

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

a) Name of facility/site :		Facility/site address:	
Location of facility/site : longitude:_____ latitude:_____	Facility SIC code(s):	Street:	
b) Name of facility/site owner :		Town:	
Email address of owner:	State:	Zip:	County:
Telephone no.of facility/site owner :			
Fax no. of facility/site owner :	Owner is (check one): 1. Federal____ 2. State/Tribal____ 3. Private____ 4. other, if so, describe:		
Address of owner (if different from site):			
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator :	Operator telephone no:		
	Operator fax no.:		Operator email:
Operator contact name and title:			
Address of operator (if different from owner):	Street:		
Town:	State:	Zip:	County:
d) Check “yes” or “no” for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Yes___ No___, if “yes,” number: 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes___ No___, if “yes,” date and tracking #: 3. Is the discharge a “new discharge” as defined by 40 CFR 122.2? Yes___ No___ 4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes__ No__			

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes___ No___ If “yes,” please list: 1. site identification # assigned by the state of NH or MA: 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number:	f) Is the site/facility covered by any other EPA permit, including: 1. multi-sector storm water general permit? Y___ N___, if Y, number: 2. phase I or II construction storm water general permit? Y___ N___, if Y, number: 3. individual NPDES permit? Y___ N___, if Y, number: 4. any other water quality related permit? Y___ N___, if Y, number:
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:			
b) Provide the following information about each discharge:	<table border="1"> <tr> <td style="vertical-align: top;">1) Number of discharge points:</td> <td> 2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft³/s)? Max. flow_____ Average flow_____ Is maximum flow a design value? Y___ N___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available. </td> </tr> </table>	1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow_____ Average flow_____ Is maximum flow a design value ? Y___ N___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.
1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow_____ Average flow_____ Is maximum flow a design value ? Y___ N___ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.		
3) Latitude and longitude of each discharge within 100 feet: pt.1:long._____ lat._____; pt.2: long._____ lat._____; pt.3: long._____ lat._____; pt.4:long._____ lat._____; pt.5: long._____ lat._____; pt.6:long._____ lat._____; pt.7: long._____ lat._____; pt.8:long._____ lat._____; etc.			
4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent_____or seasonal_____? Is discharge ongoing Yes _____ No _____?		
c) Expected dates of discharge (mm/dd/yy): start_____ end_____			
d) Please attach a line drawing or flow schematic showing water flow through the facility including:			
1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).			

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids										
2. Total Residual Chlorine										
3. Total Petroleum Hydrocarbons										
4. Cyanide										
5. Benzene										
6. Toluene										
7. Ethylbenzene										
8. (m,p,o) Xylenes										
9. Total BTEX ⁴										

⁴BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide ⁵ (1,2- Dibromo-methane)										
11. Methyl-tert-Butyl Ether (MtBE)										
12. tert-Butyl Alcohol (TBA)										
13. tert-Amyl Methyl Ether (TAME)										
14. Naphthalene										
15. Carbon Tetra-chloride										
16. 1,4 Dichlorobenzene										
17. 1,2 Dichlorobenzene										
18. 1,3 Dichlorobenzene										
19. 1,1 Dichloroethane										
20. 1,2 Dichloroethane										
21. 1,1 Dichloroethylene										
22. cis-1,2 Dichloro-ethylene										
23. Dichloromethane (Methylene Chloride)										
24. Tetrachloroethylene										

⁵EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane										
26. 1,1,2 Trichloroethane										
27. Trichloroethylene										
28. Vinyl Chloride										
29. Acetone										
30. 1,4 Dioxane										
31. Total Phenols										
32. Pentachlorophenol										
33. Total Phthalates ⁶ (Phthalate esthers)										
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]										
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)										
a. Benzo(a) Anthracene										
b. Benzo(a) Pyrene										
c. Benzo(b)Fluoranthene										
d. Benzo(k) Fluoranthene										
e. Chrysene										

⁶The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min- imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene										
g. Indeno(1,2,3-cd) Pyrene										
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)										
h. Acenaphthene										
i. Acenaphthylene										
j. Anthracene										
k. Benzo(ghi) Perylene										
l. Fluoranthene										
m. Fluorene										
n. Naphthalene-										
o. Phenanthrene										
p. Pyrene										
37. Total Polychlorinated Biphenyls (PCBs)										
38. Antimony										
39. Arsenic										
40. Cadmium										
41. Chromium III										
42. Chromium VI										

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min- imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper										
44. Lead										
45. Mercury										
46. Nickel										
47. Selenium										
48. Silver										
49. Zinc										
50. Iron										
Other (describe):										

c) For discharges where **metals** are believed present, please fill out the following:

<i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y____ N____	If yes, which metals?
<i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: _____ DF: _____	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y____ N____ If “Yes,” list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
	Chlorination	Dechlorination	Other (please describe):			
c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system: Average flow rate of discharge _____ Maximum flow rate of treatment system _____ Design flow rate of treatment system _____						
d) A description of chemical additives being used or planned to be used (attach MSDS sheets):						

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct _____	Within facility__	Storm drain_____	River/brook_____	Wetlands _____	Other (describe):
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:						
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.						
d) Provide the state water quality classification of the receiving water _____,						
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _____ cfs Please attach any calculation sheets used to support stream flow and dilution calculations.						
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes _____ No _____ If yes, for which pollutant(s)? Is there a TMDL? Yes _____ No _____ If yes, for which pollutant(s)?						

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

- a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ___ No ☒
Has any consultation with the federal services been completed? Yes ___ No ☒ or is consultation underway? Yes ___ No ☒
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):
a "no jeopardy" opinion? ___ or written concurrence ___ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?
- b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?
Yes ☒ No ___ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ___ No ☒

7. Supplemental information. :

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name: Peabody Essex Museum

Operator signature:



Title:

Senior Engineer

Date:

6-9-09

SUPPLEMENTAL INFORMATION

1. General Site Info

- a) Location of facility/site: Longitude: 70.8933 degrees west Latitude: 42.5211 degrees north
- d) 4. Site is a MA Contingency Plan Site (RTN3-23396)

Roux Associates, Inc. is submitting this Notice of Intent on behalf of the Peabody Essex Museum of Salem, Massachusetts. A previous consultant, ENSR Corporation, submitted a Notice of Intent for work on the site and was granted the permit number MAG910257. Some information in this Notice of Intent was obtained from ENSR's NOI.

2. Discharge Information

- b) Info about discharge: 3) pt. 1: long. 70.8930 degrees west lat. 42.5192 degrees north
- d) attach a line drawing or flow schematic showing water flow through the facility:
(See attached Figures 1, 2, and 3)

3c. Contaminant Information

The site is the location of a No. 4 Fuel oil release, and is not known to be impacted by any other contaminants. Two water samples were collected for the purposes of filing this notice. The first sample was taken on April 8, 2009 from a monitoring well on-site. Prior to sampling, the well was purged for three well volumes (~10 gal.) using a bailer. Following its analysis, the sample exceeded several of the discharge limitations for metals. Those metals were arsenic, chromium, copper, lead, nickel, zinc, and iron. Roux Associates believed the sample did not represent actual site conditions once the pumping system would be activated, so after speaking with the EPA, a second sample would be collected. The second sample was taken on May 27, 2009. Prior to collecting the sample, the well was purged for a period of two days. Groundwater was pumped from the well using a Whale pump and purge water was stored in a 350 gallon tank. On the first day, a total of 100 gallons were removed; the first 60 gallons of which were silty, the remaining 40 gallons were significantly clearer. On the second day, another hundred gallons were purged. The groundwater purged on the second day was clear throughout the days pumping. The second sample exceeded limitation discharges for nickel and iron. Below is a table showing the metal results for the two sampling events. Each of the metals of the second sample showed at least an 80% reduction in concentration when compared to the metals of the first sample. Metals samples were not field filtered. Slightly elevated iron and nickel concentrations are, therefore, likely associated with suspended solids. The proposed treatment system is designed to remove suspended solids and associated metals.

Metals	Massachusetts Discharge Limit (Salt Water)	Sample 1 4/8/09	Sample 2 5/27/09
Antimony	5.6	ND	ND
Arsenic	36	210	35.2
Cadmium	8.9	0.8	ND
Chromium	50.3	77	0.6
Copper	3.7	39	1.7
Lead	8.5	73	ND
Mercury	1.1	ND	ND
Nickel	8.2	60	10.9
Selenium	71	2	1
Silver	2.2	ND	ND
Zinc	85.6	111	10.1
Iron	1,000	74,000	12,000
Highlighted values exceed the discharge limit			

4a. Treatment System Information

Groundwater pumping system and water treatment is planned as part of ongoing cleanup activities under the Massachusetts Contingency Plan (MCP). Groundwater will be withdrawn from two extractions wells impacted by No. 4 fuel oil to locally depress the water table to enhance oil recovery with skimming pumps. Groundwater will be pumped from the extraction wells using dual diaphragm pumps at a combined design flow of 10 gallons per minute, with a maximum of 20 gallons per minute. Water will be transferred to an on-site building for treatment using underground conduit and tubing. The treatment system is equipped with four main components, the equalization tank, transfer pump, bag filters, and liquid phase carbon units. The equalization tank is a 300 gallon vessel equipped with float switches to operate the transfer pump and dual diaphragm pumps. There are two bag filters in parallel to remove suspended solids and iron. Additionally, there are two 200 pound liquid phase carbon filters in series. If, following system startup, the iron and/or nickel concentrations continue to exceed discharge limits the treatment system will be modified to include ion-exchange media to remove these compounds. From the carbon filters, the treated water travels in underground tubing to the sump of an on-site catch basin.

The catch basin ultimately discharges to the South River channel, located approximately 600 feet south of the site. The South River channel is a salt-water extension of Salem Harbor that is tidally-influenced. Please refer to Figures 1, 2, and 3 for pertinent site features.

5. Receiving Surface Water

The proposed discharge would be treated on-site and released to an on-site storm water catch basin located in the Loading Dock area behind the Museum near Charter Street. Then, as shown in Figure 2, the discharge would flow in a westerly direction in the subsurface storm drain piping system towards Central Street. At that point, the storm drain piping system turns south and runs beneath Lafayette Street towards Derby Street. The subsurface piping system then crosses beneath Derby Street and connects to the South River channel where it discharges. The discharge pipe was observed by ENSR on 8/16/06 at low tide on the northwesterly corner of the South River channel. The South River channel is a salt-water channel that is an extension of Salem Harbor (see Figures 2 and 3), which is a marine water body.

5c. Indirect Dischargers

Although the nearest sanitary sewer is located adjacent to the Site on Charter Street, based on consultation between ENSR and the South Essex Sewerage District, the South Essex Sewerage District stated that they would not take the proposed discharge.

No drinking water supplies are located within a half-mile radius of the site.

The closest surface water body is South River channel, which is located 600 feet south of the site.

5e. 7Q10 Values

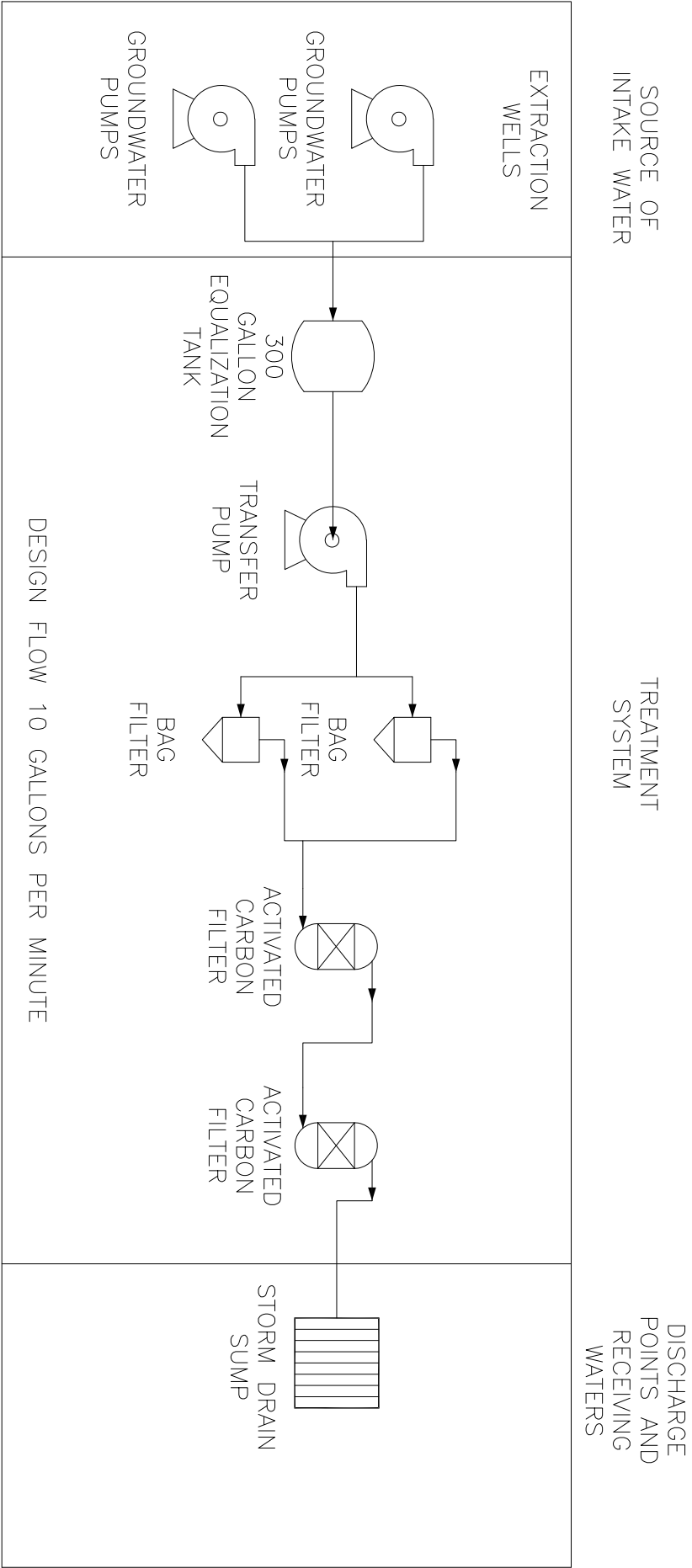
Since the South River channel and Salem Harbor are marine water bodies, no 7Q10 values exist.

6. Results of Consultation with Federal Services

a) Since the Site and location of the proposed discharge is within a downtown area and there are no listed threatened or endangered species, or designated critical habitats within four (4) miles of the discharge, it is ENSR's opinion that there is no need to consult with the USFWS and/or NMFS.

b) The Site (Peabody Essex Museum, 161 Essex Street, Salem, MA) where the proposed discharge will occur is listed on the National Register of Historic Places. It is ENSR's opinion that the proposed discharge will not adversely affect (damage, deteriorate, alter or destroy) the Site for the following reasons:

- (i) the pumped groundwater and oil will be contained within hoses, piping, and temporary storage tank before it is treated and discharged to the on-site storm drain;
- (ii) in case of potential overflow or leaks, automatic and manual shut-off switches will be in place



NOTE: ALL FLOWS ARE FROM GROUNDWATER ONLY

Title:

LINE DRAWING

161 ESSEX STREET
SALEM, MA

Prepared For:

PEABODY ESSEX MUSEUM

		Compiled by: WH		Date: 6-10-09	FIGURE 1
ROUX ASSOCIATES, INC.		Prepared by: WH		Scale: NTS	
Environmental Consulting & Management		Project Mgr: GG		Office: MA	
File No: PEM0212902		Project: 167301M02			

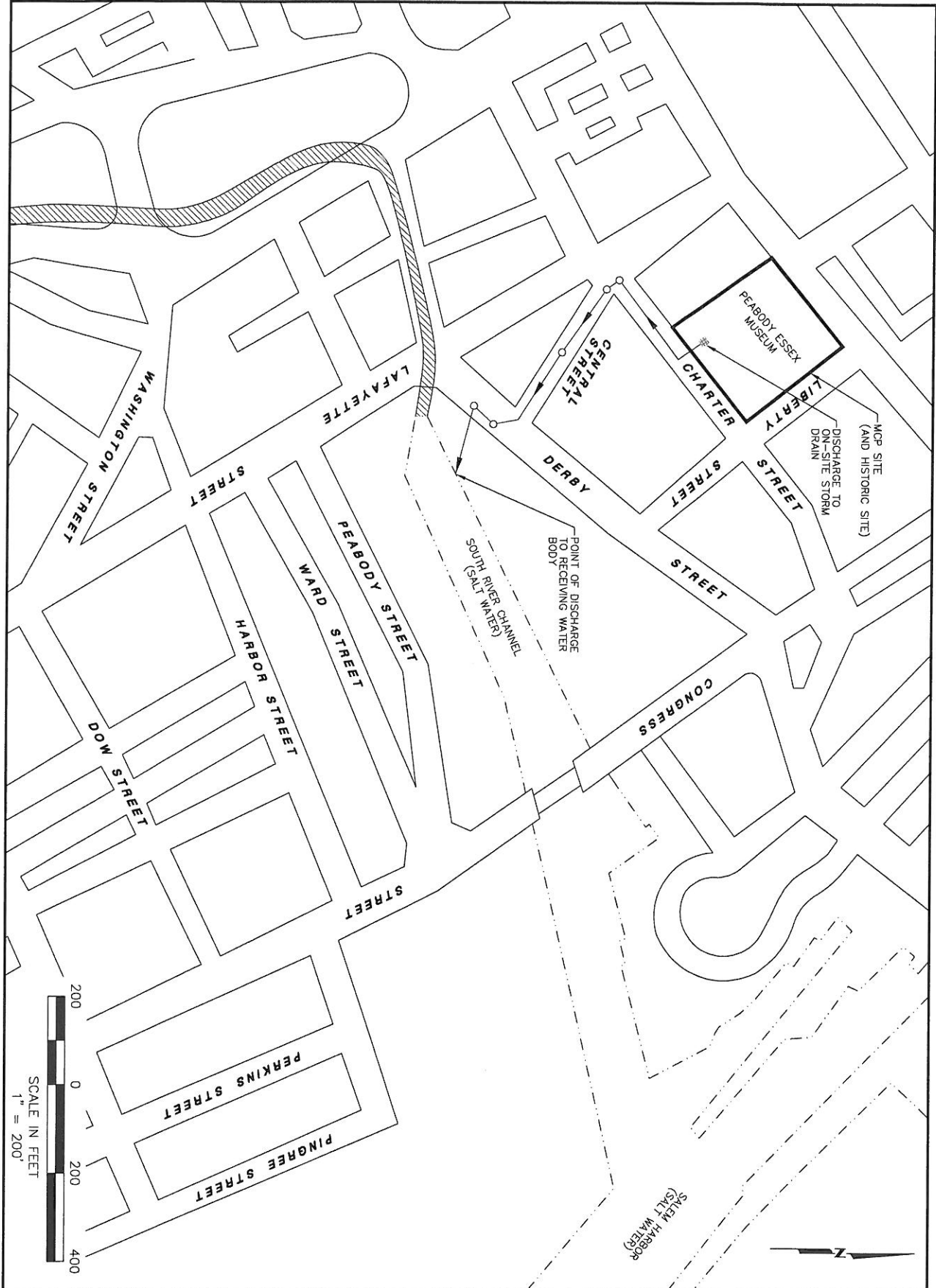
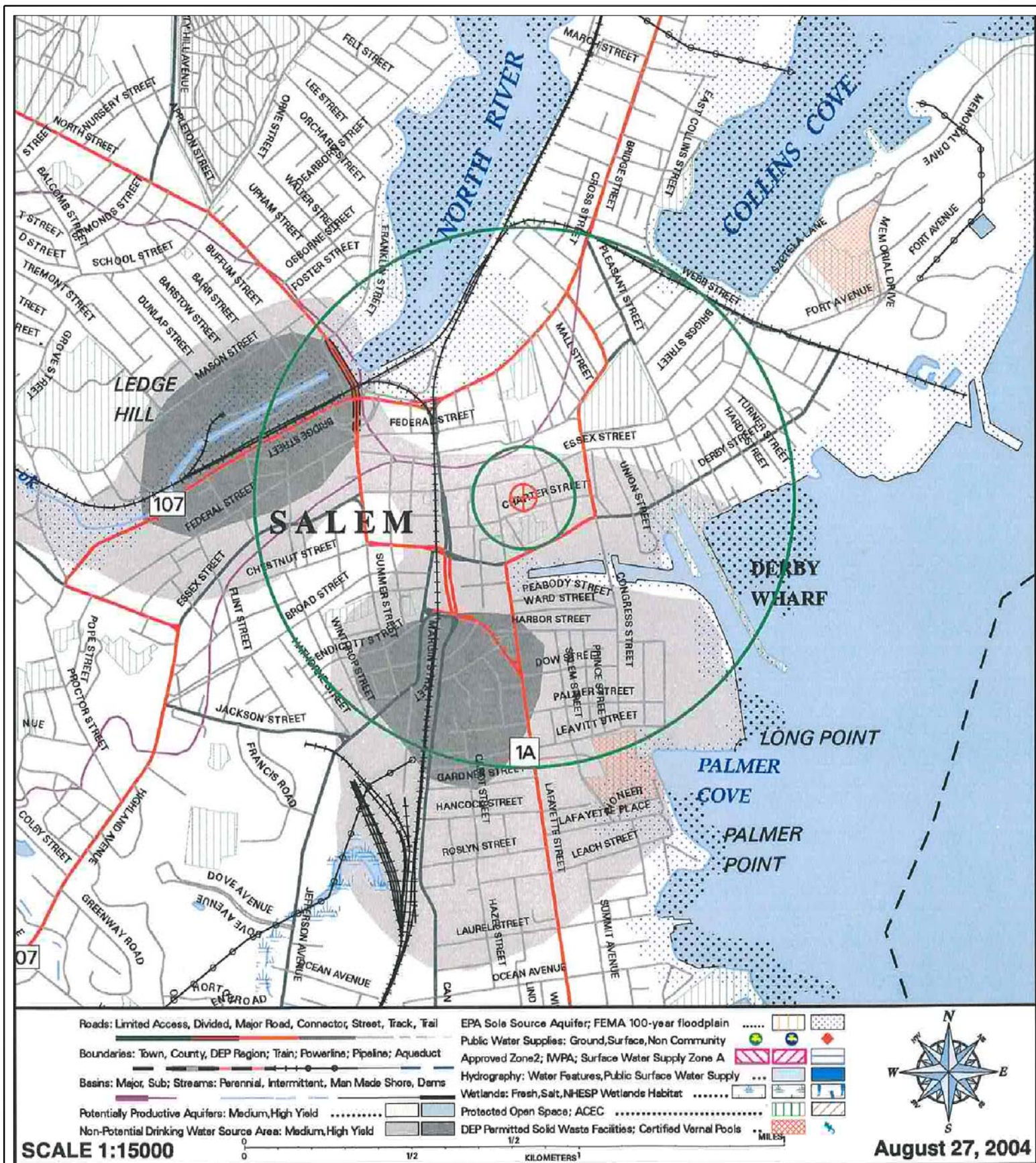


FIGURE NUMBER	2
SHEET NUMBER	1

STORM DRAIN ROUTE PEABODY ESSEX MUSEUM 161 ESSEX STREET SALEM, MA		
SCALE: 1" = 200'	DATE: 8/06	PROJECT NUMBER: 10542-004-300

ENSR AECOM	
ENSR CORPORATION 2 TECHNOLOGY PARK DRIVE WESTFORD, MASSACHUSETTS 01886 PHONE: (978) 583-3000 FAX: (978) 559-3100 WEB: HTTP://WWW.ENSR.AECOM.COM	

DESIGNED BY:	REVISIONS		
NO.	DESCRIPTION	DATE	BY
DRAWN BY:	J.E.B.		
CHECKED BY:	M.N.		
APPROVED BY:	D.F.		



Client: Peabody Essex Museum
Salem, MA.

Project: Phase I
Initial Site Investigation Report
Charter Street Site
RTN 3-23396
161 Essex Street, Salem, MA.

Figure 3.
21E Map

November 2004



2 Technology Park Drive
Westford, MA 01886
(978) 589-3000 www.ensr.com



ANALYTICAL REPORT

Lab Number: L0904367

Client: Roux Associates
67 South Bedford Street
Suite 101W
Burlington, MA 01803

ATTN: Glen Gordon

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Report Date: 04/17/09

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L0904367-01	MW-12	SALEM, MA	04/08/09 15:30
L0904367-02	TRIP BLANK	SALEM, MA	04/08/09 00:00

Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report.

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

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

Report Submission

This report replaces the report issued on April 17, 2009. The date for the Metals Prep has been amended.

Sample Receipt

A Trip Blank was received in the laboratory but not listed on the Chain of Custody. At the client's request, the Trip Blank was not analyzed.

The analyses of Hexavalent Chromium and Total Residual Chlorine were received with the method required holding times exceeded and were performed at the client's request.

Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

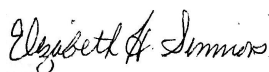
Case Narrative (continued)

Solids, Total Suspended

L0904367-01 has an elevated detection limit due to the dilution required by the elevated concentration present in the sample.

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

Authorized Signature:



Title: Technical Director/Representative

Date: 04/17/09

ORGANICS

VOLATILES

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS**

Lab ID: L0904367-01
Client ID: MW-12
Sample Location: SALEM, MA
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 04/15/09 12:55
Analyst: JB

Date Collected: 04/08/09 15:30
Date Received: 04/09/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Pesticides by GC - Westborough Lab					
1,2-Dibromoethane	ND		ug/l	0.020	1

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS**

Lab ID: L0904367-01
Client ID: MW-12
Sample Location: SALEM, MA
Matrix: Water
Analytical Method: 5,624
Analytical Date: 04/13/09 10:29
Analyst: TT

Date Collected: 04/08/09 15:30
Date Received: 04/09/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab

Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	ND		ug/l	1.5	1
Chloroform	ND		ug/l	1.5	1
Carbon tetrachloride	ND		ug/l	1.0	1
1,2-Dichloropropane	ND		ug/l	3.5	1
Dibromochloromethane	ND		ug/l	1.0	1
1,1,2-Trichloroethane	ND		ug/l	1.5	1
2-Chloroethylvinyl ether	ND		ug/l	10	1
Tetrachloroethene	ND		ug/l	1.5	1
Chlorobenzene	ND		ug/l	3.5	1
Trichlorofluoromethane	ND		ug/l	5.0	1
1,2-Dichloroethane	ND		ug/l	1.5	1
1,1,1-Trichloroethane	ND		ug/l	2.0	1
Bromodichloromethane	ND		ug/l	1.0	1
trans-1,3-Dichloropropene	ND		ug/l	1.5	1
cis-1,3-Dichloropropene	ND		ug/l	1.5	1
Bromoform	ND		ug/l	1.0	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	1
Benzene	ND		ug/l	1.0	1
Toluene	ND		ug/l	1.0	1
Ethylbenzene	ND		ug/l	1.0	1
Chloromethane	ND		ug/l	10	1
Bromomethane	ND		ug/l	5.0	1
Vinyl chloride	ND		ug/l	2.0	1
Chloroethane	ND		ug/l	2.0	1
1,1-Dichloroethene	ND		ug/l	1.0	1
trans-1,2-Dichloroethene	ND		ug/l	1.5	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	1
Trichloroethene	ND		ug/l	1.0	1
1,2-Dichlorobenzene	ND		ug/l	5.0	1

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS****Lab ID:** L0904367-01**Date Collected:** 04/08/09 15:30**Client ID:** MW-12**Date Received:** 04/09/09**Sample Location:** SALEM, MA**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab					
1,3-Dichlorobenzene	ND		ug/l	5.0	1
1,4-Dichlorobenzene	ND		ug/l	5.0	1
p/m-Xylene	ND		ug/l	2.0	1
o-xylene	ND		ug/l	1.0	1
Xylene (Total)	ND		ug/l	2.0	1
Styrene	ND		ug/l	1.0	1
Acetone	ND		ug/l	10	1
Carbon disulfide	ND		ug/l	5.0	1
2-Butanone	ND		ug/l	10	1
Vinyl acetate	ND		ug/l	20	1
4-Methyl-2-pentanone	ND		ug/l	10	1
2-Hexanone	ND		ug/l	10	1
Acrolein	ND		ug/l	8.0	1
Acrylonitrile	ND		ug/l	10	1
Methyl tert butyl ether	ND		ug/l	20	1
1,4-Dioxane	ND		ug/l	2000	1
Tert-Butyl Alcohol	ND		ug/l	100	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	91		80-120
Fluorobenzene	96		80-120
4-Bromofluorobenzene	107		80-120

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Analytical Method: 5,624
 Analytical Date: 04/13/09 08:38
 Analyst: TT

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG358747-2				
Methylene chloride	ND		ug/l	5.0
1,1-Dichloroethane	ND		ug/l	1.5
Chloroform	ND		ug/l	1.5
Carbon tetrachloride	ND		ug/l	1.0
1,2-Dichloropropane	ND		ug/l	3.5
Dibromochloromethane	ND		ug/l	1.0
1,1,2-Trichloroethane	ND		ug/l	1.5
2-Chloroethylvinyl ether	ND		ug/l	10
Tetrachloroethene	ND		ug/l	1.5
Chlorobenzene	ND		ug/l	3.5
Trichlorofluoromethane	ND		ug/l	5.0
1,2-Dichloroethane	ND		ug/l	1.5
1,1,1-Trichloroethane	ND		ug/l	2.0
Bromodichloromethane	ND		ug/l	1.0
trans-1,3-Dichloropropene	ND		ug/l	1.5
cis-1,3-Dichloropropene	ND		ug/l	1.5
Bromoform	ND		ug/l	1.0
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0
Benzene	ND		ug/l	1.0
Toluene	ND		ug/l	1.0
Ethylbenzene	ND		ug/l	1.0
Chloromethane	ND		ug/l	10
Bromomethane	ND		ug/l	5.0
Vinyl chloride	ND		ug/l	2.0
Chloroethane	ND		ug/l	2.0
1,1-Dichloroethene	ND		ug/l	1.0
trans-1,2-Dichloroethene	ND		ug/l	1.5
cis-1,2-Dichloroethene	ND		ug/l	1.0
Trichloroethene	ND		ug/l	1.0
1,2-Dichlorobenzene	ND		ug/l	5.0
1,3-Dichlorobenzene	ND		ug/l	5.0

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Analytical Method: 5,624
 Analytical Date: 04/13/09 08:38
 Analyst: TT

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG358747-2				
1,4-Dichlorobenzene	ND		ug/l	5.0
p/m-Xylene	ND		ug/l	2.0
o-xylene	ND		ug/l	1.0
Xylene (Total)	ND		ug/l	2.0
Styrene	ND		ug/l	1.0
Acetone	ND		ug/l	10
Carbon disulfide	ND		ug/l	5.0
2-Butanone	ND		ug/l	10
Vinyl acetate	ND		ug/l	20
4-Methyl-2-pentanone	ND		ug/l	10
2-Hexanone	ND		ug/l	10
Acrolein	ND		ug/l	8.0
Acrylonitrile	ND		ug/l	10
Methyl tert butyl ether	ND		ug/l	20
1,4-Dioxane	ND		ug/l	2000
Tert-Butyl Alcohol	ND		ug/l	100
Tertiary-Amyl Methyl Ether	ND		ug/l	20

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	96		80-120
Fluorobenzene	101		80-120
4-Bromofluorobenzene	108		80-120

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**Method Blank Analysis**
Batch Quality Control

Analytical Method: 14,504.1

Analytical Date: 04/15/09 11:52

Analyst: JB

Parameter	Result	Qualifier	Units	RDL
Pesticides by GC - Westborough Lab for sample(s): 01 Batch: WG358947-1				

1,2-Dibromoethane	ND		ug/l	0.020
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1,2-Dibromo-3-chloropropane	ND		ug/l	0.020
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Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG358747-1					
Methylene chloride	109	-	1-221	-	30
1,1-Dichloroethane	110	-	59-155	-	30
Chloroform	104	-	51-138	-	30
Carbon tetrachloride	112	-	70-140	-	30
1,2-Dichloropropane	114	-	1-210	-	30
Dibromochloromethane	108	-	53-149	-	30
1,1,2-Trichloroethane	108	-	52-150	-	30
2-Chloroethylvinyl ether	98	-	1-305	-	30
Tetrachloroethene	106	-	64-148	-	30
Chlorobenzene	110	-	37-160	-	30
Trichlorofluoromethane	101	-	17-181	-	30
1,2-Dichloroethane	112	-	49-155	-	30
1,1,1-Trichloroethane	110	-	52-162	-	30
Bromodichloromethane	111	-	35-155	-	30
trans-1,3-Dichloropropene	112	-	17-183	-	30
cis-1,3-Dichloropropene	112	-	1-227	-	30
Bromoform	106	-	45-169	-	30
1,1,2,2-Tetrachloroethane	110	-	46-157	-	30
Benzene	110	-	37-151	-	30
Toluene	112	-	47-150	-	30
Ethylbenzene	114	-	37-162	-	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG358747-1					
Chloromethane	115	-	1-273	-	30
Bromomethane	118	-	1-242	-	30
Vinyl chloride	91	-	1-251	-	30
Chloroethane	99	-	14-230	-	30
1,1-Dichloroethene	111	-	1-234	-	30
trans-1,2-Dichloroethene	111	-	54-156	-	30
cis-1,2-Dichloroethene	107	-	60-140	-	30
Trichloroethene	105	-	71-157	-	30
1,2-Dichlorobenzene	114	-	18-190	-	30
1,3-Dichlorobenzene	111	-	59-156	-	30
1,4-Dichlorobenzene	114	-	18-190	-	30
p/m-Xylene	113	-	40-160	-	30
o-Xylene	106	-	40-160	-	30
XYLENE (TOTAL)	110	-	40-160	-	30
Styrene	106	-	40-160	-	30
Acetone	137	-	40-160	-	30
Carbon disulfide	111	-	40-160	-	30
2-Butanone	112	-	40-160	-	30
Vinyl acetate	103	-	40-160	-	30
4-Methyl-2-pentanone	118	-	40-160	-	30
2-Hexanone	114	-	40-160	-	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG358747-1					
Acrolein	157	-	40-160	-	30
Acrylonitrile	103	-	40-160	-	30

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	102				80-120
Fluorobenzene	102				80-120
4-Bromofluorobenzene	98				80-120

Pesticides by GC - Westborough Lab Associated sample(s): 01 Batch: WG358947-2					
1,2-Dibromoethane	82	-	70-130	-	20
1,2-Dibromo-3-chloropropane	81	-	70-130	-	20

Matrix Spike Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01				QC Batch ID: WG358747-3		QC Sample: L0904367-01		Client ID: MW-12	
Methylene chloride	ND	20	19	96	-	-	1-221	-	30
1,1-Dichloroethane	ND	20	20	98	-	-	59-155	-	30
Chloroform	ND	20	19	94	-	-	51-138	-	30
Carbon tetrachloride	ND	20	21	107	-	-	70-140	-	30
1,2-Dichloropropane	ND	20	20	100	-	-	1-210	-	30
Dibromochloromethane	ND	20	19	97	-	-	53-149	-	30
1,1,2-Trichloroethane	ND	20	20	99	-	-	52-150	-	30
2-Chloroethylvinyl ether	ND	20	14	73	-	-	1-305	-	30
Tetrachloroethene	ND	20	20	102	-	-	64-148	-	30
Chlorobenzene	ND	20	20	103	-	-	37-160	-	30
Trichlorofluoromethane	ND	20	19	97	-	-	17-181	-	30
1,2-Dichloroethane	ND	20	19	94	-	-	49-155	-	30
1,1,1-Trichloroethane	ND	20	20	100	-	-	52-162	-	30
Bromodichloromethane	ND	20	20	102	-	-	35-155	-	30
trans-1,3-Dichloropropene	ND	20	19	95	-	-	17-183	-	30
cis-1,3-Dichloropropene	ND	20	19	95	-	-	1-227	-	30
Bromoform	ND	20	19	97	-	-	45-169	-	30
1,1,2,2-Tetrachloroethane	ND	20	21	103	-	-	46-157	-	30
Benzene	ND	20	20	99	-	-	35-151	-	30
Toluene	ND	20	21	104	-	-	47-150	-	30
Ethylbenzene	ND	20	22	111	-	-	37-162	-	30

Matrix Spike Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01				QC Batch ID: WG358747-3		QC Sample: L0904367-01		Client ID: MW-12	
Chloromethane	ND	20	21	104	-	-	1-273	-	30
Bromomethane	ND	20	17	85	-	-	1-242	-	30
Vinyl chloride	ND	20	16	82	-	-	1-251	-	30
Chloroethane	ND	20	18	91	-	-	14-230	-	30
1,1-Dichloroethene	ND	20	21	104	-	-	1-234	-	30
trans-1,2-Dichloroethene	ND	20	20	101	-	-	54-156	-	30
cis-1,2-Dichloroethene	ND	20	19	95	-	-	60-140	-	30
Trichloroethene	ND	20	19	93	-	-	71-157	-	30
1,2-Dichlorobenzene	ND	20	21	106	-	-	18-190	-	30
1,3-Dichlorobenzene	ND	20	20	101	-	-	59-156	-	30
1,4-Dichlorobenzene	ND	20	21	104	-	-	18-190	-	30
p/m-Xylene	ND	40	42	106	-	-	40-160	-	30
o-Xylene	ND	20	20	101	-	-	40-160	-	30
XYLENE (TOTAL)	ND	60	63	105	-	-	40-160	-	30
Styrene	ND	20	20	101	-	-	40-160	-	30
Acetone	ND	50	45	91	-	-	40-160	-	30
Carbon disulfide	ND	20	18	90	-	-	40-160	-	30
2-Butanone	ND	50	44	88	-	-	40-160	-	30
Vinyl acetate	ND	40	32	79	-	-	40-160	-	30
4-Methyl-2-pentanone	ND	50	51	102	-	-	40-160	-	30
2-Hexanone	ND	50	50	100	-	-	40-160	-	30

Matrix Spike Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01				QC Batch ID: WG358747-3		QC Sample: L0904367-01		Client ID: MW-12	
Acrolein	ND	40	53	133	-	-	40-160	-	30
Acrylonitrile	ND	40	39	98	-	-	40-160	-	30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
4-Bromofluorobenzene	99				80-120
Fluorobenzene	96				80-120
Pentafluorobenzene	98				80-120

Pesticides by GC - Westborough Lab Associated sample(s): 01				QC Batch ID: WG358947-3		QC Sample: L0904356-01		Client ID: MS Sample	
1,2-Dibromoethane	ND	0.241	0.180	75	-	-	70-130	-	20
1,2-Dibromo-3-chloropropane	ND	0.241	0.171	71	-	-	70-130	-	20

Lab Duplicate Analysis Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358747-4 QC Sample: L0904367-01 Client ID: MW-12					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30

Lab Duplicate Analysis Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358747-4 QC Sample: L0904367-01 Client ID: MW-12					
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30
Xylene (Total)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30

Lab Duplicate Analysis Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358747-4 QC Sample: L0904367-01 Client ID: MW-12					
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Methyl tert butyl ether	ND	ND	ug/l	NC	30
1,4-Dioxane	ND	ND	ug/l	NC	30
Tert-Butyl Alcohol	ND	ND	ug/l	NC	30
Tertiary-Amyl Methyl Ether	ND	ND	ug/l	NC	30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	91		96		80-120
Fluorobenzene	96		100		80-120
4-Bromofluorobenzene	107		108		80-120

SEMIVOLATILES

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS**

Lab ID: L0904367-01
Client ID: MW-12
Sample Location: SALEM, MA
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 04/11/09 16:22
Analyst: ND

Date Collected: 04/08/09 15:30
Date Received: 04/09/09
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 04/10/09 11:25

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Acenaphthene	ND		ug/l	4.8	1
Benzidine	ND		ug/l	48	1
1,2,4-Trichlorobenzene	ND		ug/l	4.8	1
Hexachlorobenzene	ND		ug/l	4.8	1
Bis(2-chloroethyl)ether	ND		ug/l	4.8	1
2-Chloronaphthalene	ND		ug/l	5.8	1
1,2-Dichlorobenzene	ND		ug/l	4.8	1
1,3-Dichlorobenzene	ND		ug/l	4.8	1
1,4-Dichlorobenzene	ND		ug/l	4.8	1
3,3'-Dichlorobenzidine	ND		ug/l	48	1
2,4-Dinitrotoluene	ND		ug/l	5.8	1
2,6-Dinitrotoluene	ND		ug/l	4.8	1
Azobenzene	ND		ug/l	4.8	1
Fluoranthene	ND		ug/l	4.8	1
4-Chlorophenyl phenyl ether	ND		ug/l	4.8	1
4-Bromophenyl phenyl ether	ND		ug/l	4.8	1
Bis(2-chloroisopropyl)ether	ND		ug/l	4.8	1
Bis(2-chloroethoxy)methane	ND		ug/l	4.8	1
Hexachlorobutadiene	ND		ug/l	9.7	1
Hexachlorocyclopentadiene	ND		ug/l	29	1
Hexachloroethane	ND		ug/l	4.8	1
Isophorone	ND		ug/l	4.8	1
Naphthalene	ND		ug/l	4.8	1
Nitrobenzene	ND		ug/l	4.8	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	14	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	4.8	1
Butyl benzyl phthalate	ND		ug/l	4.8	1
Di-n-butylphthalate	ND		ug/l	4.8	1
Di-n-octylphthalate	ND		ug/l	4.8	1
Diethyl phthalate	ND		ug/l	4.8	1

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS****Lab ID:** L0904367-01**Date Collected:** 04/08/09 15:30**Client ID:** MW-12**Date Received:** 04/09/09**Sample Location:** SALEM, MA**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab					
Dimethyl phthalate	ND		ug/l	4.8	1
Benzo(a)anthracene	ND		ug/l	4.8	1
Benzo(a)pyrene	ND		ug/l	4.8	1
Benzo(b)fluoranthene	ND		ug/l	4.8	1
Benzo(k)fluoranthene	ND		ug/l	4.8	1
Chrysene	ND		ug/l	4.8	1
Acenaphthylene	ND		ug/l	4.8	1
Anthracene	ND		ug/l	4.8	1
Benzo(ghi)perylene	ND		ug/l	4.8	1
Fluorene	ND		ug/l	4.8	1
Phenanthrene	ND		ug/l	4.8	1
Dibenzo(a,h)anthracene	ND		ug/l	4.8	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	6.8	1
Pyrene	ND		ug/l	4.8	1
Aniline	ND		ug/l	19	1
4-Chloroaniline	ND		ug/l	4.8	1
1-Methylnaphthalene	ND		ug/l	4.8	1
2-Nitroaniline	ND		ug/l	4.8	1
3-Nitroaniline	ND		ug/l	4.8	1
4-Nitroaniline	ND		ug/l	6.8	1
Dibenzofuran	ND		ug/l	4.8	1
2-Methylnaphthalene	ND		ug/l	4.8	1
n-Nitrosodimethylamine	ND		ug/l	48	1
2,4,6-Trichlorophenol	ND		ug/l	4.8	1
P-Chloro-M-Cresol	ND		ug/l	4.8	1
2-Chlorophenol	ND		ug/l	5.8	1
2,4-Dichlorophenol	ND		ug/l	9.7	1
2,4-Dimethylphenol	ND		ug/l	9.7	1
2-Nitrophenol	ND		ug/l	19	1
4-Nitrophenol	ND		ug/l	9.7	1
2,4-Dinitrophenol	ND		ug/l	29	1
4,6-Dinitro-o-cresol	ND		ug/l	19	1
Pentachlorophenol	ND		ug/l	9.7	1
Phenol	ND		ug/l	6.8	1
2-Methylphenol	ND		ug/l	5.8	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.8	1
2,4,5-Trichlorophenol	ND		ug/l	4.8	1

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS****Lab ID:** L0904367-01**Date Collected:** 04/08/09 15:30**Client ID:** MW-12**Date Received:** 04/09/09**Sample Location:** SALEM, MA**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab					
Benzoic Acid	ND		ug/l	48	1
Benzyl Alcohol	ND		ug/l	9.7	1
Carbazole	ND		ug/l	4.8	1
Pyridine	ND		ug/l	48	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	49		23-120
2-Fluorobiphenyl	49		43-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	66		33-120

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS**

Lab ID: L0904367-01
Client ID: MW-12
Sample Location: SALEM, MA
Matrix: Water
Analytical Method: 1,8270C
Analytical Date: 04/11/09 21:40
Analyst: HL

Date Collected: 04/08/09 15:30
Date Received: 04/09/09
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 04/10/09 11:25

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab					
Acenaphthene	ND		ug/l	0.19	1
2-Chloronaphthalene	ND		ug/l	0.19	1
Fluoranthene	ND		ug/l	0.19	1
Hexachlorobutadiene	ND		ug/l	0.48	1
Naphthalene	ND		ug/l	0.19	1
Benzo(a)anthracene	ND		ug/l	0.19	1
Benzo(a)pyrene	ND		ug/l	0.19	1
Benzo(b)fluoranthene	ND		ug/l	0.19	1
Benzo(k)fluoranthene	ND		ug/l	0.19	1
Chrysene	ND		ug/l	0.19	1
Acenaphthylene	ND		ug/l	0.19	1
Anthracene	ND		ug/l	0.19	1
Benzo(ghi)perylene	ND		ug/l	0.19	1
Fluorene	ND		ug/l	0.19	1
Phenanthrene	ND		ug/l	0.19	1
Dibenzo(a,h)anthracene	ND		ug/l	0.19	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.19	1
Pyrene	ND		ug/l	0.19	1
1-Methylnaphthalene	0.29		ug/l	0.19	1
2-Methylnaphthalene	ND		ug/l	0.19	1
Pentachlorophenol	ND		ug/l	0.78	1
Hexachlorobenzene	ND		ug/l	0.78	1
Hexachloroethane	ND		ug/l	0.78	1

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS**

Lab ID: L0904367-01

Date Collected: 04/08/09 15:30

Client ID: MW-12

Date Received: 04/09/09

Sample Location: SALEM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	43		43-120
2,4,6-Tribromophenol	68		10-120
4-Terphenyl-d14	65		33-120

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 04/11/09 14:49
 Analyst: ND

Extraction Method: EPA 3510C
 Extraction Date: 04/10/09 11:25

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG358473-1				
Acenaphthene	ND		ug/l	5.0
Benzidine	ND		ug/l	50
1,2,4-Trichlorobenzene	ND		ug/l	5.0
Hexachlorobenzene	ND		ug/l	5.0
Bis(2-chloroethyl)ether	ND		ug/l	5.0
2-Chloronaphthalene	ND		ug/l	6.0
1,2-Dichlorobenzene	ND		ug/l	5.0
1,3-Dichlorobenzene	ND		ug/l	5.0
1,4-Dichlorobenzene	ND		ug/l	5.0
3,3'-Dichlorobenzidine	ND		ug/l	50
2,4-Dinitrotoluene	ND		ug/l	6.0
2,6-Dinitrotoluene	ND		ug/l	5.0
Azobenzene	ND		ug/l	5.0
Fluoranthene	ND		ug/l	5.0
4-Chlorophenyl phenyl ether	ND		ug/l	5.0
4-Bromophenyl phenyl ether	ND		ug/l	5.0
Bis(2-chloroisopropyl)ether	ND		ug/l	5.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0
Hexachlorobutadiene	ND		ug/l	10
Hexachlorocyclopentadiene	ND		ug/l	30
Hexachloroethane	ND		ug/l	5.0
Isophorone	ND		ug/l	5.0
Naphthalene	ND		ug/l	5.0
Nitrobenzene	ND		ug/l	5.0
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	15
Bis(2-Ethylhexyl)phthalate	ND		ug/l	5.0
Butyl benzyl phthalate	ND		ug/l	5.0
Di-n-butylphthalate	ND		ug/l	5.0
Di-n-octylphthalate	ND		ug/l	5.0
Diethyl phthalate	ND		ug/l	5.0
Dimethyl phthalate	ND		ug/l	5.0

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 04/11/09 14:49
 Analyst: ND

Extraction Method: EPA 3510C
 Extraction Date: 04/10/09 11:25

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG358473-1				
Benzo(a)anthracene	ND		ug/l	5.0
Benzo(a)pyrene	ND		ug/l	5.0
Benzo(b)fluoranthene	ND		ug/l	5.0
Benzo(k)fluoranthene	ND		ug/l	5.0
Chrysene	ND		ug/l	5.0
Acenaphthylene	ND		ug/l	5.0
Anthracene	ND		ug/l	5.0
Benzo(ghi)perylene	ND		ug/l	5.0
Fluorene	ND		ug/l	5.0
Phenanthrene	ND		ug/l	5.0
Dibenzo(a,h)anthracene	ND		ug/l	5.0
Indeno(1,2,3-cd)Pyrene	ND		ug/l	7.0
Pyrene	ND		ug/l	5.0
Aniline	ND		ug/l	20
4-Chloroaniline	ND		ug/l	5.0
1-Methylnaphthalene	ND		ug/l	5.0
2-Nitroaniline	ND		ug/l	5.0
3-Nitroaniline	ND		ug/l	5.0
4-Nitroaniline	ND		ug/l	7.0
Dibenzofuran	ND		ug/l	5.0
2-Methylnaphthalene	ND		ug/l	5.0
n-Nitrosodimethylamine	ND		ug/l	50
2,4,6-Trichlorophenol	ND		ug/l	5.0
P-Chloro-M-Cresol	ND		ug/l	5.0
2-Chlorophenol	ND		ug/l	6.0
2,4-Dichlorophenol	ND		ug/l	10
2,4-Dimethylphenol	ND		ug/l	10
2-Nitrophenol	ND		ug/l	20
4-Nitrophenol	ND		ug/l	10
2,4-Dinitrophenol	ND		ug/l	30
4,6-Dinitro-o-cresol	ND		ug/l	20

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 04/11/09 14:49
 Analyst: ND

Extraction Method: EPA 3510C
 Extraction Date: 04/10/09 11:25

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG358473-1				
Pentachlorophenol	ND		ug/l	10
Phenol	ND		ug/l	7.0
2-Methylphenol	ND		ug/l	6.0
3-Methylphenol/4-Methylphenol	ND		ug/l	6.0
2,4,5-Trichlorophenol	ND		ug/l	5.0
Benzoic Acid	ND		ug/l	50
Benzyl Alcohol	ND		ug/l	10
Carbazole	ND		ug/l	5.0
Pyridine	ND		ug/l	50

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	52		23-120
2-Fluorobiphenyl	53		43-120
2,4,6-Tribromophenol	60		10-120
4-Terphenyl-d14	66		33-120

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270C
 Analytical Date: 04/11/09 18:43
 Analyst: HL

Extraction Method: EPA 3510C
 Extraction Date: 04/10/09 11:25

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG358474-1				
Acenaphthene	ND		ug/l	0.20
2-Chloronaphthalene	ND		ug/l	0.20
Fluoranthene	ND		ug/l	0.20
Hexachlorobutadiene	ND		ug/l	0.50
Naphthalene	ND		ug/l	0.20
Benzo(a)anthracene	ND		ug/l	0.20
Benzo(a)pyrene	ND		ug/l	0.20
Benzo(b)fluoranthene	ND		ug/l	0.20
Benzo(k)fluoranthene	ND		ug/l	0.20
Chrysene	ND		ug/l	0.20
Acenaphthylene	ND		ug/l	0.20
Anthracene	ND		ug/l	0.20
Benzo(ghi)perylene	ND		ug/l	0.20
Fluorene	ND		ug/l	0.20
Phenanthrene	ND		ug/l	0.20
Dibenzo(a,h)anthracene	ND		ug/l	0.20
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20
Pyrene	ND		ug/l	0.20
1-Methylnaphthalene	ND		ug/l	0.20
2-Methylnaphthalene	ND		ug/l	0.20
Pentachlorophenol	ND		ug/l	0.80
Hexachlorobenzene	ND		ug/l	0.80
Hexachloroethane	ND		ug/l	0.80

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270C
Analytical Date: 04/11/09 18:43
Analyst: HL

Extraction Method: EPA 3510C
Extraction Date: 04/10/09 11:25

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG358474-1				

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	59		43-120
2,4,6-Tribromophenol	72		10-120
4-Terphenyl-d14	68		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG358473-2 WG358473-3					
Acenaphthene	79	72	46-118	9	30
1,2,4-Trichlorobenzene	73	64	39-98	13	30
2-Chloronaphthalene	80	73	40-140	9	30
1,2-Dichlorobenzene	68	61	40-140	11	30
1,4-Dichlorobenzene	65	60	36-97	8	30
2,4-Dinitrotoluene	94	77	24-96	20	30
2,6-Dinitrotoluene	81	79	40-140	3	30
Fluoranthene	99	92	40-140	7	30
4-Chlorophenyl phenyl ether	86	79	40-140	8	30
n-Nitrosodi-n-propylamine	79	71	41-116	11	30
Butyl benzyl phthalate	99	89	40-140	11	30
Anthracene	95	88	40-140	8	30
Pyrene	95	86	26-127	10	30
P-Chloro-M-Cresol	78	72	23-97	8	30
2-Chlorophenol	67	63	27-123	6	30
2-Nitrophenol	71	62	30-130	14	30
4-Nitrophenol	44	40	10-80	10	30
2,4-Dinitrophenol	50	46	30-130	8	30
Pentachlorophenol	78	68	9-103	14	30
Phenol	33	31	12-110	6	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG358473-2 WG358473-3

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		42		21-120
Phenol-d6	31		28		10-120
Nitrobenzene-d5	69		64		23-120
2-Fluorobiphenyl	73		69		43-120
2,4,6-Tribromophenol	88		85		10-120
4-Terphenyl-d14	88		82		33-120

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG358474-2 WG358474-3

Acenaphthene	83	62	40-140	29	40
2-Chloronaphthalene	79	65	40-140	19	40
Fluoranthene	99	76	40-140	26	40
Anthracene	83	66	40-140	23	40
Pyrene	100	79	40-140	23	40
Pentachlorophenol	78	63	30-130	21	40

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG358474-2 WG358474-3

Surrogate	LCS %Recovery Qualifier	LCSD %Recovery Qualifier	Acceptance Criteria
2-Fluorophenol	42	39	21-120
Phenol-d6	31	28	10-120
Nitrobenzene-d5	68	55	23-120
2-Fluorobiphenyl	62	52	43-120
2,4,6-Tribromophenol	77	68	10-120
4-Terphenyl-d14	78	68	33-120

PCBS

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0904367**Project Number:** 16730001M002**Report Date:** 04/17/09**SAMPLE RESULTS**

Lab ID: L0904367-01
Client ID: MW-12
Sample Location: SALEM, MA
Matrix: Water
Analytical Method: 5,608
Analytical Date: 04/13/09 11:37
Analyst: JB

Date Collected: 04/08/09 15:30
Date Received: 04/09/09
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 04/11/09 03:14
Cleanup Method1: EPA 3665A
Cleanup Date1: 04/13/09

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab					
Aroclor 1016	ND		ug/l	0.258	1
Aroclor 1221	ND		ug/l	0.258	1
Aroclor 1232	ND		ug/l	0.258	1
Aroclor 1242	ND		ug/l	0.258	1
Aroclor 1248	ND		ug/l	0.258	1
Aroclor 1254	ND		ug/l	0.258	1
Aroclor 1260	ND		ug/l	0.258	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	88		30-150	A

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Analytical Method: 5,608
 Analytical Date: 04/13/09 10:32
 Analyst: JB

Extraction Method: EPA 3510C
 Extraction Date: 04/11/09 03:14
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 04/13/09

Parameter	Result	Qualifier	Units	RDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG358570-1				
Aroclor 1016	ND		ug/l	0.250
Aroclor 1221	ND		ug/l	0.250
Aroclor 1232	ND		ug/l	0.250
Aroclor 1242	ND		ug/l	0.250
Aroclor 1248	ND		ug/l	0.250
Aroclor 1254	ND		ug/l	0.250
Aroclor 1260	ND		ug/l	0.250

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	97		30-150	A

Matrix Spike Analysis Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358570-3 QC Sample: L0904356-01 Client ID: MS Sample									
Aroclor 1016	ND	2.22	2.03	91	-	-	40-126	-	30
Aroclor 1260	ND	2.22	2.40	108	-	-	40-127	-	30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77				30-150	A
Decachlorobiphenyl	102				30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG358570-2					
Aroclor 1016	102	-	40-126	-	
Aroclor 1260	116	-	40-127	-	

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69				30-150	A
Decachlorobiphenyl	114				30-150	A

Lab Duplicate Analysis Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358570-4 QC Sample: L0904356-01 Client ID: DUP Sample					
Aroclor 1016	ND	ND	ug/l	NC	30
Aroclor 1221	ND	ND	ug/l	NC	30
Aroclor 1232	ND	ND	ug/l	NC	30
Aroclor 1242	ND	ND	ug/l	NC	30
Aroclor 1248	ND	ND	ug/l	NC	30
Aroclor 1254	ND	ND	ug/l	NC	30
Aroclor 1260	ND	ND	ug/l	NC	30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		83		30-150	A
Decachlorobiphenyl	89		102		30-150	A

METALS

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

SAMPLE RESULTS

Lab ID: L0904367-01

Date Collected: 04/08/09 15:30

Client ID: MW-12

Date Received: 04/09/09

Sample Location: SALEM, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab										
Iron, Total	74		mg/l	0.05	1	04/10/09 11:35	04/14/09 12:04	EPA 3005A	19,200.7	TD
Mercury, Total	ND		mg/l	0.0002	1	04/10/09 16:30	04/13/09 11:59	EPA 245.2	3,245.1	EZ
Total Metals - Mansfield Lab										
Antimony, Total	ND		mg/l	0.001	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Arsenic, Total	0.210		mg/l	0.001	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Cadmium, Total	0.0008		mg/l	0.0002	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Chromium, Total	0.077		mg/l	0.001	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Copper, Total	0.039		mg/l	0.001	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Lead, Total	0.073		mg/l	0.001	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Nickel, Total	0.060		mg/l	0.001	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Selenium, Total	0.002		mg/l	0.001	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Silver, Total	ND		mg/l	0.0002	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP
Zinc, Total	0.111		mg/l	0.010	1	04/10/09 11:35	04/17/09 13:05	EPA 3020A	1,6020A	LP



Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG358501-1								
Iron, Total	ND	mg/l	0.05	1	04/10/09 11:35	04/14/09 11:13	19,200.7	TD

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG358535-1								
Mercury, Total	ND	mg/l	0.0002	1	04/10/09 16:30	04/13/09 11:54	3,245.1	EZ

Prep Information

Digestion Method: EPA 245.2

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG359279-1								
Antimony, Total	ND	mg/l	0.001	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Arsenic, Total	ND	mg/l	0.001	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Cadmium, Total	ND	mg/l	0.0002	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Chromium, Total	ND	mg/l	0.001	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Copper, Total	ND	mg/l	0.001	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Lead, Total	ND	mg/l	0.001	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Nickel, Total	ND	mg/l	0.001	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Selenium, Total	ND	mg/l	0.001	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Silver, Total	ND	mg/l	0.0002	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP
Zinc, Total	ND	mg/l	0.010	1	04/10/09 11:35	04/17/09 14:00	1,6020A	LP

Prep Information

Digestion Method: EPA 3020A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG358501-2					
Iron, Total	98	-	85-115	-	
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG358535-2					
Mercury, Total	91	-		-	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG359279-2					
Antimony, Total	102	-	80-120	-	20
Arsenic, Total	103	-	80-120	-	20
Cadmium, Total	113	-	80-120	-	20
Chromium, Total	108	-	80-120	-	20
Copper, Total	108	-	80-120	-	20
Lead, Total	106	-	80-120	-	20
Nickel, Total	107	-	80-120	-	20
Selenium, Total	101	-	80-120	-	20
Silver, Total	101	-	80-120	-	20
Zinc, Total	107	-	80-120	-	20

Matrix Spike Analysis **Batch Quality Control**

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358501-4 QC Sample: L0904273-01 Client ID: MS Sample									
Iron, Total	ND	1	0.98	98	-	-	75-125	-	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358535-4 QC Sample: L0904379-01 Client ID: MS Sample									
Mercury, Total	ND	0.001	0.0010	105	-	-		-	
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG359279-4 QC Sample: L0904356-01 Client ID: MS Sample									
Antimony, Total	0.021	0.5	0.537	103	-	-	75-125	-	20
Arsenic, Total	0.002	0.12	0.128	105	-	-	75-125	-	20
Cadmium, Total	0.123	0.051	0.183	118	-	-	75-125	-	20
Chromium, Total	0.001	0.2	0.216	108	-	-	75-125	-	20
Copper, Total	0.010	0.25	0.268	103	-	-	75-125	-	20
Lead, Total	0.001	0.51	0.541	106	-	-	75-125	-	20
Nickel, Total	0.198	0.5	0.724	105	-	-	75-125	-	20
Selenium, Total	0.001	0.12	0.123	102	-	-	75-125	-	20
Silver, Total	ND	0.05	0.048	97	-	-	75-125	-	20
Zinc, Total	0.528	0.5	1.05	104	-	-	75-125	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358501-3 QC Sample: L0904273-01 Client ID: DUP Sample					
Iron, Total	ND	ND	mg/l	NC	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358535-3 QC Sample: L0904379-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG359279-3 QC Sample: L0904356-01 Client ID: DUP Sample					
Antimony, Total	0.021	0.021	mg/l	0	20
Arsenic, Total	0.002	0.002	mg/l	2	20
Cadmium, Total	0.123	0.1210	mg/l	2	20
Chromium, Total	0.001	ND	mg/l	19	20
Copper, Total	0.010	0.010	mg/l	2	20
Lead, Total	0.001	0.001	mg/l	1	20
Nickel, Total	0.198	0.191	mg/l	4	20
Selenium, Total	0.001	0.001	mg/l	18	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.528	0.507	mg/l	4	20

INORGANICS & MISCELLANEOUS

Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

SAMPLE RESULTS

Lab ID: L0904367-01
Client ID: MW-12
Sample Location: SALEM, MA
Matrix: Water

Date Collected: 04/08/09 15:30
Date Received: 04/09/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab									
Solids, Total Suspended	1700		mg/l	25	5	-	04/14/09 19:50	30,2540D	DW
Cyanide, Total	ND		mg/l	0.005	1	04/12/09 09:45	04/14/09 13:25	30,4500CN-CE	AT
Chlorine, Total Residual	ND		mg/l	0.02	1	-	04/10/09 00:45	30,4500CL-D	JO
TPH	ND		mg/l	4.00	1	04/09/09 19:30	04/13/09 20:30	74,1664A	JO
Phenolics, Total	ND		mg/l	0.03	1	-	04/10/09 17:51	4,420.1	TH
Chromium, Hexavalent	ND		mg/l	0.010	1	04/09/09 23:30	04/09/09 23:30	30,3500CR-D	JT



Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG358385-2									
TPH	ND		mg/l	4.00	1	04/09/09 19:30	04/13/09 20:30	74,1664A	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG358409-1									
Chromium, Hexavalent	ND		mg/l	0.010	1	04/09/09 23:30	04/09/09 23:30	30,3500CR-D	JT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG358423-2									
Chlorine, Total Residual	ND		mg/l	0.02	1	-	04/10/09 00:45	30,4500CL-D	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG358531-1									
Phenolics, Total	ND		mg/l	0.03	1	-	04/10/09 17:46	4,420.1	TH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG358600-1									
Cyanide, Total	ND		mg/l	0.005	1	04/12/09 09:45	04/14/09 13:17	30,4500CN-CE	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG358622-1									
Solids, Total Suspended	ND		mg/l	5.0	1	-	04/14/09 19:50	30,2540D	DW

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG358385-1					
TPH	70	-	64-132	-	34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG358409-2					
Chromium, Hexavalent	97	-	85-115	-	20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG358423-1					
Chlorine, Total Residual	97	-		-	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG358531-2					
Phenolics, Total	96	-	82-111	-	12
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG358600-2					
Cyanide, Total	104	-	80-120	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358385-3 QC Sample: L0904297-01 Client ID: MS Sample									
TPH	ND	24.1	ND	78	-	-	64-132	-	34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358409-4 QC Sample: L0904356-01 Client ID: MS Sample									
Chromium, Hexavalent	ND	0.1	0.098	98	-	-	85-115	-	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358531-3 QC Sample: L0904356-01 Client ID: MS Sample									
Phenolics, Total	ND	0.8	0.82	102	-	-	77-124	-	12
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358600-3 QC Sample: L0904448-01 Client ID: MS Sample									
Cyanide, Total	0.010	0.2	0.202	96	-	-	80-120	-	30

Lab Duplicate Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: 16730001M002

Lab Number: L0904367

Report Date: 04/17/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358385-4 QC Sample: L0904297-02 Client ID: DUP Sample					
TPH	ND	ND	mg/l	NC	34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358409-3 QC Sample: L0904356-01 Client ID: DUP Sample					
Chromium, Hexavalent	ND	ND	mg/l	NC	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358423-3 QC Sample: L0904356-01 Client ID: DUP Sample					
Chlorine, Total Residual	ND	ND	mg/l	NC	
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358531-4 QC Sample: L0904297-01 Client ID: DUP Sample					
Phenolics, Total	ND	0.03	mg/l	NC	12
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358600-4 QC Sample: L0904448-01 Client ID: DUP Sample					
Cyanide, Total	0.010	0.010	mg/l	0	30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG358622-2 QC Sample: L0904272-03 Client ID: DUP Sample					
Solids, Total Suspended	570	560	mg/l	2	32

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0904367

Project Number: 16730001M002

Report Date: 04/17/09

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0904367-01A	Vial Na2S2O3 preserved	A	N/A	2.1	Y	Absent	624(7)
L0904367-01B	Vial Na2S2O3 preserved	A	N/A	2.1	Y	Absent	624(7)
L0904367-01C	Vial Na2S2O3 preserved	A	N/A	2.1	Y	Absent	504(14)
L0904367-01D	Vial Na2S2O3 preserved	A	N/A	2.1	Y	Absent	504(14)
L0904367-01E	Plastic 250ml NaOH preserved	A	>12	2.1	Y	Absent	TCN-4500(14)
L0904367-01F	Plastic 500ml unpreserved	A	7	2.1	Y	Absent	TRC-4500(1)
L0904367-01G	Plastic 500ml unpreserved	A	7	2.1	Y	Absent	HEXCR-3500(1)
L0904367-01H	Plastic 500ml HNO3 preserved	A	<2	2.1	Y	Absent	A2-PB-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-CR-6020T(180),FE-UI(180),A2-AS-6020T(180),HG-U(28),A2-CD-6020T(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-CU-6020T(180)
L0904367-01I	Plastic 1000ml unpreserved	A	7	2.1	Y	Absent	TSS-2540(7)
L0904367-01J	Amber 1000ml H2SO4 preserved	A	<2	2.1	Y	Absent	TPHENOL-420(28)
L0904367-01K	Amber 1000ml Na2S2O3	A	7	2.1	Y	Absent	PCB-608(7)
L0904367-01L	Amber 1000ml Na2S2O3	A	7	2.1	Y	Absent	PCB-608(7)
L0904367-01M	Amber 1000ml unpreserved	A	7	2.1	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L0904367-01N	Amber 1000ml unpreserved	A	7	2.1	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L0904367-01O	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	TPH-1664(28)
L0904367-01P	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	TPH-1664(28)
L0904367-02A	Vial Na2S2O3 preserved	NA	NA		Y	Absent	HOLD(14)

Container Comments

L0904367-01B

*Hold days indicated by values in parentheses



Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
ND	- Not detected at the reported detection limit for the sample.
NI	- Not Ignitable.
RDL	- Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

*	- The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
N	- The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
P	- The RPD between the results for the two columns exceeds the method-specified criteria.
R	- Analytical results are from sample re-analysis.
RE	- Analytical results are from sample re-extraction.
J	- Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

Report Format: Data Usability Report



Project Name: PEABODY ESSEX MUSEUM
Project Number: 16730001M002

Lab Number: L0904367
Report Date: 04/17/09

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 5 Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
- 14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 74 Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised February 18, 2009 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. Organic Parameters: 504.1, 524.2, SM 6251B.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

Non-Potable Water

Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Tl,Ti,V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.*Drinking Water*

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 314.0, SM4500CN-E, 4500H+B, 4500NO₃-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH₃-H, 4500NH₃-E, 4500NO₂-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO₃-F, 4500NO₂-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH₃-H, EPA 350.2/1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

New York Department of Health Certificate/Lab ID: 11148.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, LACHAT 10-107-06-1-B, SM4500NH₃-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO₃F, EPA 354.1, SM4500-NO₂-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. Registered Laboratory.

Certificate/Approval Program Summary

Last revised February 18, 2009 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Chloride, Fluoride, Sulfate, Sulfite, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), Total Cyanide, Bromide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Ignitability, Corrosivity, TCLP 1311, Reactivity. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814.

Non-Potable Water (Inorganic Parameters: SM2320B, 4500NH₃-F, EPA 120.1, SM2510B, 2340B, EPA 245.1, EPA 365.2, EPA 150.1, 160.1, SM2540C, EPA 160.2, SM2540D, EPA 335.2, 420.1, SM2540G, EPA 180.1. Organic Parameters: EPA 624, 625, 608.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 9050, 7470, 7471, 9045, EPA 7.3.3.2, EPA 7.3.4.2, 9014, 9065. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090.

Non-Potable Water (Inorganic Parameters: EPA 120.1, 150.1, 160.2, 180.1, 200.8, 245.1, 310.1, 335.2, 608, 625, 1631, 3010, 3015, 3020, 6020, 9010, 9014, 9040, SM2320B, 2510B, 2540D, 2540G, 4500CN-E, 4500H-B, Organic Parameters: EPA 3510, 3580, 3630, 3640, 3660, 3665, 5030, 8015 (mod), 3570, 8081, 8082, 8260, 8270,)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7196, 7470, 7471, 7474, 9010, 9014, 9040, 9045, 9060. Organic Parameters: EPA 8015 (mod), EPA 3570, 1311, 3050, 3051, 3060, 3580, 3630, 3640, 3660, 3665, 5035, 8081, 8082, 8260, 8270.)

Biological Tissue (Inorganic Parameters: EPA 6020. Organic Parameters: EPA 3570, 3510, 3610, 3630, 3640, 8270.)

Maine Department of Human Services Certificate/Lab ID: MA0030.

Wastewater (Inorganic Parameters: EPA 120.1, 300.0, SM 2320, 2510B, 2540C, 2540D, EPA 245.1. Organic Parameters: 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030.

Non-Potable Water (Inorganic Parameters: SM4500H+B. Organic Parameters: EPA 624.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206.

Non-Potable Water (Inorganic Parameters: EPA 200.8, 245.1, 1631E, 120.1, 150.1, 180.1, 310.1, 335.2, 160.2, SM2540D, 2540G, 4500CN-E, 4500H+B, 2320B, 2510B. Organic Parameters: EPA 625, 608.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015.

Non-Potable Water (Inorganic Parameters: SW-846 3010, 3020A, 3015, 6020, SM2320B, EPA 200.8, SM2540C, 2540D, 2540G, EPA 120.1, SM2510B, EPA 180.1, 245.1, SW-846 9040B, 6020, 9010B, 9014 Organic Parameters: EPA 608, 625, SW-846 3510C, 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 9010B, 9014, 1311, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 9045C, 9060. Organic Parameters: SW-846 3580A, 5030B, 3035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 3570, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

New York Department of Health Certificate/Lab ID: 11627.

Non-Potable Water (Inorganic Parameters: EPA 310.1, SM2320B, EPA 365.2, 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 335.2, 9014, 150.1, 9040B, 120.1, SM2510B, EPA 376.2, 180.1, 9010B. Organic Parameters: EPA 624, 8260B, 8270C, 608, 8081A, 625, 8082, 3510C, 3511, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, SW-846 Ch7 Sec 7.3, EPA 6020, 7196A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 3050B, 3580, 3050B, 3035.)

Air & Emissions (EPA TO-15.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299.

Refer to MA-DEP Certificate for Non-Potable Water.

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX.

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7471. Organic Parameters: EPA 8015, 8270.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089. Registered Laboratory.

U.S. Army Corps of Engineers



CHAIN OF CUSTODY

PAGE OF

Project Information

Westborough, MA Mansfield, MA
 TEL: 508-898-9220 TEL: 508-822-6900
 FAX: 508-898-9193 FAX: 508-822-3288

Project Name: *Peabody Essex Museum*

Client Information

Project Location: *Salem, MA*Client: *Roux Associates*Project #: *1673000/M002*Address: *67 South Bedford St*Project Manager: *Glen Brady*Suite: *101W, Burlington, MA*

ALPHA Quote #:

Phone: *781-270-6600*

Turn-Around Time

Fax: *781-270-9066*
☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Email: *Glen.Brady@rouxinc.com*

4/16/09

Due Date:

Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: *4/19/09*ALPHA Job #: *L0904367*

Report Information Data Deliverables

Billing Information

☐ FAX ☒ EMAIL

☐ ADEX ☐ Add'l Deliverables

☐ Same as Client Info

PO #:

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

SAMPLE HANDLING

Filtration
☐ Done
☐ Not Needed
☐ Lab to do
☐ Lab to do
 (Please specify below)

ALPHA Lab ID
(Lab Use Only)

Sample ID

Collection
Date TimeSample
MatrixSampler's
Initials

04367 -01 MW-1A

4/8/09 1530

9w

W/H

624

PCB-608

8270/PAHSIM

EDB (504)

NPDES Metals

TCN

HexCr

TPH-1664

Phenols

TRC

TSS

Sample Specific
Comments

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MA MCP or CT RCP?FORM NO 01-0911
(rev 30-JUL-07)

Relinquished By:

Container Type
Preservative

Date/Time

Received By:

Date/Time

Please print clearly, legibly
and completely. Samples can
not be logged in and
turnaround time clock will not
start until any ambiguities are
resolved. All samples
submitted are subject to
Alpha's Payment Terms.

TOTAL # BOTTOM LES



ANALYTICAL REPORT

Lab Number:	L0906816
Client:	Roux Associates 67 South Bedford Street Suite 101W Burlington, MA 01803
ATTN:	Glen Gordon
Project Name:	PEABODY ESSEX MUSEUM
Project Number:	Not Specified
Report Date:	06/02/09

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: PEABODY ESSEX MUSEUM
Project Number: Not Specified

Lab Number: L0906816
Report Date: 06/02/09

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L0906816-01	EX01	SALEM, MA	05/27/09 10:30

Project Name: PEABODY ESSEX MUSEUM
Project Number: Not Specified

Lab Number: L0906816
Report Date: 06/02/09

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report.

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

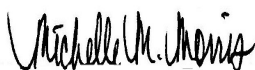
For additional information, please contact Client Services at 800-624-9220.

Total Metals

The WG364222-3 Laboratory Duplicate RPD, associated with L0906816-01, is above the acceptance criteria for Zinc (52%); however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

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

Authorized Signature:



Title: Technical Director/Representative

Date: 06/02/09

METALS

Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0906816

Project Number: Not Specified

Report Date: 06/02/09

SAMPLE RESULTS

Lab ID: L0906816-01

Date Collected: 05/27/09 10:30

Client ID: EX01

Date Received: 05/27/09

Sample Location: SALEM, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab										
Antimony, Total	ND		mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Arsenic, Total	0.0352		mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Cadmium, Total	ND		mg/l	0.0002	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Chromium, Total	0.0006		mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Copper, Total	0.0017		mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Iron, Total	12		mg/l	0.05	1	05/28/09 11:30	05/29/09 10:00	EPA 3005A	19,200.7	MG
Lead, Total	ND		mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Mercury, Total	ND		mg/l	0.0002	1	05/28/09 14:05	05/29/09 11:41	EPA 245.2	3,245.1	EZ
Nickel, Total	0.0109		mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Selenium, Total	0.001		mg/l	0.001	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Silver, Total	ND		mg/l	0.0004	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM
Zinc, Total	0.0101		mg/l	0.0050	1	05/28/09 12:30	05/29/09 22:48	EPA 3005A	1,6020	BM



Project Name: PEABODY ESSEX MUSEUM

Lab Number: L0906816

Project Number: Not Specified

Report Date: 06/02/09

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG364210-1								
Iron, Total	ND	mg/l	0.05	1	05/28/09 11:30	05/29/09 09:10	19,200.7	MG

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG364222-1								
Antimony, Total	ND	mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Arsenic, Total	ND	mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Cadmium, Total	ND	mg/l	0.0002	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Chromium, Total	ND	mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Copper, Total	ND	mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Lead, Total	ND	mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Nickel, Total	ND	mg/l	0.0005	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Selenium, Total	ND	mg/l	0.001	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Silver, Total	ND	mg/l	0.0004	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM
Zinc, Total	ND	mg/l	0.0050	1	05/28/09 12:30	05/29/09 22:08	1,6020	BM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG364251-1								
Mercury, Total	ND	mg/l	0.0002	1	05/28/09 14:05	05/29/09 11:06	3,245.1	EZ

Prep Information

Digestion Method: EPA 245.2

Lab Control Sample Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: Not Specified

Lab Number: L0906816

Report Date: 06/02/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG364210-2					
Iron, Total	97	-	85-115	-	
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG364222-2					
Antimony, Total	102	-	80-120	-	
Arsenic, Total	96	-	80-120	-	
Cadmium, Total	113	-	80-120	-	
Chromium, Total	107	-	80-120	-	
Copper, Total	107	-	80-120	-	
Lead, Total	105	-	80-120	-	
Nickel, Total	107	-	80-120	-	
Selenium, Total	98	-	80-120	-	
Silver, Total	104	-	80-120	-	
Zinc, Total	111	-	80-120	-	
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG364251-2					
Mercury, Total	101	-		-	

Matrix Spike Analysis

Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: Not Specified

Lab Number: L0906816

Report Date: 06/02/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG364210-4 QC Sample: L0906776-01 Client ID: MS Sample									
Iron, Total	0.51	1	1.6	109	-	-	75-125	-	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG364222-4 QC Sample: L0906816-01 Client ID: EX01									
Antimony, Total	ND	0.5	0.5228	104	-	-	80-120	-	20
Arsenic, Total	0.0352	0.12	0.1630	106	-	-	80-120	-	20
Cadmium, Total	ND	0.051	0.0580	114	-	-	80-120	-	20
Chromium, Total	0.0006	0.2	0.2242	112	-	-	80-120	-	20
Copper, Total	0.0017	0.25	0.2802	111	-	-	80-120	-	20
Lead, Total	ND	0.51	0.5574	109	-	-	80-120	-	20
Nickel, Total	0.0109	0.5	0.5647	111	-	-	80-120	-	20
Selenium, Total	0.001	0.12	0.122	101	-	-	80-120	-	20
Silver, Total	ND	0.05	0.0537	107	-	-	80-120	-	20
Zinc, Total	0.0101	0.5	0.5723	112	-	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG364251-4 QC Sample: L0906749-02 Client ID: MS Sample									
Mercury, Total	ND	0.001	0.0012	121	-	-		-	

Lab Duplicate Analysis Batch Quality Control

Project Name: PEABODY ESSEX MUSEUM

Project Number: Not Specified

Lab Number: L0906816

Report Date: 06/02/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG364222-3 QC Sample: L0906816-01 Client ID: EX01					
Antimony, Total	ND	ND	mg/l	NC	20
Arsenic, Total	0.0352	0.0350	mg/l	1	20
Cadmium, Total	ND	ND	mg/l	NC	20
Chromium, Total	0.0006	0.0005	mg/l	6	20
Copper, Total	0.0017	0.0017	mg/l	2	20
Lead, Total	ND	ND	mg/l	NC	20
Nickel, Total	0.0109	0.0107	mg/l	1	20
Selenium, Total	0.001	0.001	mg/l	16	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.0101	0.0059	mg/l	52	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG364251-3 QC Sample: L0906749-02 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	

Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0906816**Project Number:** Not Specified**Report Date:** 06/02/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal
L0906816-01A	Plastic 500ml HNO3 preserved	A	<2	3	Y	Absent

Analysis

SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),FE-UI(180),PB-6020T(180),HG-U(28),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180)

*Hold days indicated by values in parentheses

Project Name: PEABODY ESSEX MUSEUM
Project Number: Not Specified

Lab Number: L0906816
Report Date: 06/02/09

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
ND	- Not detected at the reported detection limit for the sample.
NI	- Not Ignitable.
RDL	- Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

*	- The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
N	- The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
P	- The RPD between the results for the two columns exceeds the method-specified criteria.
R	- Analytical results are from sample re-analysis.
RE	- Analytical results are from sample re-extraction.
J	- Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

Report Format: Data Usability Report



Project Name: PEABODY ESSEX MUSEUM**Lab Number:** L0906816**Project Number:** Not Specified**Report Date:** 06/02/09

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised February 18, 2009 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. Organic Parameters: 504.1, 524.2, SM 6251B.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

Non-Potable Water

Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Tl,Ti,V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.*Drinking Water*

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 314.0, SM4500CN-E, 4500H+B, 4500NO₃-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH₃-H, 4500NH₃-E, 4500NO₂-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO₃-F, 4500NO₂-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH₃-H, EPA 350.2/1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

New York Department of Health Certificate/Lab ID: 11148.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, LACHAT 10-107-06-1-B, SM4500NH₃-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO₃F, EPA 354.1, SM4500-NO₂-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. Registered Laboratory.

