATE	Client ID:	METHOD BLANK
Sample wt(Dry)/vol:	10.480 g	Lab Sample ID:	AO21617B
Percent Moisture:	0.0	Lab File ID:	GC18B-1423-45
Extraction:	Soxhlet Method (3540C)	Date Received:	
Conc. Extract Volume:	25000 uL	Date Extracted:	09/30/2011
Injection Volume:	1.0 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	0.0500	U
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	LRF ID:	LCS-28
Matrix:	SODIUM SULFATE	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	10.329 g	Lab Sample ID:	AO21617L
Percent Moisture:	0.0	Lab File ID:	GC18F-1449-46
Extraction:	Soxhlet Method (3540C)	Date Received:	
Conc. Extract Volume:	25000 uL	Date Extracted:	09/30/2011
Injection Volume:	1.0 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	1.05	
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	LRF ID:	LCS-28
Matrix:	SODIUM SULFATE	Client ID:	LAB CONTROL SPIKE
Sample wt(Dry)/vol:	10.329 g	Lab Sample ID:	AO21617L
Percent Moisture:	0.0	Lab File ID:	GC18B-1423-46
Extraction:	Soxhlet Method (3540C)	Date Received:	
Conc. Extract Volume:	25000 uL	Date Extracted:	09/30/2011
Injection Volume:	1.0 uL	Date Analyzed:	10/03/2011
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
GC Column:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm	Sulfur Cleanup:	YES

CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
12674-11-2	Aroclor 1016	0.0500	U
11104-28-2	Aroclor 1221	0.0500	U
11141-16-5	Aroclor 1232	0.0500	U
53469-21-9	Aroclor 1242	1.43	
12672-29-6	Aroclor 1248	0.0500	U
11097-69-1	Aroclor 1254	0.0500	U
11096-82-5	Aroclor 1260	0.0500	U

Laboratory Qualifiers:
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

10-B
PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	Client ID:	LCS-28(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-28	Lab Sample ID:	AO21617L
Instrument 1 ID:	GC18F	Instrument 2 ID:	GC18B
Date Analyzed:	10/03/2011 10:29:10 AM	Date Analyzed:	10/03/2011 10:29:14 AM
GC Column 1:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18F-1449-46	Lab File ID 2:	GC18B-1423-46
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1016	1	1	7.25	7.17	7.33			
		2	7.62	7.55	7.71			
		3	8.22	8.14	8.30			
		4	8.42	8.35	8.51			
		5	8.56	8.48	8.64			
	2	1	7.90	7.83	7.99			
		2	8.30	8.22	8.38			
		3	8.89	8.82	8.98			
		4	9.11	9.04	9.20			
		5	9.28	9.21	9.37			
Aroclor 1221	1	1	NA	4.21	4.37			
		2	NA	5.42	5.58			
		3	NA	5.97	6.13			
		4	NA	6.17	6.33			
		5	NA	6.29	6.45			
	2	1	NA	5.06	5.22			
		2	NA	6.19	6.35			
		3	NA	6.66	6.82			
		4	NA	6.87	7.03			
		5	NA	6.99	7.15			
Aroclor 1232	1	1	NA	6.28	6.44			
		2	7.62	7.54	7.70			
		3	8.22	8.14	8.30			
		4	8.42	8.34	8.50			
		5	8.56	8.48	8.64			
	2	1	NA	6.99	7.15			
		2	8.30	8.23	8.39			
		3	8.89	8.82	8.98			
		4	9.11	9.04	9.20			
		5	9.28	9.22	9.38			
Aroclor 1242	1	1	7.25	7.18	7.34			
		2	7.62	7.55	7.71			
		3	8.22	8.14	8.30			
		4	8.42	8.35	8.51			
		5	8.56	8.48	8.64	1.05		
	2	1	7.90	7.83	7.99			
		2	8.30	8.23	8.39			
		3	8.89	8.82	8.98			
		4	9.11	9.04	9.20			
		5	9.28	9.22	9.38	1.43	30.6	

Relative Percent Difference Limit = 40.0%

FORM 10-CLP-PCB(NEA-PACE)

Print Date: 10/10/2011
Lims Version : 5.0.6.1

10-B

PCB Identification Summary

Laboratory Name:	NEA - A Division of PACE	SDG No:	11090504
ELAP ID No:	11078	Client ID:	LCS-28(LAB CONTROL SPIKE)
LRF Sample ID:	LCS-28	Lab Sample ID:	AO21617L
Instrument 1 ID:	GC18F	Instrument 2 ID:	GC18B
Date Analyzed:	10/03/2011 10:29:10 AM	Date Analyzed:	10/03/2011 10:29:14 AM
GC Column 1:	Phenomenex, Zebron ZB-1, 30 m, 0.25 mm ID, 0.25 µm	GC Column 2:	Phenomenex, Zebron ZB-5, 30 m, 0.25 mm ID, 0.25 µm
Lab File ID 1:	GC18F-1449-46	Lab File ID 2:	GC18B-1423-46
Matrix:	Soil		

Analyte	Column	Peak	RT (min)	RT Window From	RT Window To	Concentration (ug/g)	RPD (%)	*
Aroclor 1248	1	1	NA	9.03	9.19			
		2	NA	9.65	9.81			
		3	NA	10.27	10.43			
		4	NA	10.43	10.59			
		5	NA	10.82	10.98			
	2	1	NA	9.73	9.89			
		2	NA	10.44	10.60			
		3	NA	11.04	11.20			
		4	NA	11.24	11.40			
		5	NA	11.70	11.86			
Aroclor 1254	1	1	NA	11.12	11.28			
		2	NA	11.76	11.92			
		3	NA	12.03	12.19			
		4	NA	13.46	13.62			
		5	NA	14.26	14.42			
	2	1	NA	11.88	12.04			
		2	NA	12.64	12.80			
		3	NA	12.93	13.09			
		4	NA	14.38	14.54			
		5	NA	15.24	15.40			
Aroclor 1260	1	1	NA	14.26	14.42			
		2	NA	16.44	16.60			
		3	NA	17.25	17.41			
		4	NA	17.94	18.10			
		5	NA	19.89	20.05			
	2	1	NA	15.24	15.40			
		2	NA	17.44	17.60			
		3	NA	18.55	18.71			
		4	NA	19.16	19.32			
		5	NA	21.63	21.79			

Relative Percent Difference Limit = 40.0%

APPENDIX D

COPY OF CLARIFICATION LETTER TO EPA DATED OCTOBER 28, 2011

Wannalancit Mills
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TRC Project No. 115058

October 28, 2011

Ms. Kimberly Tisa
United States Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100
Mail Code: OSRR07-2
Boston, MA 02109-3912

RE: Clarification of Triangle Island TI-3 Polychlorinated Biphenyl Detection

Dear Ms. Tisa:

This letter clarifies the September 6, 2011 verbal notification to the United States Department of Environmental Protection Agency (EPA) by TRC Environmental Corporation (TRC) on behalf of the City of New Bedford (City) of the detection of polychlorinated biphenyls (PCBs) in soil at the New Bedford High School (NBHS) Campus that would be classified as PCB Remediation Waste as defined in 40 CFR §761.3. The laboratory initially reported PCB detection was 100 milligrams per kilogram (mg/kg) total PCBs for composite soil sample TREE-TI-3 (0-1). Subsequently, the laboratory revised the originally reported PCB detection (20 mg/kg) due to an erroneously reported dilution factor. When combined with supplemental soil characterization results and site history, this revision supports a determination that the soil associated with Triangle Island TI-3 is not a PCB Remediation Waste and does not require EPA regulation under the Toxic Substance Control Act (TSCA).

Background

The City is currently implementing soil removal activities under a Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) Release Abatement Measure (RAM) approved by the Massachusetts Department of Environmental Protection (MassDEP) to address impacted soil at the NBHS Campus. Among the RAM-related activities was the preservation of existing mature stands of trees within areas targeted for soil excavation. Where the trees remain in place, the soil surrounding the trees and root systems has been excavated to a depth of three feet, except for the area underneath the dense root mass closer to the tree trunk due to the impracticality of removing soil without damaging the integrity of the tree and/or of accessing the soil under the root mass. Following the excavation of soil from the area around the root system, backfilling and compaction occurred per the RAM Plan and associated Soil Management Plan (SMP).

Soil below the tree trunks, larger roots and dense root mass remains in place so as to maintain the integrity of the tree support systems. Following excavation activities, the remaining root zone soil was sampled in support of post-remediation risk characterization. Individual grab aliquots were collected by TRC and composited in the field. Composite soil samples, generally consisting of four grab aliquots collected from the northern, eastern, southern and western portions of each root mass, were collected from the 0 to 1 foot and 1 to 3 foot depth intervals around each of the trees. Soil composite samples were submitted under chain-of-custody to Con-Test Analytical Laboratory (Con-Test) in East Longmeadow, Massachusetts for select analytes including PCB Aroclors (EPA Method 8082).

Initial laboratory results from one of the composite soil samples (TREE-TI-3 [0-1]) indicated a total PCB Aroclor concentration of 100 mg/kg in the top foot of soil. TRC's Senior Chemist initiated a routine quality assurance review of the laboratory analytical data summary table and report on September 6, 2011. You were also notified of the initial detection via teleconference on September 6, 2011. The Senior Chemist's review was completed on September 23, 2011.

Historical Information

A thorough review of all the available information indicates that soils located at the NBHS Campus were in place as of 1973. Available information indicates that the soils in the vicinity of Triangle Island TI-3 have remained in place, undisturbed since April 1978 (other than activities conducted with EPA and/or MassDEP acknowledgement and/or oversight, as well as standard grounds keeping activities).

Supplemental Assessment

Following the September 6, 2011 teleconference regarding the initially reported PCB detection, a supplemental investigation approach was designed to determine the lateral and vertical extents of potential PCB impacted soil within the Triangle Island TI-3 root mass. The proposed scope of work was submitted to you via electronic mail on September 8, 2011.

The supplemental assessment consisted of using a GeoProbe® direct push track-mounted drill rig to advance soil borings, collect soil samples and observe subsurface soil conditions with the intention of delineating potential PCB impacts within the Triangle Island TI-3 root mass. The delineation approach targeted representative locations of the four grab aliquots that composed sample TREE-TI-3 (0-1) collected on August 25, 2011. Soil samples TI-3N, TI-3E (including field duplicate), TI-3S and TI-3W were collected from the 0 to 1 foot depth interval on September 26, 2011 to represent the original northern, eastern, southern and western grab aliquots, respectively (see Figure 1). Two additional soil samples were collected from each soil boring location from the 1 to 1.3 foot and 2 to 2.3 foot depth intervals, respectively. These deeper samples were retained for analysis contingent upon the analytical results of the upper 0 to 1 foot horizon in an attempt to delineate the vertical extent of impacts, if present, without having to remobilize sampling teams.

As depicted in Figure 1, additional soil borings were advanced within the northern (i.e., TI-3N1 through TI-3N2), eastern (i.e., TI-3E1 through TI-3E3), southern (i.e., TI-3S1 through TI-3S3) and western (i.e., TI-3W1 through TI-3W3) sectors of the Triangle Island TI-3 root mass for analysis contingent upon the analytical results of the 0 to 1 foot depth interval TI-3N, TI-

3E, TI-3S and TI-3W grab aliquots. Contingency grab soil samples were collected from the 0 to 1 foot, 1 to 1.3 foot and 2 to 2.3 foot depth intervals from each of the twelve additional soil boring locations. In addition, three aliquot composite soil samples were collected from the northern (i.e., TI-3N-COMP), eastern (i.e., TI-3E-COMP), southern (i.e., TI-3S-COMP) and western (i.e., TI-3W-COMP) sectors from the 0 to 1 foot, 1 to 1.3 foot and 2 to 2.3 foot depth intervals. Composite sample volume was collected from the twelve above referenced contingency soil boring locations in support of remedial planning, if necessary.

Drilling services and equipment were provided by New England Geotech, LLC (New England Geotech) of Jamestown, Rhode Island. Copies of associated soil boring logs for the environmental investigations conducted on September 26 – 27, 2011 are provided as Attachment A.

Soil samples for PCB Aroclor (EPA Method 8082) analysis were submitted to Pace/Northeast Analytical Laboratories (Pace/NEA) of Schenectady, New York. All samples were submitted under chain-of-custody. Total PCB Aroclor concentrations ranged from 0.115 mg/kg (TI-3N [0-1]) to 3.53 mg/kg (TI-3E [0-1]). A summary of the soil analytical results at Triangle Island TI-3 is included in Table 1. The associated laboratory analytical data reports are included in Attachment B.

Quality Assurance Review

A quality assurance review of the laboratory analytical data report associated with the original TREE-TI-3 (0-1) composite sample collected on August 25, 2011 was initiated by TRC's Senior Chemist on September 6, 2011.

TRC subsequently requested additional information and clarification on select items related to the laboratory analytical report from Con-Test, including additional calibration and quality control documentation.

Following review of the original laboratory report and requested additional documentation, a further inquiry was made with the laboratory regarding inconsistencies between the dilution factor noted on the instrument injection logs and those reported on the sample data sheets. Con-Test acknowledged that the originally reported dilution factor for sample TREE-TI-3 (0-1) of "100" was incorrect due to a typographical error. The correct dilution factor was "20". The laboratory analytical data report was revised to reflect the correct dilution factor and correspondingly correct concentration for PCB Aroclor 1254 of 20 mg/kg, rather than the initially reported 100 mg/kg (see Table 1). The revised report was issued to TRC on September 29, 2011 and is included in Attachment B.

Conclusion

Following receipt of the revised laboratory analytical data report associated with soil composite sample TREE-TI-3 (0-1) and the delineation soil samples results representing the original northern, eastern, southern and western grab aliquots, TRC reported the results via electronic mail to you on October 6, 2011. The laboratory revision of the originally reported PCB detection to 20 mg/kg due to an erroneously reported dilution factor, combined with site history and supplemental soil characterization results, support a determination that the

soil associated with Triangle Island TI-3 does not in fact represent a PCB Remediation Waste as defined in 40 CFR §761.3 and does not require EPA regulation under TSCA.

Soil generated during excavation activities in the vicinity of Triangle Island TI-3 is no longer targeted for disposal at a permitted facility allowed to accept PCB Remediation Waste.

If you have any questions or comments, please do not hesitate to contact me at 978-656-3565.

Sincerely,

TRC Environmental Corporation

David M. Sullivan, LSP
Senior Project Manager

TABLE

Table 1
Summary of Analytical Results for Triangle Island TI-3 Soil Samples
New Bedford High School
New Bedford, Massachusetts

Analysis	Analyte	Sample ID:			TREE-TI-3 (1)		TI-3E		TI-3N	TI-3S	TI-3W
		Sample Depth (ft.):			0-1	1-3	0-1	0-1	0-1	0-1	0-1
		Sample Date:			8/25/2011	8/25/2011	9/26/2011	9/26/2011	9/26/2011	9/26/2011	9/26/2011
		S-1/GW-3	S-2/GW-3	S-3/GW-3	Composite	Composite	Grab	Grab Field Dup	Grab	Grab	Grab
PCBs											
(mg/kg)	Aroclor-1016	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1221	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1232	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1242	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1248	2	3	3	2.2 U	0.25 U	0.114 U	0.112 U	0.0549 U	0.0567 U	0.0547 U
	Aroclor-1254	2	3	3	**20**	**2.5**	**2.46**	**2.54**	**0.115**	**0.906**	**0.179**
	Aroclor-1260	2	3	3	2.2 U	0.25 U	**1.07**	**0.933**	0.0549 U	**0.261**	**0.0911**
	Aroclor-1262	2	3	3	2.2 U	0.25 U	NA	NA	NA	NA	NA
	Aroclor-1268	2	3	3	2.2 U	0.25 U	NA	NA	NA	NA	NA
	Total PCBs	2	3	3	**20**	**2.5**	**3.53**	**3.473**	**0.115**	**1.167**	**0.270**

Notes:

(1) - Initially reported result for sample TREE-TI-3 (0-1) was revised by the laboratory on September 29, 2011

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

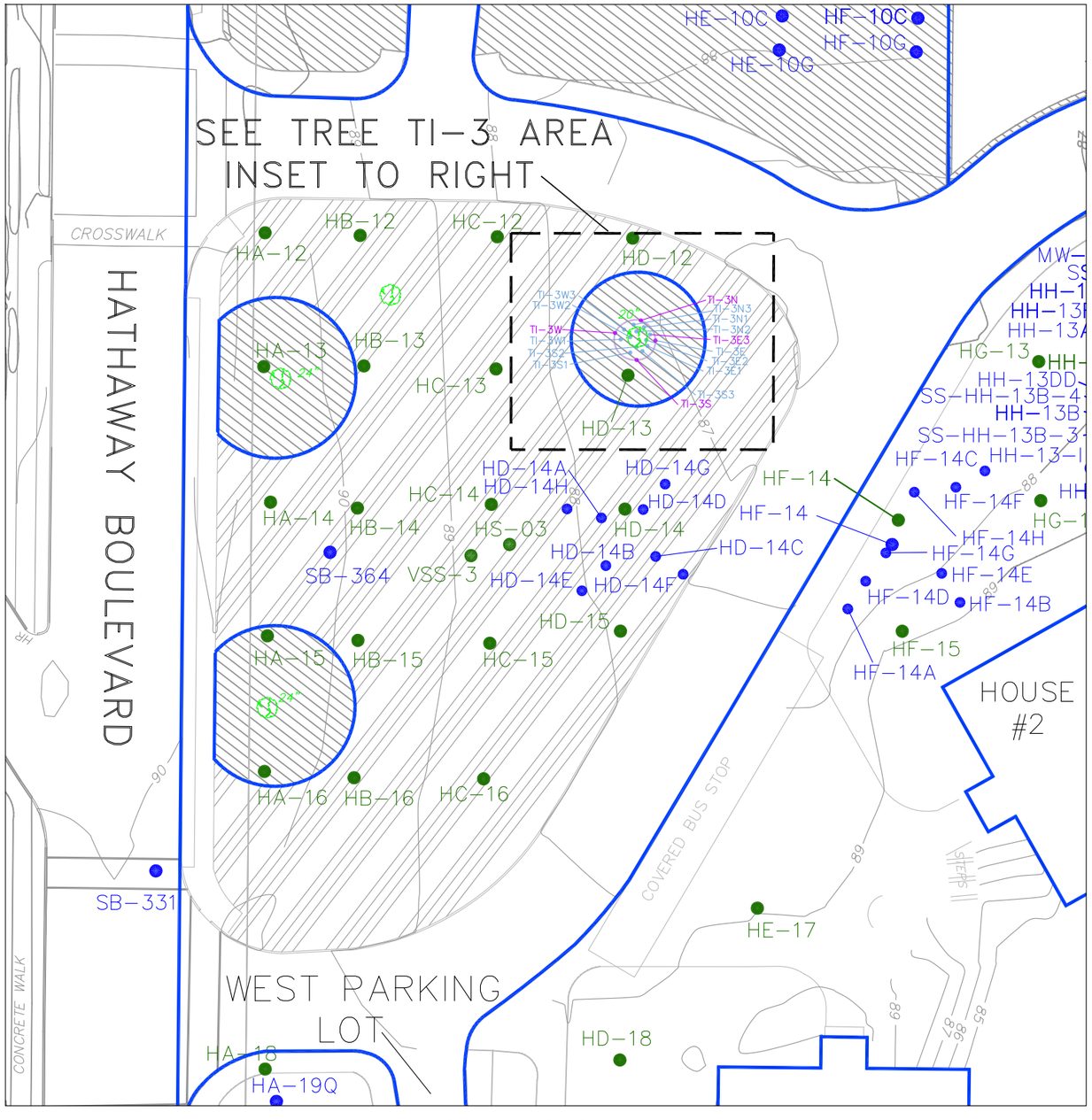
U - Compound was not detected at specified quantitation limit.

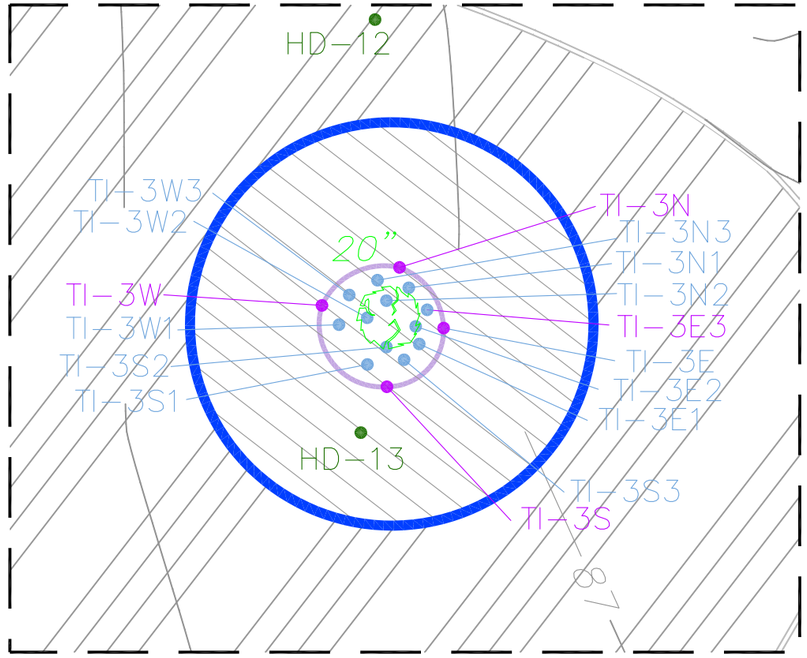
Values in **Bold** indicate the compound was detected.

Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.

PCBs - Polychlorinated Biphenyls.

FIGURE





LEGEND:

- TRC DISCRETE SAMPLE LOCATIONS
- TRC SECTOR COMPOSITE SAMPLE LOCATIONS
- PREVIOUS TRC SAMPLE LOCATIONS
- VHB/BETA SAMPLE LOCATIONS
- PAVED AREA
- BACKFILLED SOIL AREA
- APPROXIMATE LIMIT OF ROOT BALL

NOTE:

SAMPLES TREE-TI-3 (0-1') AND TREE-TI-3 (1-3') REPRESENT FOUR POINT COMPOSITES COLLECTED ON AUGUST 25, 2011 FROM THE APPROXIMATE LOCATIONS OF SOIL BORINGS TI-3N, TI-3E, TI-3S, AND TI-3W.

NEW BEDFORD HIGH SCHOOL
NEW BEDFORD, MASSACHUSETTS

TREE TI-3 DELINEATION LOCATION

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

DRAWN BY: HWB
CHECKED BY: JBS
DATE: OCT 2011

FIGURE 1

FILE: T:\E_CAD\115058\NBHS TI AREA -3.dwg

NOTE:

Attachment A ("Soil Boring Logs") and Attachment B ("Laboratory Analytical Data Reports") of the October 28, 2011 letter to the United States Environmental Protection Agency are identical to Appendix B and Appendix C, respectively, of this Immediate Response Action Completion Report. Therefore, these attachments have been excluded from Appendix D this report to avoid unnecessary duplication.

APPENDIX E

PUBLIC NOTIFICATION LETTERS

Wannalancit Mills
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Lowell, MA 01854

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TRC Reference Number: 115058.0000

November 2, 2011

Mayor Scott W. Lang
City Hall, Room 311
133 William Street
New Bedford, MA 02740

RE: Notice of Immediate Response Action Completion Report – Triangle Island TI-3 Area
230 Hathaway Boulevard
New Bedford, Massachusetts
Release Tracking Number 4-23526

Ms. Mayor Lang:

On behalf of the City of New Bedford, Massachusetts, and pursuant to 310 CMR 40.1403(3)(b) of the Massachusetts Contingency Plan (MCP), TRC Environmental Corporation (TRC) has prepared this letter to inform you of the submittal of an Immediate Response Action Completion Report pertaining to the detection of PCB in soil that could pose and Imminent Hazard (IH) at the New Bedford High School campus in New Bedford, Massachusetts. This submittal will be made to the Massachusetts Department of Environmental Protection (MassDEP) by November 5, 2011.

The calculated estimated cancer risk and noncarcinogenic hazard for the young child recreational user do not exceed the MCP risk limits for an IH of a Hazard Index (HI) of 10 and an excess lifetime cancer risk (ELCR) of 1E-05. No IH condition exists at the triangle island TI-3 area of the NBHS Campus.

A copy of this document can be obtained from Cheryl Henlin in the Department of Environmental Stewardship. If you have any questions concerning this letter please contact me at (978) 656-3565.

Sincerely,
TRC Environmental Corporation

David M. Sullivan, CHMM, LSP
Sr. Project Manager

Cc: Cheryl Henlin, New Bedford Department of Environmental Stewardship

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854

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TRC Reference Number: 115058.0000

November 2, 2011

Marianne B. De Souza
Health Department
1213 Purchase Street
First Floor
New Bedford, MA 02740

RE: Notice of Immediate Response Action Completion Report – Triangle Island TI-3 Area
230 Hathaway Boulevard
New Bedford, Massachusetts
Release Tracking Number 4-23526

Ms. De Souza:

On behalf of the City of New Bedford, Massachusetts, and pursuant to 310 CMR 40.1403(3)(b) of the Massachusetts Contingency Plan (MCP), TRC Environmental Corporation (TRC) has prepared this letter to inform you of the submittal of an Immediate Response Action Completion Report pertaining to the detection of PCB in soil that could pose and Imminent Hazard (IH) at the New Bedford High School campus in New Bedford, Massachusetts. This submittal will be made to the Massachusetts Department of Environmental Protection (MassDEP) by November 5, 2011.

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Sincerely,
TRC Environmental Corporation

David M. Sullivan, CHMM, LSP
Sr. Project Manager

Cc: Cheryl Henlin, New Bedford Department of Environmental Stewardship