



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

CERTIFIED MAIL RETURN RECEIPT REQUESTED

JUN 13 2012

Robert Bradley
Project Manager
Keith Construction Inc.
14 Page Terrace
Stoughton, MA 02072

Re: Authorization to discharge under the Remediation General Permit (RGP) –
MAG910000. Ames Shovel Works site located at 50 Main Street, Easton, MA 02356
Bristol County; Authorization # MAG910540

Dear Mr. Bradley:

Based on the review of a Notice of Intent (NOI) submitted on behalf of BC Shovel Works LLC by the firm McPhail Associates, Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

The checklist enclosed with this RGP authorization indicates the pollutants which you are required to monitor. Also indicated on the checklist are the effluent limits, test methods and minimum levels (MLs) for each pollutant. Please note that the checklist does not represent the complete requirements of the RGP. Operators must comply with all of the applicable requirements of this permit, including influent and effluent monitoring, narrative water quality standards, record keeping, and reporting requirements, found in Parts I and II, and Appendices I – VIII of the RGP. See EPA's website for the complete RGP and other information at: <http://www.epa.gov/region1/npdes/mass.html#dgp>.

Please note the enclosed checklist includes parameters that exceeded Appendix III limits. The checklist also includes other parameters for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the minimum levels established in Appendix VI of the RGP.

In addition, Group I- Polycyclic Aromatic Hydrocarbons (PAHs) have been included on the check list in view of historic contamination. You may request deletion of these and any other parameters on the check list not detected during the first six consecutive months of influent monitoring using a notice of change (NOC) application found in Appendix V of the RGP.

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR). With the absence of dilution to ponds, EPA determined that the DFR for each parameter is in the one and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities) Therefore, the limits for lead of 1.3 ug/L, zinc of 66.6 ug/L and iron of 1,000 ug/L, are required to achieve permit compliance at your site.

Finally, please note the checklist of pollutants attached to this authorization is subject to a recertification if the operations at the site result in a discharge lasting longer than six months. A recertification can be submitted to EPA within six (6) to twelve (12) months of operations in accordance with the 2010 RGP regulations.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on June 2, 2013. If for any reason the discharge terminates sooner you are required to submit a Notice of Termination (NOT) to the attention of the contact person indicated below within 30 days of project completion.

Thank you in advance for your cooperation in this matter. Please contact Victor Alvarez at 617-918-1572 or Alvarez.Victor@epa.gov, if you have any questions.

Sincerely,



Thelma Murphy, Manager
Storm Water and Construction
Permits Section

Enclosure

cc: Kathleen Keohane, MassDEP
David Field, Easton DPW
William J. Burns, McPhail Associates

**2010 Remediation General Permit
Summary of Monitoring Parameters^[1]**

NPDES Authorization Number:		MAG910540
Authorization Issued:	June, 2012	
Facility/Site Name:	Ames Shovel Works	
Facility/Site Address:	50 Main Street, Easton, MA 02356, Bristol County	
	Email address of owner:jcohen@beaconcommunitiesLLC.com	
Legal Name of Operator:	Keith Construction Inc.	
Operator contact name, title, and Address:	Robert Bradley, Project Manager, 14 Page Terrace, Stoughton, MA 02072	
	Email: bbradley@keithconstruction.ne	
Estimated date of Completion:	June 2, 2013	
Category and Sub-Category:	Category I- Petroleum Related Site Remediation. Sub-category B. Fuel Oil and Other Oils Sites and Category III- Contaminated Construction Dewatering. Sub-category B. Known Contaminated Sites	
RGP Termination Date:	September 10, 2015	
Receiving Water:	Shovel Shop Pond	

Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing **, Me#60.2/ML5ug/L
✓	2. Total Residual Chlorine (TRC) ¹	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
✓	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
✓	4. Cyanide (CN) ^{2, 3}	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ML 2ug/L
	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ML 2ug/L

	Parameter	Effluent Limit/Method#/ML (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
✓	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) ⁴	100 ug/L/ Me#8260C/ ML 2ug/L
✓	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
✓	14. Naphthalene ⁵	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
✓	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
✓	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
✓	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
✓	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
✓	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
✓	33. Total Phthalates (Phthalate esters) ⁶	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
✓	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
✓	a. Benzo(a) Anthracene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	b. Benzo(a) Pyrene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	c. Benzo(b)Fluoranthene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	d. Benzo(k)Fluoranthene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	e. Chrysene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	f. Dibenzo(a,h)anthracene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
✓	g. Indeno(1,2,3-cd) Pyrene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
✓	h. Acenaphthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	i. Acenaphthylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	j. Anthracene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	l. Fluoranthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	m. Fluorene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	n. Naphthalene ⁵	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	o. Phenanthrene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
✓	37. Total Polychlorinated Biphenyls (PCBs) ^{8,9}	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
✓	38. Chloride	Monitor only/Me# 300.0/ ML 0.1ug/L

<u>Metal parameter</u>	<u>Total Recoverable Metal Limit @ H¹⁰ = 50 mg/l CaCO3 for discharges in Massachusetts (ug/l)</u> <small>11/12</small>	<u>Minimum level=ML</u>

		Freshwater	Saltwater		
	39. Antimony	5.6/ML 10			
	40. Arsenic **	10/ML20	36/ML 20		
	41. Cadmium **	0.2/ML10	8.9/ML 10		
	42. Chromium III (trivalent) **	48.8/ML15	100/ML 15		
	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10		
	44. Copper **	5.2/ML15	3.7/ML 15		
√	45. Lead **	1.3/ML20	8.5/ML 20		
	46. Mercury **	0.9/ML0.2	1.1/ML 0.2		
	47. Nickel **	29/ML20	8.2/ML 20		
	48. Selenium **	5/ML20	71/ML 20		
	49. Silver	1.2/ML10	2.2/ML 10		
√	50. Zinc **	66.6/ML15	85.6/ML 15		
√	51. Iron	1,000/ML 20			

	Other Parameters	Limit
√	52. Instantaneous Flow	Site specific in CFS
√	53. Total Flow	Site specific in CFS
√	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab ¹³
	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab ¹³
	56. pH Range for Class B Waters in NH	6.5-8; 1/Month/Grab ¹³
	57. Daily maximum temperature - Warm water fisheries	83°F; 1/Month/Grab ¹⁴
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab ¹⁴
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab ¹⁴
	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab ¹⁴
	61. Maximum Change in Temperature in MA - Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab ¹⁴
	62. Maximum Change in Temperature in MA - Any Class SA water body - Coastal	1.5°F; 1/Month/Grab ¹⁴
	63. Maximum Change in Temperature in MA - Any Class SB water body - July to September	1.5°F; 1/Month/Grab ¹⁴
	64. Maximum Change in Temperature in MA -Any Class SB water body - October to June	4°F; 1/Month/Grab ¹⁴

Footnotes:

¹ Although the maximum values for TRC are 11ug/l and 7.5 ug/l for freshwater, and saltwater respectively, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., Method 330.5, 20 ug/l).

² Limits for cyanide are based on EPA's water quality criteria expressed as micrograms per liter. There is currently no EPA approved test method for free cyanide. Therefore, total cyanide must be reported.

³ Although the maximum values for cyanide are 5.2 ug/l and 1.0 ug/l for freshwater and saltwater, respectively, the compliance limits are equal to the minimum level (ML) of the Method 335.4 as listed in Appendix VI (i.e., 10 ug/l).

⁴ BTEX = sum of Benzene, Toluene, Ethylbenzene, and total Xylenes.

⁵ Naphthalene can be reported as both a purgeable (VOC) and extractable (SVOC) organic compound. If both VOC and SVOC are analyzed, the highest value must be used unless the QC criteria for one of the analyses is not met. In such cases, the value from the analysis meeting the QC criteria must be used.

⁶ The sum of individual phthalate compounds(not including the #34, Bis (2-Ethylhexyl) Phthalate . The compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measurement of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

⁷ Although the maximum value for the individual PAH compounds is 0.0038 ug/l, the compliance limits are equal to the minimum level (ML) of the test method used as listed in Appendix VI.

⁸ In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as total PCBs is the sum of all homologue, all isomer, all congener, or all "Orochlor analyses."Total values calculated for reporting on NOIs and discharge monitoring reports shall be calculated by adding the measured concentration of each constituent. If the measure of a constituent is less than the ML, the permittee shall use a value of zero for that constituent. For each test, the permittee shall also attach the raw data for each constituent to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

⁹Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved).

¹⁰ Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

¹¹ For a Dilution Factor (DF) from 1 to 5, metals limits are calculated using DF times the base limit for the metal. See Appendix IV. For example, iron limits are calculated using DF x 1,000ug/L (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit =1,000 x 2 =2,000 ug/L., etc. not to exceed the DF=5.

¹² Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B).

¹³ pH sampling for compliance with permit limits may be performed using field methods as provided for in EPA test Method 150.1.

¹⁴ Temperature sampling per Method 170.1



**NOTICE OF INTENT FOR DISCHARGE
UNDER MASSACHUSETTS REMEDIAL
GENERAL PERMIT MAG910000**

**AMES SHOVEL WORKS
50 MAIN STREET**

EASTON MASSACHUSETTS

to

U.S. Environmental Protection Agency

May 24, 2012

Project No. 5031



May 24, 2012

U.S Environmental Protection Agency
RGP-NOC Processing Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Attention: RGP-NOC Processing

Reference: Ames Shovel Works; 50 Main Street (also known as 26, 28 and 34 Main Street);
North Easton, Massachusetts
Notice of Intent for Construction Dewatering Discharge Under Massachusetts
Remedial General Permit MAG910000

Ladies and Gentlemen:

The purpose of this letter report is to provide a summary of the site and groundwater quality information in support of an application for approval from the U.S. Environmental Protection Agency (EPA) for the temporary discharge of groundwater into the Shovel Shop Pond via a storm drain system during construction at the above referenced site. Refer to **Figure 1** Project Location Plan for the general site locus.

These services were performed and this permit application was prepared with the authorization of BC Shovel Works LLC. These services are subject to the limitations contained in **Appendix A**.

The required Notice of Intent Form contained in the RGP permit is included in **Appendix B**.

Applicant/Operator

The applicant for the Notice of Intent-Remedial General Permit is:

Keith Construction Inc.
14 Page Terrace
Stoughton, MA 02072

Attention: Mr. Bob Bradley

Tel: 781-828-8474
Fax: 781-828-0010

Existing Conditions

Fronting onto Main Street to the west, the subject site is bounded by Oliver Street to the north, the former North Easton Railroad Station and railroad tracks to the east, and Queset Brook to the south. The subject site, referred to as Ames Shovel Works, consists of two (2) irregularly shaped parcels of land occupying approximately 8 acres. Currently, the property is occupied by a former residential dwelling, thirteen (13) buildings formerly occupied by the Ames Shovel and Tool Company, asphalt paved parking lots, landscaped margins and areas of grass and overgrown vegetation. The existing buildings are currently vacant, and the former residential dwelling has been vandalized. The limits of the subject site are shown on **Figure 2**, which is based on a plan entitled Subsurface Investigation Plan.



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The site and surrounding area are serviced by public utilities including municipal water and gas. Catch basins located on-site and along Oliver Street and Main Street control surface drainage.

Site Environmental Setting and Surrounding Historical Places

Based on an on-line edition of the Massachusetts Geographic Information Systems (GIS) on-line DEP Priority Resources Map the subject site is not located within the boundaries of a Potentially Productive Aquifer or within an Interim Wellhead Protection Area as defined by the Massachusetts Department of Environmental Protection. However, the map indicates that the subject site is located in a Zone II Drinking Water Area. The nearest Public Water Supply Well is located approximately 1-mile to the southeast of the subject site. Queset Brook bounds the southern end of the subject site, and Shovel Shop Pond is located approximately 200 feet to the west of the subject site. According to the Priority Resources Map, there are no Areas of Critical Environmental Concern, no habitats of Species of Special Concern or Threatened or Endangered Species within specified distances of the subject site. A Certified Vernal Pool is located approximately 500 feet to the southwest of the subject site. The Map indicates that there are no areas designated as solid waste sites (landfills) located within 1,000 feet of the site. Based on EDR's search of FEMA Flood Plain Maps, the majority of the subject site is not located within a 100 year or 500 year flood plain. However, the bank along Queset Brook located along the southern boundary of the subject site is located within a 100 year flood plain. A copy of the DEP Priority Resources Map depicting the location of the subject property is included in **Appendix C**.

A review of the most recent federal listing of threatened and endangered species published by the U.S. Fish and Wildlife Service identified no threatened and/or endangered species at or in the vicinity of the discharge location and/or discharge outfall. A review of the Massachusetts Division of Fisheries and Wildlife on-line database identified no threatened, rare or endangered species at the point of discharge and/or the discharge outfall. A list of threatened and endangered species from the U.S. Fish and Wildlife Services and Massachusetts Division of Fisheries on-line databases is included in **Appendix C**.

A review of the most recent National Register of Historical Places for Bristol County in Easton, Massachusetts did not identify records or addresses of Historic Sites that exist in the immediate vicinity of the subject property and/or outfall location. However, the subject site and several of its structures are listed as historical places by the Massachusetts Historical Commission. Construction at the subject site will be conducted as an historic rehabilitation. The proposed rehabilitation has been reviewed and approved by the Town of Easton Historical Commission, the Massachusetts Historical Commission and the National Park Service. Given that the discharge will flow through the site's storm drain system which discharges into Shovel Shop Pond, it is anticipated that discharge activities will not affect the historical places listed by the Massachusetts Historical Commission.

Release History

The presence of extractable petroleum hydrocarbon fractions (EPHs), naphthalene, lead and beryllium above RCS-1 Standards in site soils and volatile petroleum hydrocarbon fractions (VPHs) and EPHs in groundwater above the RCGW-1 Standards were reported to DEP in May 2006 based on subsurface investigations and chemical testing of soil and groundwater samples. The explorations and testing were conducted by Norfolk Ram Group (NRG) on behalf of Shovel Shop Square Nominee Trust, a former Owner. The DEP subsequently assigned Release Tracking Number (RTN) 4-19778 to the release site. In accordance with the Massachusetts Contingency Plan (MCP), NRG submitted a RAM Plan during June 2006 and RAM Status Reports to the DEP during October 2006, April 2007 and October 2007.



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The scope of the RAM Plan prepared by NRG included excavation of petroleum impacted soil and treating of petroleum impacted groundwater within three (3) separate areas on the subject site. Impacted soil was transported to Aggregate Industries in Stoughton, Massachusetts and treated groundwater was discharged into on-site stormwater catch basins in accordance with an NPDES permit.

A Phase I Initial Site Investigation and Tier Classification Report, prepared by NRG, was submitted to the DEP on May 17, 2007 on behalf of a former Owner of the property, Easton Shovel Shop, LLC. NRG completed a Numerical Ranking System (NRS) Scoresheet with a score of 517 for the subject site indicating that the subject site is a Tier IB site.

On April 13, 2012, BC Shovel Works LLC acquired the subject site. Subsequently, McPhail Associates, LLC submitted a Phase I Initial Site Investigation Report and Tier Classification to the DEP which re-established MCP reporting deadlines for the release site. The Phase I Initial Site Investigation Report documented the results of previously completed subsurface investigations performed by McPhail Associates, LLC at the site. Based on the results of our supplemental subsurface investigations, a new reporting condition was identified at the site due to concentrations of antimony, arsenic, cadmium, chromium, lead and nickel in soil which exceed applicable RCS-1 reporting thresholds.

Proposed Scope of Site Development

It is understood that the existing buildings will be renovated into multi-unit residential buildings. The proposed development is understood to include rehabilitation of the buildings. It is understood that Building 10 will be a new wastewater treatment plant constructed by the Town of Easton.

Renovations to the buildings will include new interior framing and construction of additional levels or lofts within the existing facades of Buildings 1, 2, 4, 4B, 4C, 5 and 7A. It is understood that renovations to Buildings 3, 4A, 6 and 7B will include roof framing and cupola construction, with some minor load increases to the existing foundations.

Site redevelopment will also include construction of parking areas, roadways, walkways, landscaped areas and installation of new utilities.

Construction Site Dewatering

As part of the planned redevelopment of the subject site, it is anticipated that construction of site utilities will extend below the surface of the groundwater. Hence, construction dewatering will be required during excavation at these areas. The excavation of site soils and dewatering of groundwater will be performed under the provisions of a RAM plan that is to be submitted to the DEP during June 2012.

It is estimated that intermittent groundwater discharge required during excavation will be on the order of 30 to 50 gallons per minute (GPM).

Construction dewatering will require the discharge of collected groundwater into the on-site storm drain system under the requested Remedial General Permit. According to an Existing Site Grading and Drainage Plan of the Ames Shovel Works complex, the dedicated storm drainage system that exists at the subject site discharges stormwater into the nearby Shovel Shop Pond. Specifically, on-site catch basins connect to storm drain pipes which flow south to a single dedicated storm drain pipe located at the southeastern portion of the subject site. The dedicated storm drain pipe flows east beneath the abutting railroad tracks and eventually discharges into the nearby Shovel Shop Pond. The on-site storm drain system and the direction of storm water flow is shown on **Figure 3** which is based upon the Existing Site



Grading and Drainage Plan.

Summary of Groundwater Analysis

In May 2010, August 2011, and September 2011, groundwater samples were obtained by McPhail Associates, LLC from on-site monitoring wells identified as B-1(OW), B-2(OW), B-3(OW), B-6(OW), B-7(OW), B-9(OW), B-13(OW), MW-A, B-101(OW), B-102(OW), B-106(OW), NRG-1, NRG-7, NRG-11, NRG-14, and NRG-16. The groundwater samples were submitted for laboratory analysis for the presence of extractable petroleum hydrocarbons (EPHs) with target polynuclear aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs) volatile petroleum hydrocarbons (VPHs), and/or metals. The purpose of the analysis was to assess possible impacts to groundwater from the previously identified release conditions on the subject site.

The results of the laboratory analysis are summarized in **Table 1**, and laboratory data is included in **Appendix D**. The results of laboratory analysis indicate the following:

1. **EPH target PAH analytes:** Twenty-one (21) groundwater samples were obtained from on-site monitoring wells by McPhail Associates and analyzed for the presence of the EPH fractions and target PAHs. With the exception of four samples, the results of the groundwater analysis did not detect the presence of EPHs in excess of the laboratory method detection limits. The total concentration of hydrocarbons in groundwater samples which exhibited detectable levels of EPH, did not exceed the RGP effluent limit of 5,000 micrograms per liter (ug/l) for total petroleum hydrocarbons (TPH). These samples were obtained from three isolated areas located at the subject site.

Although the laboratory testing did not detect the presence of Group I PAHs in excess of the laboratory method detection limits, the associated method detection limits exceeded the EPA effluent limits for Group I PAHs.

Laboratory analysis did not detect the presence of Group II PAH compounds in excess of the EPA established total effluent limit of 100 ug/l.

As indicated above, a release of EPH and naphthalene was detected in soil and groundwater within three isolated areas located at the Ames Shovel Works complex. Although, post remedial analysis of groundwater at these areas has not detected residual levels of petroleum hydrocarbons or naphthalene in excess of the EPA effluent limits, it is possible that these constituents may be encountered during dewatering at concentrations which exceed the EPA effluent limits. If evidence of petroleum contamination is identified during dewatering, a granular activated carbon filter will be incorporated into the dewatering treatment system.

2. **VOCs:** A total of eight (8) groundwater samples were analyzed for the presence of VOCs. The results indicated that VOCs were not detected above the laboratory method detection limits and/or the applicable EPA effluent limits.
3. **VPH:** Laboratory analysis of two groundwater samples indicated that VPHs were either below the applicable laboratory method detection limit and/or the applicable EPA effluent limits.

As indicated above, a release of VPH was previously detected in groundwater within three isolated areas located at the Ames Shovel Works complex. Although, post remedial analysis of groundwater at these areas has not detected residual levels of petroleum hydrocarbons in excess



of the EPA effluent limits, it is possible that these constituents may be encountered during dewatering at concentrations which exceed the EPA effluent limits. If evidence of petroleum contamination is identified during dewatering, a granular activated carbon filter will be incorporated into the dewatering treatment system.

4. **Metals:** A total of four (4) groundwater samples were analyzed for the presence of total antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium and zinc. In addition, one groundwater sample was analyzed for the presence of dissolved lead.

With the exception of antimony, mercury, zinc and lead, concentrations of metals were not detected in excess of the laboratory method detection limits. However, laboratory method detection limits for cadmium and silver were set above the EPA established effluent limits. Only one sample, obtained from monitoring well B-13(OW), exhibited concentrations of antimony and mercury in excess of the laboratory method detection limits. Concentrations of antimony and mercury were detected in the sample obtained from B-13(OW) at 0.6 ug/l and 0.2 ug/l, respectively, which are below the applicable EPA effluent limits. Total zinc was detected at a concentration of 118 ug/l in the sample obtained from monitoring well B-1(OW). Additionally, the groundwater sample obtained from B-13(OW) exhibited a level of total lead at 17 ug/l.

The detected levels of total zinc and lead exceed the EPA effluent limit of 66.6 ug/l and 1.3 ug/l, respectively, for discharge into a freshwater body. Based on calculations of the applicable dilution factor as shown below, the detected concentration of zinc does not exceed the applicable EPA effluent limit. However, the concentration of lead continues to exceed the corresponding dilution concentration of 2.3 ug/l. An additional sample of groundwater was obtained from B-13(OW) and submitted for laboratory analysis for the presence of dissolved lead. The analytical results did not indicate a concentration of dissolved lead in excess of the laboratory method detection limit. As a result, it is likely that the elevated level of lead detected in monitoring well B-13(OW) is attributable to the presence of total suspended solids present in the sample. As discussed in further detail below, dewatered groundwater will pass through a settling tank and bag filters in series prior to discharge into the on-site stormwater drain system. As a result, it is anticipated that levels of lead detected in groundwater will be reduced to below the applicable EPA RGP effluent limitation prior to off-site discharge.

Dilution Factor Application for Total Zinc and Lead

As mentioned above, total zinc and lead were detected at concentrations of 118 ug/l and 17 ug/l, respectively. The EPA freshwater effluent limitations for zinc and lead are 66.6 ug/l and 1.3 ug/l, respectively. As a result, a Dilution Factor (DF) was calculated for the detected levels of total zinc and lead pursuant to the procedure contained in RGP MAG910000, Appendix V. The purpose of the DF calculation is to establish Total Recoverable Limits for metals, taking into consideration the anticipated dilution of the detected analyte upon discharge into the Shovel Shop Pond. The Minimum Flow Rate calculated by the USGS Streamstats GIS database at the location of discharge into the Shovel Shop Pond for 7 consecutive days with a recurrence interval of 10 years (7Q10 flow) is 0.0889 cubic feet per second thus resulting in a DF of 1.8. Therefore, based on calculations of the applicable dilution factor, zinc does not exceed the applicable permit limit of 119.9 ug/l for total recoverable metals. However, as mentioned above the detected level of lead at 17 ug/l exceeds the dilution concentration of 2.3 ug/l for discharge into a freshwater body.



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Groundwater Treatment

As indicated above, concentrations of petroleum hydrocarbons, naphthalene and metals have been detected in soil and groundwater within isolated areas at the subject site which required notification to the DEP. With the exception of total lead, recent groundwater testing has not detected concentrations of petroleum constituents or metals which exceed the EPA effluent limits. Therefore, based upon the recent analysis of groundwater at the subject site in conjunction with the scope of site redevelopment, it is anticipated that a 5,000-gallon settling tank and bag filters in series will be necessary to settle out particulate matter and reduce levels of lead to meet the applicable effluent limits established by the US EPA for discharge into a freshwater body. A schematic of the treatment system is shown on **Figure 4**.

To document the effectiveness of the treatment system, samples of the discharge water will be obtained and tested for the presence of TSS, Group I PAHs, TPH, total lead and zinc prior to the start of discharge into the storm drain system. Should the pre-start up testing indicate that the levels of these compounds in the effluent exceed the limits established under the RGP, additional treatment of the effluent will be implemented prior to initial discharge. Although, recent analysis of groundwater at the subject site has not detected residual levels of petroleum hydrocarbons or naphthalene in excess of the EPA effluent limits, it is possible that these constituents may be encountered in dewatered groundwater during construction at concentrations which exceed the EPA effluent limits. If evidence of petroleum contamination is identified during dewatering, a granular activated carbon filter will be incorporated into the dewatering treatment system. In addition, should other contaminants be detected within the discharge water during the construction dewatering phase of the project at levels that exceed the effluent limitations, mitigative measures will be implemented to meet the allowable discharge limits.

Summary and Conclusions

The purpose of this report is to assess site environmental conditions and groundwater data to support an application for a Massachusetts Remedial General Permit for off-site discharge of groundwater which will be encountered during redevelopment of the Ames Shovel Complex located in Easton. The groundwater testing results reported in this application have been provided to the site owner.

Based on the results of the above referenced groundwater analyses in conjunction with the presence of an MCP release site documented at the subject site, groundwater treatment is necessary to meet allowable effluent limits established by the US EPA prior to discharge. The proposed groundwater treatment system will consist of one settling tank 5,000-gallons in capacity and bag filters in series in order to meet the applicable discharge limits for TPH, Group I PAHs and metals established by the RGP. In order to ensure that the levels of TSS, Group I PAHs, TPH and total metals meet the terms of the discharge permit, a sample of the effluent will be submitted for laboratory analysis prior to discharge into the on-site storm drain system. However, should the effluent monitoring results indicate levels of TSS, PAHs, TPH or metals in excess of the limits established in the Massachusetts Remedial General Permit, additional mitigative measures will be implemented to meet the allowable discharge limits.



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May 24, 2012
Page 7

We trust that the above satisfies your present requirements. Should you have any questions or comments concerning the above, please do not hesitate to contact us.

Very truly yours,

McPHAIL ASSOCIATES, LLC

A handwritten signature in black ink, appearing to read "W. Burns", written over a horizontal line.

William J. Burns

A handwritten signature in black ink, appearing to read "Peter J. DeChaves", written over a horizontal line.

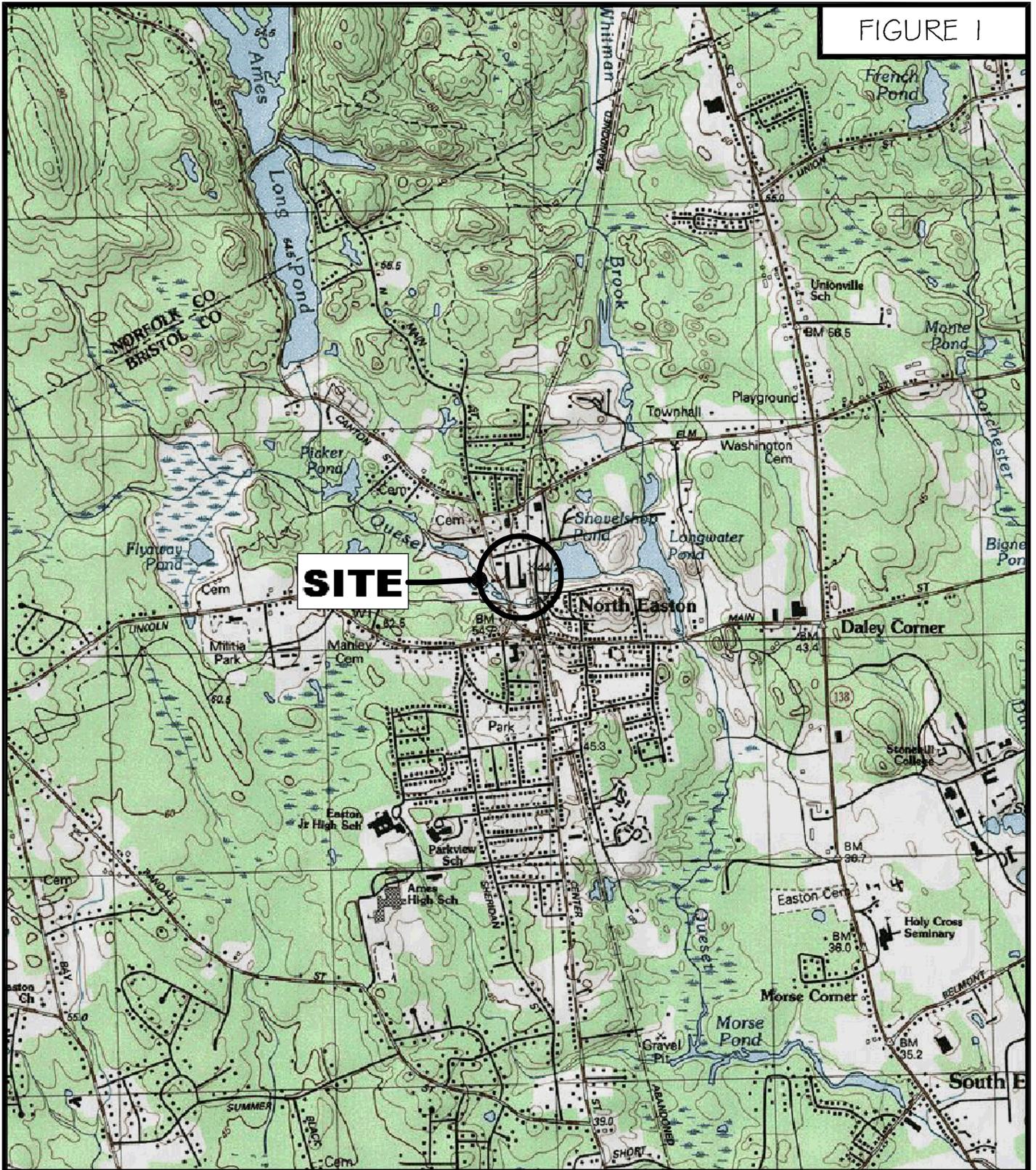
Peter J. DeChaves, L.S.P.

Enclosures

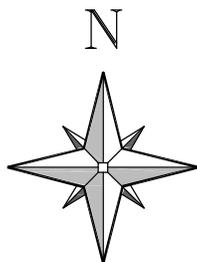
F:\WP5\REPORTS\5031 RGP.wpd

WJB/pjd

FIGURE 1



Geotechnical and
Geoenvironmental Engineers
2269 Massachusetts Avenue
Cambridge, MA 02140
617/868-1420
617/868-1423 (Fax)



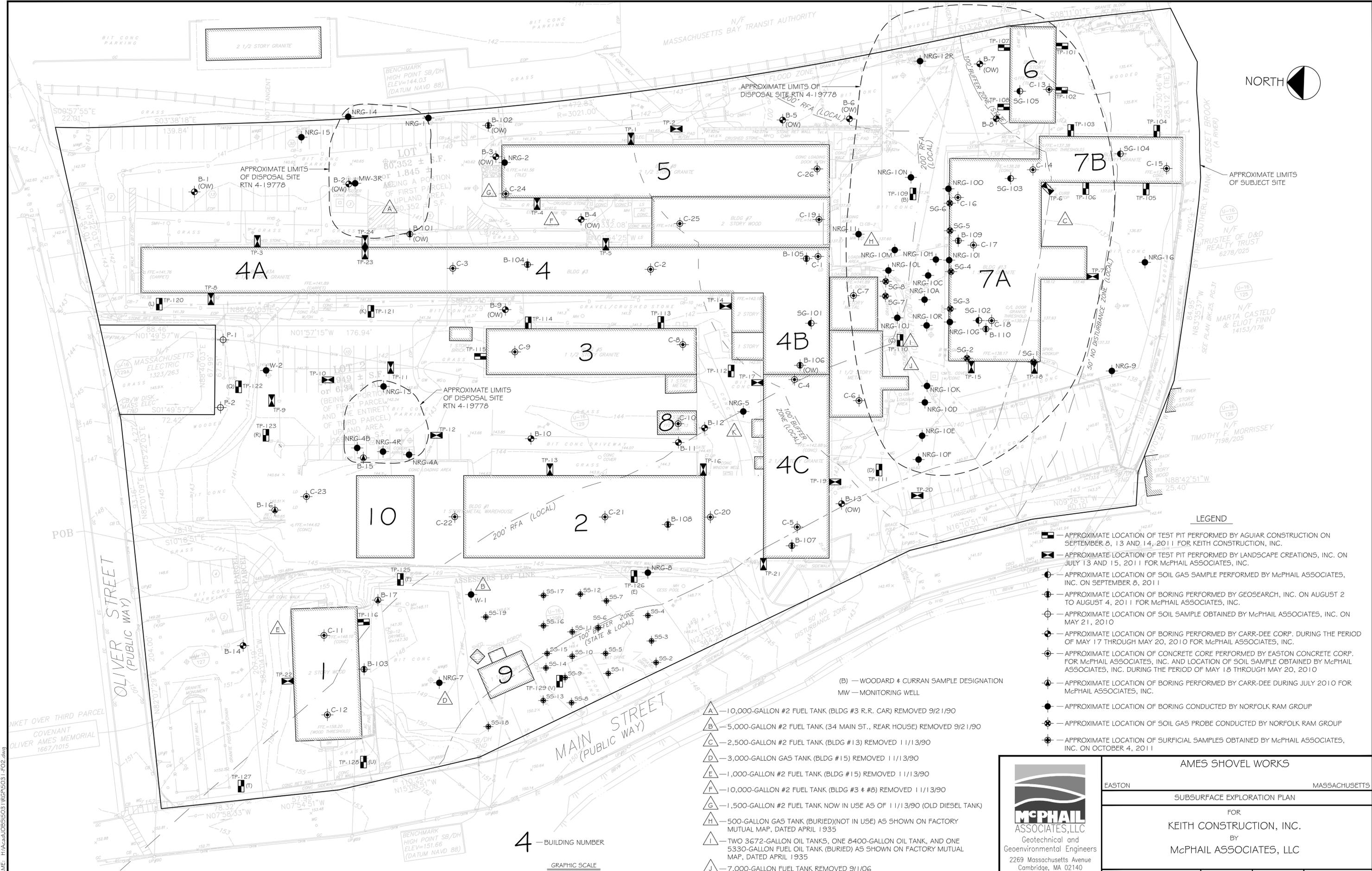
SCALE 1:25,000

PROJECT LOCATION PLAN

AMES SHOVEL WORKS

EASTON

MASSACHUSETTS



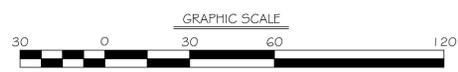
LEGEND

- APPROXIMATE LOCATION OF TEST PIT PERFORMED BY AGUIAR CONSTRUCTION ON SEPTEMBER 8, 13 AND 14, 2011 FOR KEITH CONSTRUCTION, INC.
- APPROXIMATE LOCATION OF TEST PIT PERFORMED BY LANDSCAPE CREATIONS, INC. ON JULY 13 AND 15, 2011 FOR McPHAIL ASSOCIATES, INC.
- APPROXIMATE LOCATION OF SOIL GAS SAMPLE PERFORMED BY McPHAIL ASSOCIATES, INC. ON SEPTEMBER 8, 2011
- APPROXIMATE LOCATION OF BORING PERFORMED BY GEOSearch, INC. ON AUGUST 2 TO AUGUST 4, 2011 FOR McPHAIL ASSOCIATES, INC.
- APPROXIMATE LOCATION OF SOIL SAMPLE OBTAINED BY McPHAIL ASSOCIATES, INC. ON MAY 21, 2010
- APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING THE PERIOD OF MAY 17 THROUGH MAY 20, 2010 FOR McPHAIL ASSOCIATES, INC.
- APPROXIMATE LOCATION OF CONCRETE CORE PERFORMED BY EASTON CONCRETE CORP. FOR McPHAIL ASSOCIATES, INC. AND LOCATION OF SOIL SAMPLE OBTAINED BY McPHAIL ASSOCIATES, INC. DURING THE PERIOD OF MAY 18 THROUGH MAY 20, 2010
- APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE DURING JULY 2010 FOR McPHAIL ASSOCIATES, INC.
- APPROXIMATE LOCATION OF BORING CONDUCTED BY NORFOLK RAM GROUP
- APPROXIMATE LOCATION OF SOIL GAS PROBE CONDUCTED BY NORFOLK RAM GROUP
- APPROXIMATE LOCATION OF SURFICIAL SAMPLES OBTAINED BY McPHAIL ASSOCIATES, INC. ON OCTOBER 4, 2011

(B) — WOODARD & CURRAN SAMPLE DESIGNATION
 MW — MONITORING WELL

- A — 10,000-GALLON #2 FUEL TANK (BLDG #3 R.R. CAR) REMOVED 9/21/90
- B — 5,000-GALLON #2 FUEL TANK (34 MAIN ST., REAR HOUSE) REMOVED 9/21/90
- C — 2,500-GALLON #2 FUEL TANK (BLDG #13) REMOVED 11/13/90
- D — 3,000-GALLON GAS TANK (BLDG #15) REMOVED 11/13/90
- E — 1,000-GALLON #2 FUEL TANK (BLDG #15) REMOVED 11/13/90
- F — 10,000-GALLON #2 FUEL TANK (BLDG #3 & #8) REMOVED 11/13/90
- G — 1,500-GALLON #2 FUEL TANK NOW IN USE AS OF 11/13/90 (OLD DIESEL TANK)
- H — 500-GALLON GAS TANK (BURIED)(NOT IN USE) AS SHOWN ON FACTORY MUTUAL MAP, DATED APRIL 1935
- I — TWO 3672-GALLON OIL TANKS, ONE 8400-GALLON OIL TANK, AND ONE 5330-GALLON FUEL OIL TANK (BURIED) AS SHOWN ON FACTORY MUTUAL MAP, DATED APRIL 1935
- J — 7,000-GALLON FUEL TANK REMOVED 9/11/06
- K — GASOLINE PUMP LOCATION AS SHOWN ON FACTORY MUTUAL MAP, DATED APRIL 1935

4 — BUILDING NUMBER



REFERENCE: THIS PLAN WAS PREPARED FROM A 30-SCALE DRAWING ENTITLED "TOPOGRAPHIC PLAN" DATED MAY 7, 2007 BY BEALS AND THOMAS, INC.

McPHAIL ASSOCIATES, LLC
 Geotechnical and Geoenvironmental Engineers
 2269 Massachusetts Avenue
 Cambridge, MA 02140
 617/868-1420
 617/868-1423 (Fax)

AMES SHOVEL WORKS

EASTON	MASSACHUSETTS		
SUBSURFACE EXPLORATION PLAN			
FOR			
KEITH CONSTRUCTION, INC.			
BY			
McPHAIL ASSOCIATES, LLC			
Date: MAY 2012	Dwn: F.G.P.	Chkd: W.J.B.	Scale: 1" = 30'
Project No: 5031	FIGURE 2		

FILE NAME: H:\a\10955031\NRG5031_F02.dwg

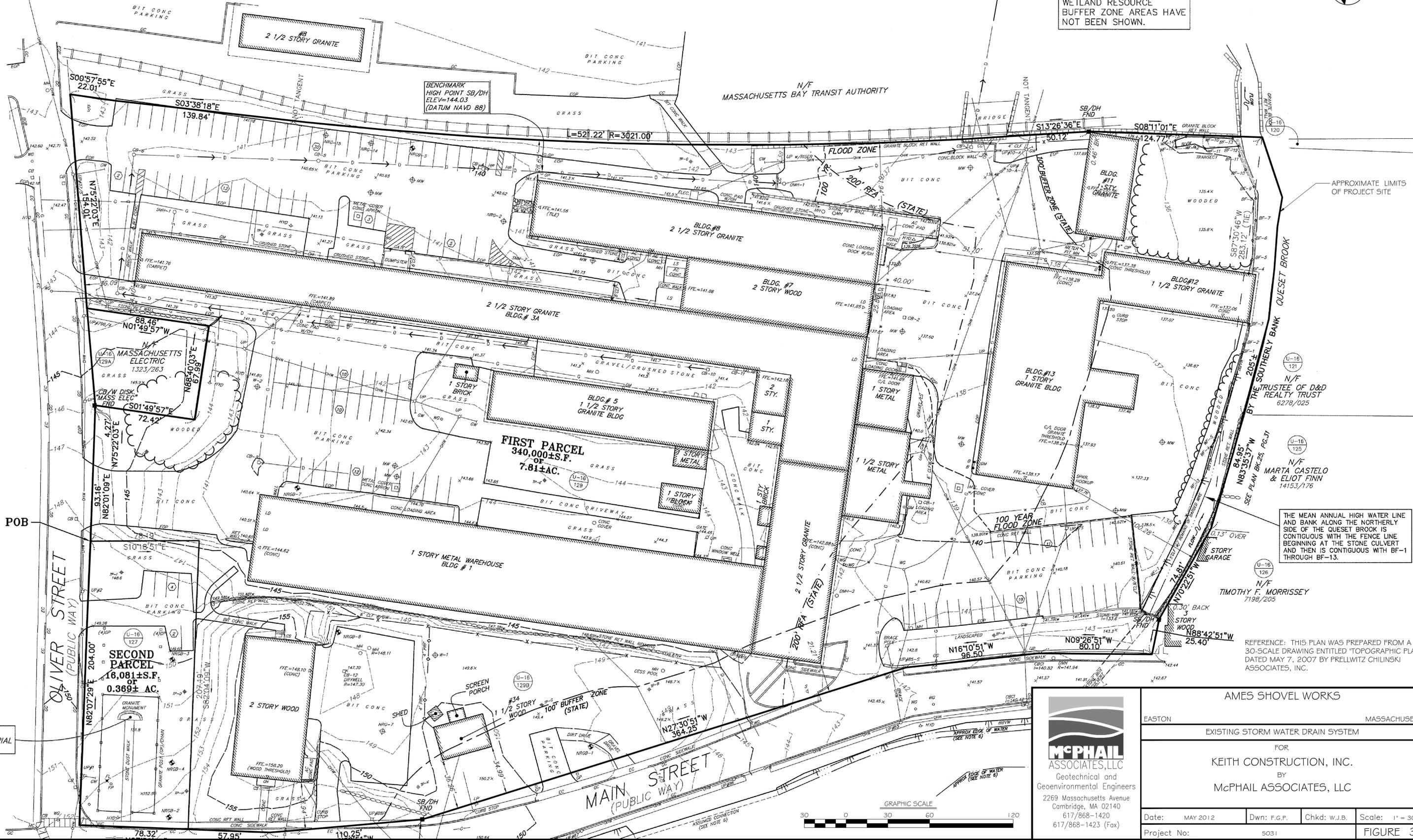
FIRST PARCEL 340,000±S.F. or 7.81±AC.
 SECOND PARCEL 16,081±S.F. or 0.369±AC.
 TOTAL AREA 356,100±S.F. or 8.17± AC.



LOCATION OF DISCHARGE TO SHOVEL SHOP POND



NOTE:
 LOCAL RIVERFRONT AND WETLAND RESOURCE BUFFER ZONE AREAS HAVE NOT BEEN SHOWN.



APPROXIMATE LIMITS OF PROJECT SITE

N/F TRUSTEE OF D&D REALTY TRUST 6278/025
 N/F MARTA CASTELO & ELIOT FINN 14153/176
 N/F TIMOTHY F. MORRISSEY 7198/205

THE MEAN ANNUAL HIGH WATER LINE AND BANK ALONG THE NORTHERLY SIDE OF THE QUESET BROOK IS CONTIGUOUS WITH THE FENCE LINE BEGINNING AT THE STONE CULVERT AND THEN IS CONTIGUOUS WITH BF-1 THROUGH BF-13.

REFERENCE: THIS PLAN WAS PREPARED FROM A 30-SCALE DRAWING ENTITLED "TOPOGRAPHIC PLAN" DATED MAY 7, 2007 BY PRELLWITZ CHILINSKI ASSOCIATES, INC.

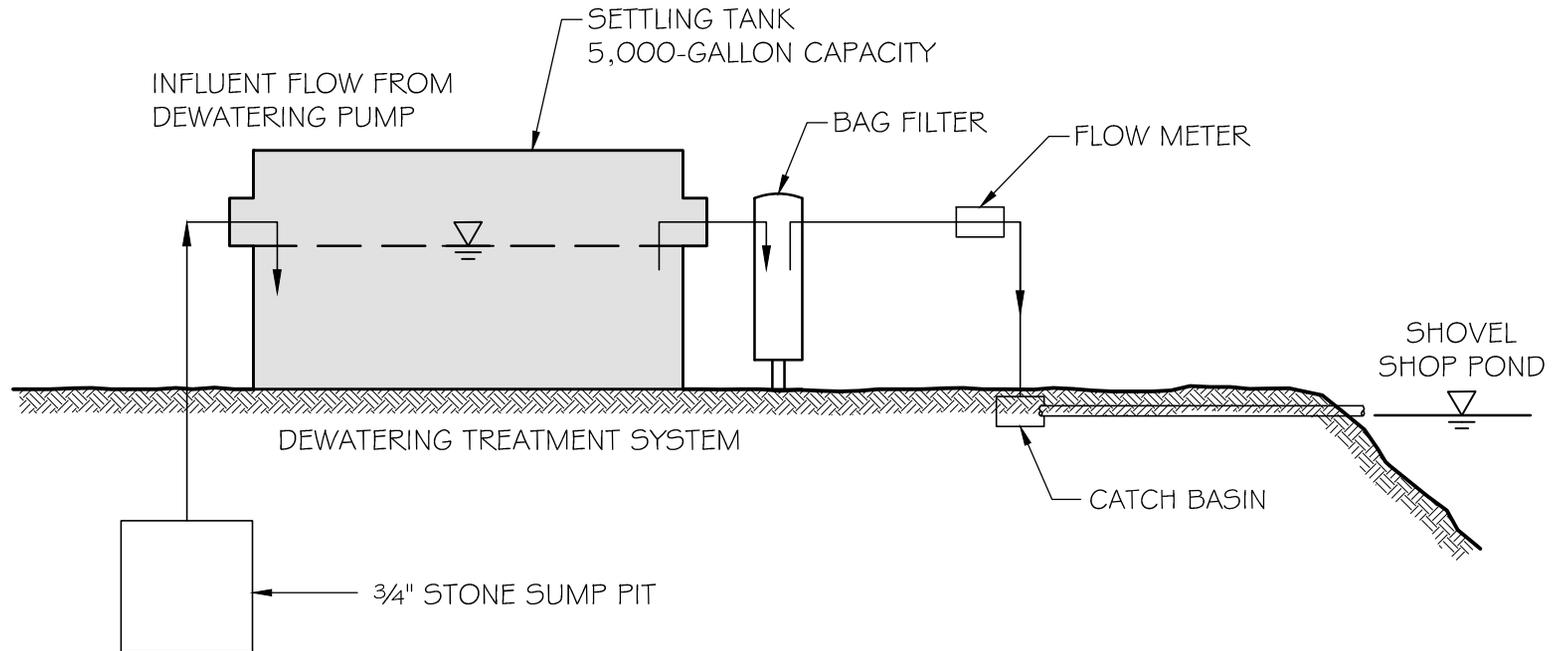
MCPHAIL ASSOCIATES, LLC
 Geotechnical and Geoenvironmental Engineers
 2269 Massachusetts Avenue
 Cambridge, MA 02140
 617/868-1420
 617/868-1423 (Fax)

AMES SHOVEL WORKS			
EASTON		MASSACHUSETTS	
EXISTING STORM WATER DRAIN SYSTEM			
FOR			
KEITH CONSTRUCTION, INC.			
BY			
MCPHAIL ASSOCIATES, LLC			
Date:	MAY 2012	Dwn:	F.G.P.
Project No:	5031	Chkd:	W.J.B.
		Scale:	1" = 30'
		FIGURE 3	



FILE NAME: H:\Macphail\0955031\1\0955031_1_F03.dwg

FIGURE 4



 <p>McPHAIL ASSOCIATES, LLC Geotechnical and Geoenvironmental Engineers 2269 Massachusetts Avenue Cambridge, MA 02140 617/868-1420 617/868-1423 (Fax)</p>	AMES SHOVEL WORKS	
	EASTON	MASSACHUSETTS
	SCHEMATIC OF WATER FLOW	
	FOR KEITH CONSTRUCTION, INC.	
	BY McPHAIL ASSOCIATES, LLC CONSULTING GEOTECHNICAL ENGINEERS	
Date: MAY 2012	Dwn: F.G.P.	Chkd: W.J.B.
Project No: 5031	Scale: N.T.S.	

**TABLE 1
ANALYTICAL RESULTS - GROUNDWATER**

Shovel Shop Square
50 Main Street; Easton, MA
Project No. 5031

LOCATION SAMPLING DATE LAB SAMPLE ID	EPA Effluent Limits	RCGW-1	Method 1 GW-1	B-1 (OW)	B-2 (OW)	B-2	B-3 (OW)	B-3	B-4 (OW)	B-6 (OW)	B-7 (OW)	B-7	B-9 (OW)	B-9 (OW)	B-13 (OW)	B-13
				5/27/2010 L1007986-02	5/27/2010 L1007986-03	9/23/2011 L1115203-01	5/27/2010 L1007986-05	9/23/2011 L1115203-02	5/27/2010 L1007986-04	5/27/2010 L1007986-06	5/27/2010 L1007986-07	9/23/2011 L1115203-09	5/27/2010 L1007986-01	8/8/2011 L1112002-04	5/27/2010 L1007986-08	9/23/2011 L1115203-11
EPH w/MS Targets (ug/l)																
C9-C18 Aliphatics		700	700	-	ND(103)	ND(100)	129	ND(100)	ND(103)	ND(103)	ND(103)	ND(100)	-	ND(100)	ND(103)	-
C19-C36 Aliphatics		14000	14000	-	ND(103)	ND(100)	ND(103)	ND(100)	ND(103)	ND(103)	ND(103)	ND(100)	-	ND(100)	ND(103)	-
C11-C22 Aromatics, Adjusted		200	200	-	237	ND(100)	351	ND(100)	ND(103)	ND(103)	ND(103)	ND(100)	-	ND(100)	ND(103)	-
Naphthalene	20	140	140	-	ND(0.412)	ND(0.4)	0.518	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
2-Methylnaphthalene		10	10	-	1.23	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Acenaphthylene		30	30	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Acenaphthene		20	20	-	3.22	1.61	1.82	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Fluorene		30	30	-	3.87	ND(0.4)	4.5	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Phenanthrene		40	40	-	3.47	ND(0.4)	1.5	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Anthracene		30	60	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Fluoranthene		90	90	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Pyrene		20	80	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Benzo(a)anthracene	0.0038	1	1	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Chrysene	0.0038	2	2	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Benzo(b)fluoranthene	0.0038	1	1	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Benzo(k)fluoranthene	0.0038	1	1	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Benzo(a)pyrene	0.0038	0.2	0.2	-	ND(0.2)	-	ND(10)	ND(0.2)	-							
Indeno(1,2,3-cd)Pyrene	0.0038	0.5	0.5	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Dibenzo(a,h)anthracene	0.0038	0.5	0.5	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
Benzo(ghi)perylene		20	50	-	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.4)	ND(0.412)	ND(0.412)	ND(0.412)	ND(0.4)	-	ND(10)	ND(0.412)	-
MCP Total Metals (ug/l)																
Antimony, Total	5.6	6	6	ND(0.5)	-	-	-	-	-	-	ND(0.5)	-	ND(0.5)	-	0.6	-
Arsenic, Total	10	10	10	ND(5)	-	-	-	-	-	-	ND(5)	-	ND(5)	-	ND(5)	-
Beryllium, Total		4	4	ND(4)	-	-	-	-	-	-	ND(4)	-	ND(4)	-	ND(4)	-
Cadmium, Total	0.2	4	5	ND(4)	-	-	-	-	-	-	ND(4)	-	ND(4)	-	ND(4)	-
Chromium, Total		100	100	ND(10)	-	-	-	-	-	-	ND(10)	-	ND(10)	-	ND(10)	-
Copper, Total	5.2	10000		ND(10)	-	-	-	-	-	-	ND(10)	-	ND(10)	-	ND(10)	-
Lead, Total	1.3	10	15	ND(10)	-	-	-	-	-	-	ND(10)	-	ND(10)	-	17	-
Lead, Dissolved		10	15	-	-	-	-	-	-	-	-	-	-	-	-	ND(10)
Mercury, Total	0.9	2	2	ND(0.2)	-	-	-	-	-	-	ND(0.2)	-	ND(0.2)	-	0.2	-
Nickel, Total	29	100	100	ND(25)	-	-	-	-	-	-	ND(25)	-	ND(25)	-	ND(25)	-
Selenium, Total	5	50	50	ND(10)	-	-	-	-	-	-	ND(10)	-	ND(10)	-	ND(10)	-
Silver, Total	1.2	7	100	ND(7)	-	-	-	-	-	-	ND(7)	-	ND(7)	-	ND(7)	-
Thallium, Total		2	2	ND(0.5)	-	-	-	-	-	-	ND(0.5)	-	ND(0.5)	-	ND(0.5)	-
Zinc, Total	66.6	900	5000	118	-	-	-	-	-	-	ND(50)	-	ND(50)	-	ND(50)	-
MCP Volatile Organics (ug/l)																
1,1,2-Trichloroethane	5	5	5	ND(1)	-	-	-	-	ND(1)	ND(1)	ND(1)	-	ND(1)	-	ND(1)	-
Toluene		1000	1000	3	-	-	-	-	ND(1)	ND(1)	ND(1)	-	ND(1)	-	ND(1)	-
1,4-Dichlorobenzene	5	5	5	4.7	-	-	-	-	ND(1)	ND(1)	ND(1)	-	ND(1)	-	ND(1)	-
Acetone		6300	6300	25	-	-	-	-	ND(5)	25	34	-	ND(5)	-	ND(5)	-
SUM				32.7	-	-	-	-	ND	25	34	-	ND	-	ND	-
Volatile Petroleum Hydrocarbons (ug/l)																
C9-C10 Aromatics		200	200	-	-	-	-	-	-	-	-	-	-	-	-	ND(100)
C5-C8 Aliphatics, Adjusted		300	300	-	-	-	-	-	-	-	-	-	-	-	-	ND(100)
C9-C12 Aliphatics, Adjusted		700	700	-	-	-	-	-	-	-	-	-	-	-	-	ND(100)
Benzene		5	5	-	-	-	-	-	-	-	-	-	-	-	-	ND(1)
Toluene		1000	1000	-	-	-	-	-	-	-	-	-	-	-	-	ND(1)
Ethylbenzene		700	700	-	-	-	-	-	-	-	-	-	-	-	-	ND(1)
p/m-Xylene		5000	10000	-	-	-	-	-	-	-	-	-	-	-	-	ND(1)
o-Xylene		5000	10000	-	-	-	-	-	-	-	-	-	-	-	-	ND(1)
Methyl tert butyl ether	70	70	70	-	-	-	-	-	-	-	-	-	-	-	-	ND(5)
Naphthalene	20	140	140	-	-	-	-	-	-	-	-	-	-	-	-	ND(5)

Tested compounds not shown do not exceed the laboratory method detection limit

**TABLE 1
ANALYTICAL RESULTS - GROUNDWATER**

Shovel Shop Square
50 Main Street; Easton, MA
Project No. 5031

LOCATION	EPA Effluent Limits	RCGW-1	Method 1 GW-1	MW-A	B-101 (OW)	B-102 (OW)	B-102	B-106 (OW)	B-106 (OW)	NRG-1	NRG-7	NRG-9	NRG-11	NRG-14	NRG-16
SAMPLING DATE				8/8/2011	8/8/2011	8/8/2011	9/23/2011	8/8/2011	10/5/2011	9/23/2011	9/23/2011	9/23/2011	9/23/2011	9/23/2011	9/23/2011
LAB SAMPLE ID				L1112002-01	L1112002-03	L1112002-02	L1115203-05	L1112002-05	L1116017-01	L1115203-03	L1115203-08	L1115203-07	L1115203-10	L1115203-04	L1115203-06
EPH w/MS Targets (ug/l)															
C9-C18 Aliphatics		700	700	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	-	ND(100)	ND(100)
C19-C36 Aliphatics		14000	14000	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	ND(100)	-	ND(100)	ND(100)
C11-C22 Aromatics, Adjusted		200	200	ND(100)	ND(100)	194	ND(100)	316	ND(100)	ND(100)	ND(100)	ND(100)	-	ND(100)	ND(100)
Naphthalene	20	140	140	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
2-Methylnaphthalene		10	10	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Acenaphthylene		30	30	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Acenaphthene		20	20	ND(10)	ND(10)	ND(10)	0.442	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Fluorene		30	30	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Phenanthrene		40	40	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Anthracene		30	60	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Fluoranthene		90	90	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Pyrene		20	80	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Benzo(a)anthracene	0.0038	1	1	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Chrysene	0.0038	2	2	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Benzo(b)fluoranthene	0.0038	1	1	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Benzo(k)fluoranthene	0.0038	1	1	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Benzo(a)pyrene	0.0038	0.2	0.2	ND(10)	ND(10)	ND(10)	ND(0.2)	ND(10)	ND(10)	ND(0.2)	ND(0.2)	ND(0.2)	-	ND(0.2)	ND(0.2)
Indeno(1,2,3-cd)Pyrene	0.0038	0.5	0.5	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Dibenzo(a,h)anthracene	0.0038	0.5	0.5	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
Benzo(ghi)perylene		20	50	ND(10)	ND(10)	ND(10)	ND(0.4)	ND(10)	ND(10)	ND(0.4)	ND(0.4)	ND(0.4)	-	ND(0.4)	ND(0.4)
MCP Total Metals (ug/l)															
Antimony, Total	5.6	6	6	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	10	10	10	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium, Total		4	4	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium, Total	0.2	4	5	-	-	-	-	-	-	-	-	-	-	-	-
Chromium, Total		100	100	-	-	-	-	-	-	-	-	-	-	-	-
Copper, Total	5.2	10000		-	-	-	-	-	-	-	-	-	-	-	-
Lead, Total	1.3	10	15	-	-	-	-	-	-	-	-	-	-	-	-
Lead, Dissolved		10	15	-	-	-	-	-	-	-	-	-	-	-	-
Mercury, Total	0.9	2	2	-	-	-	-	-	-	-	-	-	-	-	-
Nickel, Total	29	100	100	-	-	-	-	-	-	-	-	-	-	-	-
Selenium, Total	5	50	50	-	-	-	-	-	-	-	-	-	-	-	-
Silver, Total	1.2	7	100	-	-	-	-	-	-	-	-	-	-	-	-
Thallium, Total		2	2	-	-	-	-	-	-	-	-	-	-	-	-
Zinc, Total	66.6	900	5000	-	-	-	-	-	-	-	-	-	-	-	-
MCP Volatile Organics (ug/l)															
1,1,2-Trichloroethane	5	5	5	-	ND(1)	-	-	1.7	-	-	-	-	-	-	-
Toluene		1000	1000	-	ND(1)	-	-	ND(1)	-	-	-	-	-	-	-
1,4-Dichlorobenzene	5	5	5	-	ND(1)	-	-	ND(1)	-	-	-	-	-	-	-
Acetone		6300	6300	-	19	-	-	ND(5)	-	-	-	-	-	-	-
SUM				-	19	-	-	1.7	-	-	-	-	-	-	-
Volatile Petroleum Hydrocarbons (ug/l)															
C9-C10 Aromatics		200	200	-	-	-	-	114	-	-	-	-	ND(100)	-	-
C5-C8 Aliphatics, Adjusted		300	300	-	-	-	-	ND(50)	-	-	-	-	ND(100)	-	-
C9-C12 Aliphatics, Adjusted		700	700	-	-	-	-	ND(50)	-	-	-	-	ND(100)	-	-
Benzene		5	5	-	-	-	-	-	-	-	-	-	ND(1)	-	-
Toluene		1000	1000	-	-	-	-	-	-	-	-	-	ND(1)	-	-
Ethylbenzene		700	700	-	-	-	-	-	-	-	-	-	ND(1)	-	-
p/m-Xylene		5000	10000	-	-	-	-	-	-	-	-	-	ND(1)	-	-
o-Xylene		5000	10000	-	-	-	-	-	-	-	-	-	ND(1)	-	-
Methyl tert butyl ether	70	70	70	-	-	-	-	-	-	-	-	-	ND(5)	-	-
Naphthalene	20	140	140	-	-	-	-	-	-	-	-	-	ND(5)	-	-

Tested compounds not shown do not exceed the laboratory method detection limit



APPENDIX A

Limitations



Limitations

The purpose of this report is to present a summary of environmental conditions, including the results of testing of groundwater samples obtained from monitoring wells on the Ames Shovel Works property located at 50 Main Street in Easton, Massachusetts, in support of an application for approval of construction site dewatering discharge into surface waters of the Commonwealth of Massachusetts under EPA's Massachusetts Remedial General Permit MAG910000.

The observations were made under the conditions stated in this report. The conclusions presented above were based on these observations. If variations in the nature and extent of subsurface conditions between the spaced subsurface explorations become evident in the future, it will be necessary to re-evaluate the conclusions presented herein after performing on-site observations and noting the characteristics of any variations.

The conclusions submitted in this report are based in part upon analytical data obtained from analysis of groundwater samples, and are contingent upon their validity. The data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in seasonal water table, past practices used in disposal and other factors.

Laboratory analyses have been performed for specific constituents during the course of this assessment, as described in the text. However, it should be noted that additional constituents not searched for during the current study may be present in soil and/or groundwater at the site.

This report and application have been prepared on behalf of and for the exclusive use of Keith Construction Inc. and BC Shovel Works LLC. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, other than the US EPA, nor used in whole or in part by any other party without prior written consent of McPhail Associates, LLC.



APPENDIX B

Notice of Intent for Construction Site Dewatering

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

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

a) Name of facility/site : Ames Shovel Works		Facility/site mailing address:	
Location of facility/site :	Facility SIC code(s):	Street:	50 Main Street
longitude: 71.1045			
latitude: 42.0688			
b) Name of facility/site owner : BC Shovel Works LLC		Town: Easton	
Email address of facility/site owner : jcohen@beaconcommunitiesLLC.com		State: MA	Zip: 02356
Telephone no. of facility/site owner : 617-574-1100		County: Bristol	
Fax no. of facility/site owner : 617-422-0576		Owner is (check one): 1. Federal <input type="radio"/> 2. State/Tribal <input type="radio"/>	
Address of owner (if different from site):		3. Private <input checked="" type="radio"/> 4. Other <input type="radio"/> if so, describe:	
Street: Two Center Plaza, Suite 700			
Town: Boston	State: MA	Zip: 02108	County: Suffolk
c) Legal name of operator : Keith Construction Inc.		Operator telephone no: 781-828-8474	
Operator fax no.: 781-828-0010		Operator email: bbradley@keithconstruction.ne	
Operator contact name and title: Bob Bradley-Project Manager			
Address of operator (if different from owner):		Street:	14 Page Terrace
Town: Stoughton	State: MA	Zip: 02072	County: Bristol

d) Check Y for “yes” or N for “no” for the following:
 1. Has a prior NPDES permit exclusion been granted for the discharge? Y N , if Y, number:
 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge?
 Y N , if Y, date and tracking #:
 3. Is the discharge a “new discharge” as defined by 40 CFR 122.2? Y N
 4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y N

e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y N
 If Y, 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 General Permit? Y N ,
 if Y, number:
 2. Final Dewatering General Permit? Y N ,
 if Y, number:
 3. EPA Construction General Permit? Y N ,
 if Y, number:
 4. Individual NPDES permit? Y N ,
 if Y, number:
 5. any other water quality related individual or general permit? Y N , if Y, number:

g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y N

h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.

<u>Activity Category</u>	<u>Activity Sub-Category</u>
I - Petroleum Related Site Remediation	A. Gasoline Only Sites <input type="checkbox"/> B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) <input checked="" type="checkbox"/> C. Petroleum Sites with Additional Contamination <input type="checkbox"/>
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites <input type="checkbox"/> B. VOC Sites with Additional Contamination <input type="checkbox"/> C. Primarily Heavy Metal Sites <input type="checkbox"/>
III - Contaminated Construction Dewatering	A. General Urban Fill Sites <input type="checkbox"/> B. Known Contaminated Sites <input checked="" type="checkbox"/>

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites <input type="checkbox"/> B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites <input type="checkbox"/> C. Hydrostatic Testing of Pipelines and Tanks <input type="checkbox"/> D. Long-Term Remediation of Contaminated Sumps and Dikes <input type="checkbox"/> E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) <input type="checkbox"/>
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:	
Temporary Construction Dewatering	
b) Provide the following information about each discharge:	
1) Number of discharge points: 1	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <input type="text" value="0.1115"/> Is maximum flow a design value ? Y <input type="radio"/> N <input checked="" type="radio"/> Average flow (include units) <input type="text" value="0.07805 ft<sup>3</sup>/s"/> Is average flow a design value or estimate? <input type="text" value="estimate"/>
3) Latitude and longitude of each discharge within 100 feet:	
pt.1: lat. <input type="text" value="42.00682"/> long. <input type="text" value="71.1027"/>	pt.2: lat. <input type="text"/> long. <input type="text"/> ; pt.3: lat. <input type="text"/> long. <input type="text"/> ; pt.4: lat. <input type="text"/> long. <input type="text"/> ; pt.5: lat. <input type="text"/> long. <input type="text"/> ; pt.6: lat. <input type="text"/> long. <input type="text"/> ; pt.7: lat. <input type="text"/> long. <input type="text"/> ; pt.8: lat. <input type="text"/> long. <input type="text"/> ; etc.
4) If hydrostatic testing, total volume of the discharge (gals): <input type="text"/>	5) Is the discharge intermittent <input checked="" type="radio"/> or seasonal <input type="radio"/> ? Is discharge ongoing? Y <input type="radio"/> N <input checked="" type="radio"/>
c) Expected dates of discharge (mm/dd/yy): start <input type="text" value="06/04/2012"/> end <input type="text" value="06/02/2013"/>	
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). <input type="text" value="Please refer to the attached report"/>	

3. Contaminant information.

a) Based on the sub-category selected (see Appendix III), indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
1. Total Suspended Solids (TSS)		<input type="checkbox"/>	<input checked="" type="checkbox"/>								
2. Total Residual Chlorine (TRC)		<input checked="" type="checkbox"/>	<input type="checkbox"/>								
3. Total Petroleum Hydrocarbons (TPH)		<input type="checkbox"/>	<input checked="" type="checkbox"/>								
4. Cyanide (CN)	57125	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
5. Benzene (B)	71432	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	100, VPH-04-1.1	2	ND			
6. Toluene (T)	108883	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	100, VPH-04-1.1		3	0.001	1.25	0.0002
7. Ethylbenzene (E)	100414	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	100, VPH-04-1.1	2	ND			
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	100, VPH-04-1.1	2	ND			
9. Total BTEX ²	n/a	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8	grab			3	0.001		0.0002
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
11. Methyl-tert-Butyl Ether (MtBE)	1634044	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	2.0	ND			
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	2.0	ND			

* Numbering system is provided to allow cross-referencing to Effluent Limits and Monitoring Requirements by Sub-Category included in Appendix III, as well as the Test Methods and Minimum Levels associated with each parameter provided in Appendix VI.

² BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

³ EDB is a groundwater contaminant at fuel spill and pesticide application sites in New England.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
13. tert-Amyl Methyl Ether (TAME)	9940508	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	2.0	ND			
14. Naphthalene	91203	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8	grab	97-8260B	0.4	ND			
15. Carbon Tetrachloride	56235	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
16. 1,2 Dichlorobenzene (o-DCB)	95501	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
17. 1,3 Dichlorobenzene (m-DCB)	541731	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
18. 1,4 Dichlorobenzene (p-DCB)	106467	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B		4.7	0.001	1.5	0.0015
18a. Total dichlorobenzene		<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B		4.7	0.001	1.5	0.0015
19. 1,1 Dichloroethane (DCA)	75343	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
20. 1,2 Dichloroethane (DCA)	107062	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
21. 1,1 Dichloroethene (DCE)	75354	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
22. cis-1,2 Dichloroethene (DCE)	156592	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
23. Methylene Chloride	75092	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	2.0	ND			
24. Tetrachloroethene (PCE)	127184	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
25. 1,1,1 Trichloro-ethane (TCA)	71556	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
26. 1,1,2 Trichloro-ethane (TCA)	79005	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B		1.7	0.0005	1.1	0.0002
27. Trichloroethene (TCE)	79016	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
28. Vinyl Chloride (Chloroethene)	75014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	1.0	ND			
29. Acetone	67641	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B		34	0.009	15.35	0.01535
30. 1,4 Dioxane	123911	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8	grab	97-8260B	250	ND			
31. Total Phenols	108952	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
32. Pentachlorophenol (PCP)	87865	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
33. Total Phthalates (Phthalate esters) ⁴		<input checked="" type="checkbox"/>	<input type="checkbox"/>								
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		<input checked="" type="checkbox"/>	<input type="checkbox"/>					ND			
a. Benzo(a) Anthracene	56553	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1	0.412	ND			
b. Benzo(a) Pyrene	50328	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1	0.2	ND			
c. Benzo(b)Fluoranthene	205992	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1 ⁺	0.412	ND			
d. Benzo(k)Fluoranthene	207089	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1 ⁺	0.412	ND			
e. Chrysene	21801	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1	0.412	ND			
f. Dibenzo(a,h)anthracene	53703	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1 ⁺	0.412	ND			
g. Indeno(1,2,3-cd) Pyrene	193395	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1 ⁺	0.412	ND			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		<input type="checkbox"/>	<input checked="" type="checkbox"/>					11.71	0.0032		

⁴The sum of individual phthalate compounds.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
h. Acenaphthene	83329	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1		3.22	0.001	3.4	0.00065
i. Acenaphthylene	208968	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1	0.412	ND			
j. Anthracene	120127	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1	0.412	ND			
k. Benzo(ghi) Perylene	191242	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1	0.412	ND			
l. Fluoranthene	206440	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1	0.412	ND			
m. Fluorene	86737	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1		4.5	0.001	3.5	0.00067
n. Naphthalene	91203	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1		0.518	0.0001	Not Representative	
o. Phenanthrene	85018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1		3.47	0.001	3.34	0.00064
p. Pyrene	129000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21	grab	98,EPH-04-1.1	0.412	ND			
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
38. Chloride	16887006	<input type="checkbox"/>	<input checked="" type="checkbox"/>								
39. Antimony	7440360	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6020A		0.6	0.0002	0.525	0.00010
40. Arsenic	7440382	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6010B	5	ND			
41. Cadmium	7440439	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6010B	4	ND			
42. Chromium III (trivalent)	16065831	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
43. Chromium VI (hexavalent)	18540299	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
44. Copper	7440508	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6010B	10	ND			
45. Lead	7439921	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4	grab	97,6010B		17	0.0046	11.75	0.00224
46. Mercury	7439976	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,7470A		0.2	0.0001	0.2	0.00004
47. Nickel	7440020	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6010B	25	ND			
48. Selenium	7782492	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6010B	10	ND			
49. Silver	7440224	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6010B	7	ND			
50. Zinc	7440666	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6010B		118	0.032	67	0.0128
51. Iron	7439896	<input checked="" type="checkbox"/>	<input type="checkbox"/>								
Other (describe):		<input type="checkbox"/>	<input type="checkbox"/>								

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (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)
Total Chromium		<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	grab	97,6010B	10	ND			
Dissolved Lead		<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab		10	ND			

b) For discharges where **metals** are believed present, please fill out the following (attach results of any calculations):

<p><i>Step 1:</i> Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y <input checked="" type="radio"/> N <input type="radio"/></p>	<p>If yes, which metals? Lead</p>								
<p><i>Step 2:</i> For any metals which 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?</p> <table border="1"> <tr> <td>Metal: Lead</td> <td>DF: 1.8</td> </tr> <tr> <td>Metal: zinc</td> <td>DF: 1.8</td> </tr> <tr> <td>Metal:</td> <td>DF:</td> </tr> <tr> <td>Metal:</td> <td>DF:</td> </tr> </table> <p>Etc.</p>	Metal: Lead	DF: 1.8	Metal: zinc	DF: 1.8	Metal:	DF:	Metal:	DF:	<p>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 <input checked="" type="radio"/> N <input type="radio"/> If Y, list which metals: Lead</p>
Metal: Lead	DF: 1.8								
Metal: zinc	DF: 1.8								
Metal:	DF:								
Metal:	DF:								

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

<p>a) A description of the treatment system, including a schematic of the proposed or existing treatment system:</p> <p>Settling tank and bag filter in series</p>						
<p>b) Identify each applicable treatment unit (check all that apply):</p>	<p>Frac. tank <input checked="" type="checkbox"/></p>	<p>Air stripper <input type="checkbox"/></p>	<p>Oil/water separator <input type="checkbox"/></p>	<p>Equalization tanks <input type="checkbox"/></p>	<p>Bag filter <input checked="" type="checkbox"/></p>	<p>GAC filter <input type="checkbox"/></p>
	<p>Chlorination <input type="checkbox"/></p>	<p>De-chlorination <input type="checkbox"/></p>	<p>Other (please describe):</p>			

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 gpm Maximum flow rate of treatment system gpm
 Design flow rate of treatment system gpm

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 to receiving water <input type="checkbox"/>	Within facility (sewer) <input type="checkbox"/>	Storm drain <input checked="" type="checkbox"/>	Wetlands <input type="checkbox"/>	Other (describe): <input style="width: 90%;" type="text"/>
------------------------------------	--	--	---	-----------------------------------	---

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

Please refer to attached report for narrative description and plan

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? Y N If yes, for which pollutant(s)?
 Exotic species

Is there a final TMDL? Y N If yes, for which pollutant(s)?

6. ESA and NHPA Eligibility.

Please provide the following information according to requirements of Permit Parts I.A.4 and I.A.5 Appendices II and VII.

<p>a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit? A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input checked="" type="radio"/> E <input type="radio"/> F <input type="radio"/></p> <p>b) If you selected Criterion D or F, has consultation with the federal services been completed? Y <input checked="" type="radio"/> N <input type="radio"/> Underway <input type="radio"/></p> <p>c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is “not likely to adversely affect” listed species or critical habitat received? Y <input checked="" type="radio"/> N <input type="radio"/></p> <p>d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.</p>
<p>e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit? 1 <input type="radio"/> 2 <input checked="" type="radio"/> 3 <input type="radio"/></p> <p>f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.</p>

7. Supplemental information.

<p>Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.</p>
<p>Please refer to attached report</p>

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:	Ames Shovel Works
Operator signature:	
Printed Name & Title:	Bob Bradley Project Manager
Date:	<input type="checkbox"/>



APPENDIX C

DEP Priority Resources Map

U.S Fish and Wildlife Services Endangered Species List

Massachusetts Division of Fisheries and Wildlife Endangered Species List

Regression Flow Analysis

MassDEP - Bureau of Waste Site Cleanup

MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

Site Information:

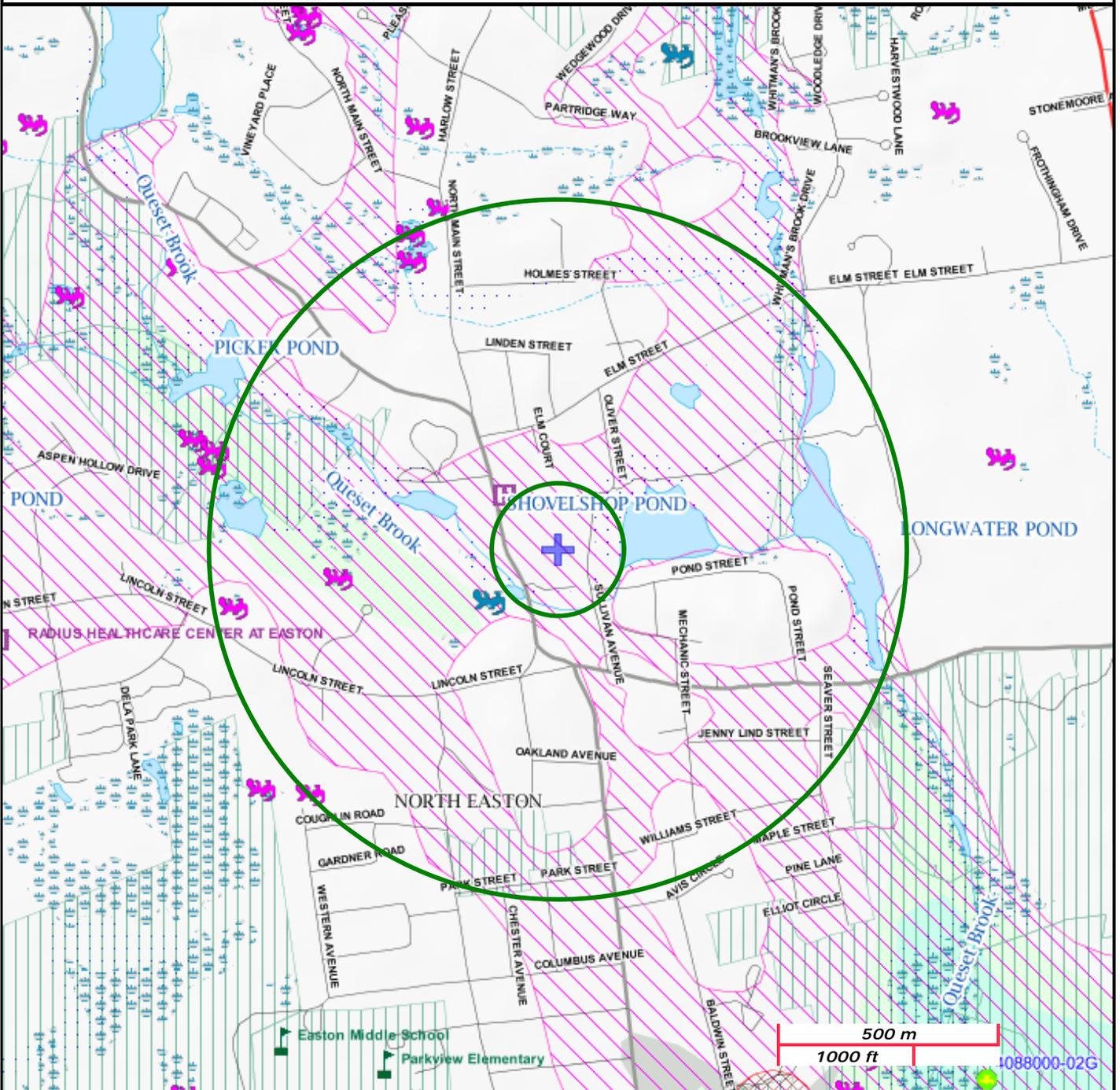
SHOVEL SHOP SQUARE
50 MAIN STREET EASTON, MA

NAD83 UTM Meters:
4659544mN, 325940mE (Zone: 19)
May 23, 2012

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: <http://www.mass.gov/mgis/>.



MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, IWPA, Zone A		
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat		
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog		
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain; Protected Open Space; ACEC		
Non Potential Drinking Water Source Area: Medium, High (Yield)	Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential		
	Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.		

MASSACHUSETTS AREAS OF CRITICAL ENVIRONMENTAL CONCERN

June 2009

Total Approximate Acreage: 268,000 acres

Approximate acreage and designation date follow ACEC names below.

Bourne Back River

(1,850 acres, 1989) Bourne

Canoe River Aquifer and Associated Areas (17,200 acres, 1991) Easton, Foxborough, Mansfield, Norton, Sharon, and Taunton

Cedar Swamp

(1,650 acres, 1975) Hopkinton and Westborough

Central Nashua River Valley

(12,900 acres, 1996) Bolton, Harvard, Lancaster, and Leominster

Cranberry Brook Watershed

(1,050 acres, 1983) Braintree and Holbrook

Ellisville Harbor

(600 acres, 1980) Plymouth

Fowl Meadow and Ponkapoag Bog

(8,350 acres, 1992) Boston, Canton, Dedham, Milton, Norwood, Randolph, Sharon, and Westwood

Golden Hills

(500 acres, 1987) Melrose, Saugus, and Wakefield

Great Marsh (originally designated as Parker River/Essex Bay)

(25,500 acres, 1979) Essex, Gloucester, Ipswich, Newbury, and Rowley

Herring River Watershed

(4,450 acres, 1991) Bourne and Plymouth

Hinsdale Flats Watershed

(14,500 acres, 1992) Dalton, Hinsdale, Peru, and Washington

Hockomock Swamp

(16,950 acres, 1990) Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater

Inner Cape Cod Bay

(2,600 acres, 1985) Brewster, Eastham, and Orleans

Kampoosa Bog Drainage Basin

(1,350 acres, 1995) Lee and Stockbridge

Karner Brook Watershed

(7,000 acres, 1992) Egremont and Mount Washington

Miscoe, Warren, and Whitehall Watersheds

(8,700 acres, 2000) Grafton, Hopkinton, and Upton

Neponset River Estuary

(1,300 acres, 1995) Boston, Milton, and Quincy

Petapawag

(25,680 acres, 2002) Ayer, Dunstable, Groton, Pepperell, and Tyngsborough

Pleasant Bay

(9,240 acres, 1987) Brewster, Chatham, Harwich, and Orleans

Pocasset River

(160 acres, 1980) Bourne

Rumney Marshes

(2,800 acres, 1988) Boston, Lynn, Revere, Saugus, and Winthrop

Sandy Neck Barrier Beach System

(9,130 acres, 1978) Barnstable and Sandwich

Schenob Brook Drainage Basin

(13,750 acres, 1990) Mount Washington and Sheffield

Squannassit

(37,420 acres, 2002) Ashby, Ayer, Groton, Harvard, Lancaster, Lunenburg, Pepperell, Shirley, and Townsend

Three Mile River Watershed

(14,280 acres, 2008) Dighton, Norton, Taunton

Upper Housatonic River

(12,280 acres, 2009) Lee, Lenox, Pittsfield, Washington

Waquoit Bay

(2,580 acres, 1979) Falmouth and Mashpee

Weir River

(950 acres, 1986) Cohasset, Hingham, and Hull

Wellfleet Harbor

(12,480 acres, 1989) Eastham, Truro, and Wellfleet

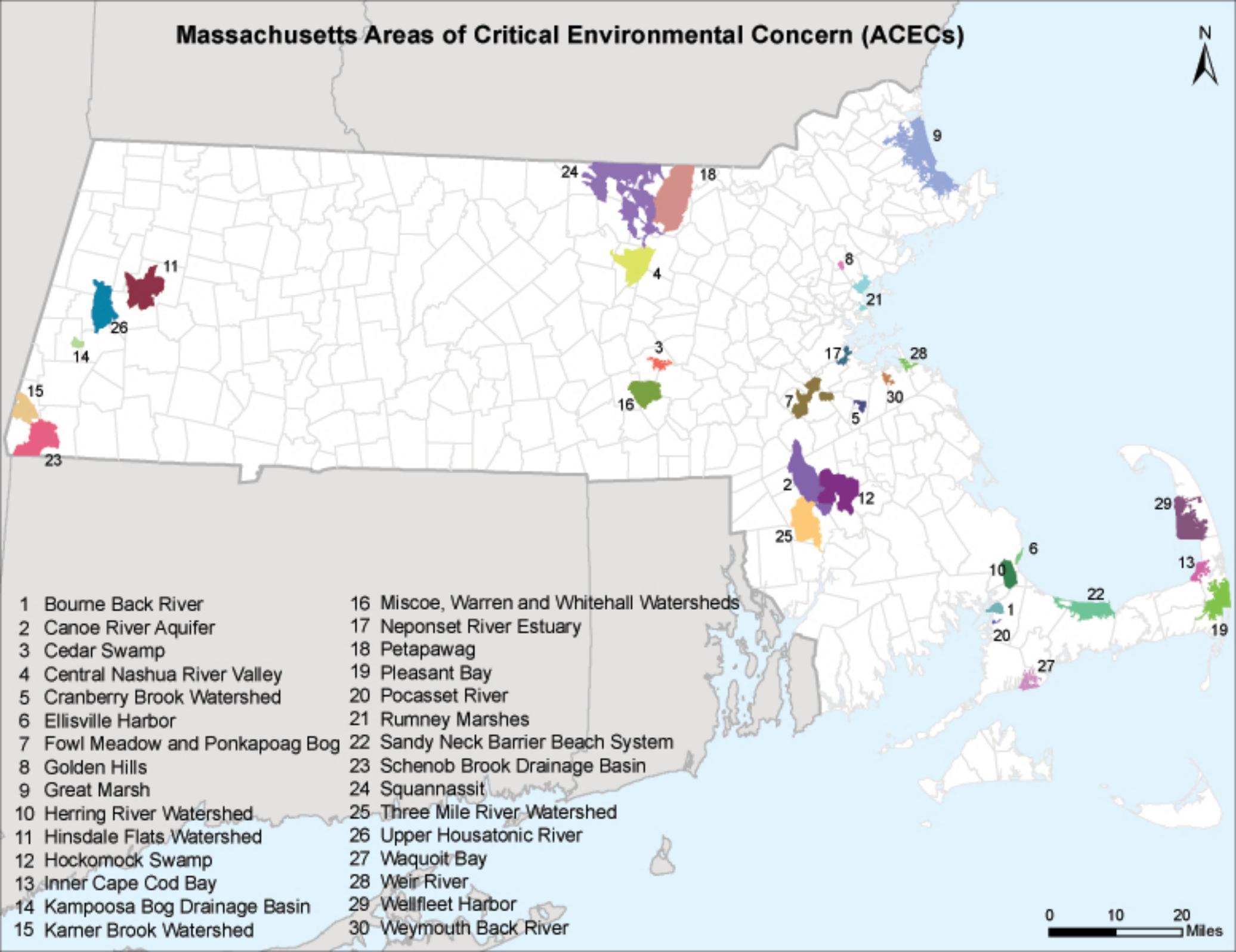
Weymouth Back River

(800 acres, 1982) Hingham and Weymouth

Towns with ACECs within their Boundaries
June 2009

TOWN	ACEC	TOWN	ACEC
Ashby	Squannassit	Mt. Washington	Karner Brook Watershed
Ayer	Petapawag		Schenob Brook
	Squannassit	Newbury	Great Marsh
Barnstable	Sandy Neck Barrier Beach System	Norton	Hockomock Swamp
Bolton	Central Nashua River Valley		Canoe River Aquifer
Boston	Rumney Marshes		Three Mile River Watershed
	Fowl Meadow and Ponkapoag Bog	Norwood	Fowl Meadow and Ponkapoag Bog
	Neponset River Estuary	Orleans	Inner Cape Cod Bay
Bourne	Pocasset River		Pleasant Bay
	Bourne Back River	Pepperell	Petapawag
	Herring River Watershed		Squannassit
Braintree	Cranberry Brook Watershed	Peru	Hinsdale Flats Watershed
Brewster	Pleasant Bay	Pittsfield	Upper Housatonic River
	Inner Cape Cod Bay	Plymouth	Herring River Watershed
Bridgewater	Hockomock Swamp		Ellisville Harbor
Canton	Fowl Meadow and Ponkapoag Bog	Quincy	Neponset River Estuary
Chatham	Pleasant Bay	Randolph	Fowl Meadow and Ponkapoag Bog
Cohasset	Weir River	Raynham	Hockomock Swamp
Dalton	Hinsdale Flats Watershed	Revere	Rumney Marshes
Dedham	Fowl Meadow and Ponkapoag Bog	Rowley	Great Marsh
Dighton	Three Mile River Watershed	Sandwich	Sandy Neck Barrier Beach System
Dunstable	Petapawag	Saugus	Rumney Marshes
Eastham	Inner Cape Cod Bay		Golden Hills
	Wellfleet Harbor	Sharon	Canoe River Aquifer
Easton	Canoe River Aquifer		Fowl Meadow and Ponkapoag Bog
	Hockomock Swamp	Sheffield	Schenob Brook
Egremont	Karner Brook Watershed	Shirley	Squannassit
Essex	Great Marsh	Stockbridge	Kampoosa Bog Drainage Basin
Falmouth	Waquoit Bay	Taunton	Hockomock Swamp
Foxborough	Canoe River Aquifer		Canoe River Aquifer
Gloucester	Great Marsh	Truro	Three Mile River Watershed
Grafton	Miscoe-Warren-Whitehall Watersheds	Townsend	Wellfleet Harbor
		Tyngsborough	Squannassit
Groton	Petapawag	Upton	Petapawag
	Squannassit		Miscoe-Warren-Whitehall Watersheds
Harvard	Central Nashua River Valley	Wakefield	Golden Hills
	Squannassit	Washington	Hinsdale Flats Watershed
Harwich	Pleasant Bay		Upper Housatonic River
Hingham	Weir River	Wellfleet	Wellfleet Harbor
	Weymouth Back River	W Bridgewater	Hockomock Swamp
Hinsdale	Hinsdale Flats Watershed	Westborough	Cedar Swamp
Holbrook	Cranberry Brook Watershed	Westwood	Fowl Meadow and Ponkapoag Bog
Hopkinton	Miscoe-Warren-Whitehall Watersheds	Weymouth	Weymouth Back River
		Winthrop	Rumney Marshes
	Cedar Swamp		
Hull	Weir River		
Ipswich	Great Marsh		
Lancaster	Central Nashua River Valley		
	Squannassit		
Lee	Kampoosa Bog Drainage Basin		
	Upper Housatonic River		
Lenox	Upper Housatonic River		
Leominster	Central Nashua River Valley		
Lunenburg	Squannassit		
Lynn	Rumney Marshes		
Mansfield	Canoe River Aquifer		
Mashpee	Waquoit Bay		
Melrose	Golden Hills		
Milton	Fowl Meadow and Ponkapoag Bog		
	Neponset River Estuary		

Massachusetts Areas of Critical Environmental Concern (ACECs)



- | | |
|---------------------------------|--|
| 1 Bourne Back River | 16 Miscoe, Warren and Whitehall Watersheds |
| 2 Canoe River Aquifer | 17 Neponset River Estuary |
| 3 Cedar Swamp | 18 Petapawag |
| 4 Central Nashua River Valley | 19 Pleasant Bay |
| 5 Cranberry Brook Watershed | 20 Pocasset River |
| 6 Ellisville Harbor | 21 Rumney Marshes |
| 7 Fowl Meadow and Ponkapoag Bog | 22 Sandy Neck Barrier Beach System |
| 8 Golden Hills | 23 Schenob Brook Drainage Basin |
| 9 Great Marsh | 24 Squannassit |
| 10 Herring River Watershed | 25 Three Mile River Watershed |
| 11 Hinsdale Flats Watershed | 26 Upper Housatonic River |
| 12 Hockomock Swamp | 27 Waquoit Bay |
| 13 Inner Cape Cod Bay | 28 Weir River |
| 14 Kamposa Bog Drainage Basin | 29 Wellfleet Harbor |
| 15 Kerner Brook Watershed | 30 Weymouth Back River |



**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN MASSACHUSETTS**

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
Suffolk	Piping Plover	Threatened	Coastal Beaches	Winthrop
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster

- Eastern cougar and gray wolf are considered extirpated in Massachusetts.
- Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
- Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.



New England Field Office

Conserving the Nature of New England

Friday,
November 18, 2011

ENDANGERED SPECIES

Overview
Consultation
N.E. Listed Species
Species Under Review
Recovery Activities
Habitat Conservation
Images
Biological Opinions

PARTNERS FOR FISH & WILDLIFE

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Species & Habitats of
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How to Participate
Habitat Restoration
Links

ENVIRONMENTAL CONTAMINANTS

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NRDAR
Special Studies
Oil Spills

FEDERAL ACTIVITIES

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Wetland Permits
FERC_ Hydropower
Projects
River Flow Protection
Wind Energy Projects

OUTREACH

NH Envirothon
Kids Corner
Let's Go Outside

Staff Directory

Our Location

HOME



Endangered Species

New England Listed Species

The following federally-listed species are protected in New England. This list includes links to species information on our National Fish and Wildlife Service website including current Federal Register documents, HCPs, Recovery Plans, Life History accounts.

Vertebrates

Mammals

Eastern Cougar - [Puma \(=Felis\) concolor cougar](#)
Gray Wolf - [Canis lupus](#)
Indiana Bat - [Myotis sodalis](#)
Canada Lynx - [Lynx canadensis](#)

Birds

Atlantic Coast Piping Plover - [Charadrius melodus](#)
Birds of North America Species Account [Piping Plover](#)
Atlantic Coast piping plover website [Piping Plover](#)
Roseate Tern – [Sterna dougallii dougallii](#)
Birds of North America Species Account [Roseate Tern](#)

Reptiles

Bog Turtle - [Clemmys muhlenbergii](#)
Northern Redbelly Cooter (Plymouth redbelly turtle) [Pseudemys rubriventris bangsii](#)
[Northern Redbelly Cooter 5-year Review](#); (pdf size 1.6MB*) May 2007

Fish

Atlantic Salmon - [Salmo salar](#) (Maine only)
[Maine Atlantic Salmon Atlas](#)

Invertebrates

Insects

American Burying Beetle - [Nicrophorus americanus](#)
Karner Blue Butterfly - [Lycaeides melissa samuelis](#)
Karner Blue Butterfly Fact sheet
Northeastern Beach Tiger Beetle - [Cicindela dorsalis dorsalis](#)
Puritan Tiger Beetle - [Cicindela puritana](#)
[Draft Puritan Tiger Beetle](#); (pdf size 2.4MB*) 5-year Review

Mussels

Dwarf Wedgemussel - [Alasmidonta heterodon](#)
[Dwarf Wedgemussel 5-Year Status Review 2007](#) (pdf size 1.14MB*)

Plants

Jesup's Milkvetch - [Astragalus robbinsii var. jesupi](#)
Northeastern Bulrush - [Scirpus ancistrochaetus](#)
Sandplain Gerardia - [Agalinis acuta](#)
Small Whorled Pogonia - [Isotria medeoloides](#)
Seabeach Amaranth - [Amaranthus pumilus](#) (historic)
American Chaffseed - [Schwalbea americana](#) (historic)
Eastern Prairie Fringed Orchid - [Platanthera leucophaea](#) (Maine only)
Furbish's Lousewort - [Pedicularis furbishiae](#) (Maine only)

Candidate species and species recently delisted are identified below, including links for additional information regarding their status.

Candidate Species

The Service has recently completed a status assessment for the following species and determined that federally listing is "warranted, but precluded", i.e. the status of the species indicates that it should be listed but the listing is superceded by higher listing actions.

While there is currently no obligation for Federal Agencies to consult with us regarding these species, coordination is encouraged to avoid project delays that may occur as a result of the species becoming federally-listed during the planning or construction phases of a given project. In addition, the Service is interested in promoting conservation actions that may result in benefits to these species that will prevent the need to list it. Information regarding our [candidate conservation](#) program may help you decide if you would like to become involved.

- [New England Cottontail; *Sylvilagus transitionalis*](#)
- Red Knot [Calidris canutus rufa](#); [Red Knot Fact Sheet](#)

Delisted Species

Bald Eagle - [Haliaeetus leucocephalus](#)
[Bald Eagle Guidance](#)



NCTC Eagle Cam

This Bald Eagle image is a link to a Service website that chronicles the activities of the eagle nest located on the grounds of the USFWS National Conservation Training Center near the Potomac River in Shepherdstown, West Virginia. The nest has been active for four seasons, fledging several juvenile bald eagles.

Files in PDF format will require Acrobat Reader to access the content. If you do not have a copy, please select the link [or click the image] to take you to the Adobe website where you can download a free copy. [Get Adobe Acrobat Reader](#)

Last updated: October 28, 2010



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>

January 17, 2012

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

(<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Anthony Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Easton; Resource Type(s): Area, Building, Structure;

Inv. No.	Property Name	Street	Town	Year
EST.A	Furnace Village		Easton	
EST.B	North Easton Historic Area		Easton	
EST.C	The Seven Sisters - Battle Row		Easton	
EST.D	Furnace Village Historic District		Easton	
EST.E	North Easton Historic District		Easton	
EST.F	H. H. Richardson Historic District of North Easton		Easton	
EST.G	Bay Road		Easton	
EST.H	Borderland Historic District		Easton	
EST.I	Easton Center		Easton	
EST.J	Central Street Area		Easton	
EST.K	Hayward - Pool Area		Easton	
EST.L	Howland Court Area		Easton	
EST.M	Pine Street Area		Easton	
EST.N	Simpson Spring Bottling Company		Easton	
EST.O	Williams Street Area		Easton	
EST.P	Dean Grist Mill		Easton	
EST.Q	Elm Street Estates		Easton	
EST.R	Queset - Main Street Area		Easton	
EST.S	Howard, Lucius Farm		Easton	
EST.T	Williams, Milo M. House and Store		Easton	
EST.U	Immaculate Conception Roman Catholic Church		Easton	
EST.V	Andrews - Mechanic Streets Area		Easton	
EST.W	Elm Street Tenement Row		Easton	
EST.X	Lincoln Street Tenement Row		Easton	
EST.Y	Oliver Street Tenement Row		Easton	
EST.Z	Ames Shovel and Tool Company Works		Easton	
EST.AA	Ames Historic District		Easton	

Monday, May 14, 2012

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Inv. No.	Property Name	Street	Town	Year
EST.521	Keith, Frank P. Tenant House	3 Andrews St	Easton	1890
EST.522	Erickson, A. House	6 Andrews St	Easton	1865
EST.523	Ames Shovel and Tool Company Tenement #50	7 Andrews St	Easton	1861
EST.524	McMenamy, M. House	10 Andrews St	Easton	1880
EST.525	Ames Shovel and Tool Company Tenement #49	11 Andrews St	Easton	1865
EST.1	Oakes Ames Memorial Hall	3 Barrows St	Easton	1879
EST.59	Newcomb - Claire House	Bay Rd	Easton	1812
EST.115	Borderland State Park - Smith Farmhouse	91 Bay Rd	Easton	1880
EST.144	Borderland State Park - Smith Farm Barn	91 Bay Rd	Easton	1880
EST.57	Keith, Josiah House	479 Bay Rd	Easton	1717
EST.58	Wheaton, Daniel House	519 Bay Rd	Easton	1765
EST.56	Williams, Capt. Benjamin House	539 Bay Rd	Easton	1727
EST.932	Borderland State Park - Stone Wall System	Borderland State Pk	Easton	
EST.933	Borderland State Park - Electric Wire Fence System	Borderland State Pk	Easton	
EST.934	Borderland State Park - Leach Pond	Borderland State Pk	Easton	1825
EST.935	Borderland State Park - Puds Pond	Borderland State Pk	Easton	1906
EST.936	Borderland State Park - Dam and Sluiceway System	Borderland State Pk	Easton	1825
EST.937	Borderland State Park - Water Pipe & Valve System	Borderland State Pk	Easton	1930
EST.938	Borderland State Park - Selee Dam	Borderland State Pk	Easton	1908
EST.939	Borderland State Park - Shooting Range	Borderland State Pk	Easton	1906
EST.940	Borderland State Park - Water Tower Footings	Borderland State Pk	Easton	1906
EST.941	Borderland State Park - Agricultural Fields	Borderland State Pk	Easton	1786
EST.942	Borderland State Park - Circulation System	Borderland State Pk	Easton	
EST.255	Texeira, Joseph House	18 Bridge St	Easton	1900
EST.256	Spillane, Frank House	19 Bridge St	Easton	1891
EST.257	Plunkett, Harold House	23 Bridge St	Easton	1900
EST.18	Picker Farm	Canton St	Easton	1800
EST.400	Randall, E. William House and Market	1 Center St	Easton	1865
EST.401	New England Telephone and Telegraph Company	2 Center St	Easton	1941
EST.45	Wilder, Adm. House	37 Center St	Easton	1885
EST.191	Clark House	285 Center St	Easton	1840
EST.46	Edson House	300 Center St	Easton	1812
EST.192	Howard, Miranda House	314 Center St	Easton	1840
EST.193		321 Center St	Easton	1850
EST.194	Leonard, William A. House	347 Center St	Easton	1870

Inv. No.	Property Name	Street	Town	Year
EST.195	Leonard, H. L. House	348 Center St	Easton	1890
EST.196		349 Center St	Easton	1870
EST.197		367 Center St	Easton	1940
EST.198		409 Center St	Easton	1850
EST.199		414 Center St	Easton	1920
EST.200		425 Center St	Easton	1940
EST.201	Reed, David House	429 Center St	Easton	1840
EST.202		432 Center St	Easton	1860
EST.203		433 Center St	Easton	1860
EST.204		434 Center St	Easton	1860
EST.146	Morse, Edward J. W. Thread Mill	Central Ave	Easton	1894
EST.949	Morse, E. J. W. Thread Mill Dam	Central Ave	Easton	1900
EST.145		12 Central St	Easton	1860
EST.147		14 Central St	Easton	1930
EST.148		19 Central St	Easton	1930
EST.149	Crofoot, Charles E. Gear Building	22 Central St	Easton	1910
EST.150	Morse, E. N. Company Office	24 Central St	Easton	1800
EST.151	Crofoot, Charles E. Gear Worker Housing	25 Central St	Easton	1948
EST.152		31 Central St	Easton	1895
EST.153		33 Central St	Easton	1895
EST.154		36 Central St	Easton	1980
EST.155		39 Central St	Easton	1895
EST.156		40 Central St	Easton	1920
EST.157		43 Central St	Easton	1895
EST.158		44 Central St	Easton	1910
EST.159		45 Central St	Easton	1910
EST.160		46 Central St	Easton	1980
EST.161		47 Central St	Easton	1910
EST.162	Crofoot, Charles E. Gear Worker Housing	50 Central St	Easton	1948
EST.163	Crofoot, Charles E. Gear Worker Housing	51 Central St	Easton	1948
EST.164		52 Central St	Easton	1980
EST.165		54 Central St	Easton	1980
EST.166	Crofoot, Charles E. Gear Worker Housing	61 Central St	Easton	1948
EST.167	Crofoot, Charles E. Gear Worker Housing	62 Central St	Easton	1948
EST.168	Crofoot, Charles E. Gear Worker Housing	65 Central St	Easton	1948
EST.169		71 Central St	Easton	1900
EST.170	Crofoot, Charles E. Gear Worker Housing	73 Central St	Easton	1948
EST.171	Crofoot, Charles E. Gear Worker Housing	77 Central St	Easton	1948

Inv. No.	Property Name	Street	Town	Year
EST.172	Crofoot, Charles E. Gear Worker Housing	81 Central St	Easton	1948
EST.173	Crofoot, Charles E. Gear Worker Housing	83 Central St	Easton	1948
EST.54		Dean St	Easton	1800
EST.55	Godfrey, Jones House	Dean St	Easton	1855
EST.205	Easton Evangelical Congregational Church	Depot St	Easton	1885
EST.947	Old Colony Railroad	Depot St	Easton	1866
EST.258	Cunningham, Daniel House	7 Depot St	Easton	1930
EST.259	Morse, Edward Newcomb House	12 Depot St	Easton	1860
EST.260	Wilson, Jesse C. House	13 Depot St	Easton	1890
EST.261	Pye, Walter B. House	24 Depot St	Easton	1900
EST.262	Mahoney, Frederick J. House	27 Depot St	Easton	1930
EST.263	Millet, Henry P. House	30 Depot St	Easton	1830
EST.264	Willis Double House	49-51 Depot St	Easton	1925
EST.265	Fox, Michael House	60 Depot St	Easton	1935
EST.266	Soule, Alfred W. House	69 Depot St	Easton	1900
EST.267	Heath, Lyman House	83 Depot St	Easton	1900
EST.268	Randall, Frank M. House	86 Depot St	Easton	1915
EST.269	South Easton Fire Station No. 2	87 Depot St	Easton	1934
EST.270	Guild, James House	95 Depot St	Easton	1750
EST.206		259 Depot St	Easton	1860
EST.207		261 Depot St	Easton	1860
EST.208	Ripley, Clifton House	263 Depot St	Easton	1840
EST.209		336 Depot St	Easton	1840
EST.210	Easton Center School House	350 Depot St	Easton	1856
EST.211		354 Depot St	Easton	1870
EST.212	Reed, Rev. William House	364 Depot St	Easton	1786
EST.213	Mason, George House	369 Depot St	Easton	1870
EST.214		375 Depot St	Easton	1860
EST.117	Pratt Farm	441 Depot St	Easton	1784
EST.951	Ames Estates Stone Walls	Elm St	Easton	1920
EST.952	Langwater Pond	Elm St	Easton	1850
EST.402	Hayes, William House	2 Elm St	Easton	1851
EST.403	Heelan, Patrick House	12 Elm St	Easton	1865
EST.404	Johnson, Carl S. House	16 Elm St	Easton	1938
EST.405	Johnson, Carl S. House	18 Elm St	Easton	1942
EST.406	Blake, Catherine H. Grocery Store	21 Elm St	Easton	1930
EST.407	Farrell, John House	28 Elm St	Easton	1865
EST.408	O'Beirne, Michael House	38 Elm St	Easton	1870

Inv. No.	Property Name	Street	Town	Year
EST.409	Middleton, Francis House	44 Elm St	Easton	1870
EST.544	Ames Shovel and Tool Company Tenement #55	45-47 Elm St	Easton	1859
EST.545	Ames Shovel and Tool Company Tenement #56	49-51 Elm St	Easton	1859
EST.410	Kinmartin, Simon H. House	50 Elm St	Easton	1889
EST.411	Cunningham, James House	54 Elm St	Easton	1882
EST.546	Ames Shovel and Tool Company Tenement #57	55-57 Elm St	Easton	1859
EST.412	Middleton, Bridget House	58 Elm St	Easton	1870
EST.413	O'Keefe, Thomas House	60 Elm St	Easton	1855
EST.547	Ames Shovel and Tool Company Tenement #58	61-63 Elm St	Easton	1859
EST.548	Ames Shovel and Tool Company Tenement #59	65-67 Elm St	Easton	1859
EST.414	Murphy, Patrick House	68 Elm St	Easton	1870
EST.415	Murphy, Thomas House	70 Elm St	Easton	1919
EST.416	Proctor, Bartholomew House	72 Elm St	Easton	1880
EST.549	Ames Shovel and Tool Company Tenement #60	73-75 Elm St	Easton	1859
EST.550	Ames Shovel and Tool Company Tenement #61	77-79 Elm St	Easton	1859
EST.417	Sheehan, Dennis House	78 Elm St	Easton	1850
EST.418	Johnson, John House	84 Elm St	Easton	1860
EST.419	Conley, Thomas House	88 Elm St	Easton	1876
EST.420	Quinn, Patrick House	92 Elm St	Easton	1830
EST.21	Spring Hill	104 Elm St	Easton	1893
EST.23	Ames, Frederick Lothrop Estate Gate Lodge	133 Elm St	Easton	1881
EST.27	Langwater	135 Elm St	Easton	1859
EST.390	Langwater Potting Shed and Greenhouse	135 Elm St	Easton	1890
EST.391	Langwater Stable	135 Elm St	Easton	1876
EST.953	Langwater Estate Bridge	135 Elm St	Easton	1880
EST.954	Langwater Estate Landscape	135 Elm St	Easton	1885
EST.955	Langwater Estate Circulation System	135 Elm St	Easton	1885
EST.22	Wayside	136 Elm St	Easton	1912
EST.956	Wayside Rose Garden Remnants	136 Elm St	Easton	1912
EST.24	Ames, Frederick Lothrop Estate Gardner's Cottage	137 Elm St	Easton	1884
EST.463	Swain, John H. House	149 Elm St	Easton	1880
EST.131		Foundry St	Easton	1910
EST.244	Meadow Lea Cranberry Company Shed #2	Foundry St	Easton	1910
EST.252	Meadow Lea Cranberry Company Building #1	Foundry St	Easton	1910
EST.253	Meadow Lea Cranberry Company Building #2	Foundry St	Easton	1910
EST.254	Meadow Lea Cranberry Company Shed #1	Foundry St	Easton	1910
EST.930	New Pond Dam	Foundry St	Easton	1810

Inv. No.	Property Name	Street	Town	Year
EST.948	Meadow Lea Cranberry Bog	Foundry St	Easton	1910
EST.950	Old Colony Railroad	Foundry St	Easton	1866
EST.61	Slocum House	75 Foundry St	Easton	1810
EST.62	Hayward, Joseph House	121 Foundry St	Easton	1778
EST.245	Hayward, Edward R. House	239 Foundry St	Easton	1870
EST.246	Hayward, Harold - Gershman House	243 Foundry St	Easton	1928
EST.247	Hayward, Edward B. House	247 Foundry St	Easton	1880
EST.248	Hayward, Joseph Jr. House	261 Foundry St	Easton	1810
EST.249	Pool, Harrison House	263 Foundry St	Easton	1870
EST.63	Poule House	269 Foundry St	Easton	1780
EST.251	Hayward, Edward - Pool, Dea. Samuel House	285 Foundry St	Easton	1770
EST.65	Drake, Lincoln House	500 Foundry St	Easton	1812
EST.126	Grant House	530 Foundry St	Easton	1870
EST.125	Spiby House	531 Foundry St	Easton	1830
EST.127	Munier House	534 Foundry St	Easton	1925
EST.124	Andrus House	541 Foundry St	Easton	1840
EST.128	Stewart House	542 Foundry St	Easton	1880
EST.136	Stacey House	545 Foundry St	Easton	1830
EST.135	Wry House	549 Foundry St	Easton	1760
EST.64	Swift Store	555 Foundry St	Easton	1810
EST.129		558 Foundry St	Easton	1840
EST.130		560 Foundry St	Easton	1890
EST.134	Baker House	573 Foundry St	Easton	1820
EST.132	Wilbur House	581 Foundry St	Easton	1870
EST.133	Shaw House	583 Foundry St	Easton	1870
EST.271	Philbrick, Ralph F. House	6 High St	Easton	1944
EST.272	Heaphy, Estelle House	26 High St	Easton	1900
EST.108		Highland St	Easton	1850
EST.107		12 Highland St	Easton	1850
EST.109		18 Highland St	Easton	1850
EST.84	South School House	23 Highland St	Easton	1860
EST.85	Keith, Josiah Jr. House	29 Highland St	Easton	1730
EST.86		35 Highland St	Easton	1800
EST.87		37 Highland St	Easton	1770
EST.88		41 Highland St	Easton	1800
EST.137	Rollins House	45 Highland St	Easton	1930
EST.89		49 Highland St	Easton	1800
EST.110		58 Highland St	Easton	1850

Inv. No.	Property Name	Street	Town	Year
EST.273	White, Leslie B. House	2 Hill St	Easton	1925
EST.274	White, Edwin H. House	6 Hill St	Easton	1895
EST.275	Andrews, Elwood House	11 Hill St	Easton	1953
EST.50	Howard, Second Elijah House	Howard St	Easton	1771
EST.48	Howard, Elijah House	2 Howard St	Easton	1771
EST.49	Howard House	3 Howard St	Easton	1840
EST.51	Soule House	25 Howard St	Easton	1800
EST.52	Howard Schoolhouse	36 Howard St	Easton	1845
EST.53		57 Howard St	Easton	1825
EST.356	Atwood, Julius D. Barn	5 Howland Ct	Easton	1890
EST.357	Anderson, August House	7 Howland Ct	Easton	1890
EST.358	Johnson, Alfred House	8 Howland Ct	Easton	1890
EST.359	Johnson, Borje House	9 Howland Ct	Easton	1890
EST.360	Nelson, Carl House	12 Howland Ct	Easton	1890
EST.276	Lindquist, O. J. and John House	5 Jenny Lind St	Easton	1870
EST.277	Benson, August House	9 Jenny Lind St	Easton	1918
EST.278	Anderson, Andrew B. House	11 Jenny Lind St	Easton	1891
EST.279	Downey, James P. House	21 Jenny Lind St	Easton	1900
EST.280	Anderson, Anna House	25 Jenny Lind St	Easton	1900
EST.281	Lonn, John House	31 Jenny Lind St	Easton	1885
EST.282	Dahlborg, Albert F. House	35 Jenny Lind St	Easton	1890
EST.421	Johnson, Carl S. House	2 King Ave	Easton	1942
EST.968	Rockery, The - Olmsted Memorial Cairn	Lincoln St	Easton	1882
EST.13	Ames, Gov. Oliver High School	8 Lincoln St	Easton	1895
EST.422	Barrows, Joseph House	10 Lincoln St	Easton	1861
EST.423	Ames, Oliver III Honeymoon Cottage	11 Lincoln St	Easton	1850
EST.424	Higginbottom, William House	14 Lincoln St	Easton	1870
EST.425	Middleton, David House	15 Lincoln St	Easton	1850
EST.426	Buckley, Daniel House	20 Lincoln St	Easton	1870
EST.427	McCarty, Julia Crowley Boarding House	21 Lincoln St	Easton	1865
EST.428	McEvoy, Thomas House	23 Lincoln St	Easton	1894
EST.429	Linehan, John J. House	24 Lincoln St	Easton	1893
EST.430	Healey, Thomas House	28 Lincoln St	Easton	1855
EST.431	Fernandes, John House	30 Lincoln St	Easton	1910
EST.432	Santos, Joseph House	32 Lincoln St	Easton	1910
EST.15	Ames Shovel and Tool Company Tenement #65	41 Lincoln St	Easton	1865
EST.433	Ames Shovel and Tool Company Tenement #93	42 Lincoln St	Easton	1860
EST.434	Ames Shovel and Tool Company Tenement #92	44 Lincoln St	Easton	1860

Inv. No.	Property Name	Street	Town	Year
EST.551	Ames Shovel and Tool Company Polishing Shop #1	45 Lincoln St	Easton	1868
EST.435	Donahoe, Thomas Stable	46 Lincoln St	Easton	1870
EST.436	Donahoe, Thomas House	48 Lincoln St	Easton	1870
EST.552	Ames Shovel and Tool Company Polishing Shop #2	49 Lincoln St	Easton	1868
EST.437	Healan, Edmund House	52 Lincoln St	Easton	1860
EST.553	Ames Shovel and Tool Company Tenement #77	55 Lincoln St	Easton	1870
EST.438	Conlan, Patrick House	56 Lincoln St	Easton	1860
EST.554	Ames Shovel and Tool Company Tenement #78	59-61 Lincoln St	Easton	1870
EST.14	Ames Shovel and Tool Company Tenement #79	63 Lincoln St	Easton	1870
EST.439	McDonald, Daniel House	66 Lincoln St	Easton	1870
EST.440	O'Connor, Patrick House	70 Lincoln St	Easton	1875
EST.555	Ames Shovel and Tool Company Tenement #80	71 Lincoln St	Easton	1870
EST.556	Ames Shovel and Tool Company Tenement #81	73 Lincoln St	Easton	1870
EST.441	Linehan, Edward House	78 Lincoln St	Easton	1875
EST.557	Ames Shovel and Tool Company Tenement #76	79 Lincoln St	Easton	1870
EST.558	Ames Shovel and Tool Company Tenement #75	81 Lincoln St	Easton	1870
EST.442	Linehan, Edward House	82 Lincoln St	Easton	1875
EST.559	Ames Shovel and Tool Company Tenement #38	85 Lincoln St	Easton	1855
EST.443	Linehan, James House	86 Lincoln St	Easton	1870
EST.560	Ames Shovel and Tool Company Tenement #20	89 Lincoln St	Easton	1855
EST.3	Ames Free Library	Main St	Easton	1883
EST.957	Main Street Granite Wall System	Main St	Easton	1880
EST.958	Queset River - Long and Hoe Shop Ponds Raceways	Main St	Easton	1850
EST.959	North Easton Village Cemetery High Stone Wall	Main St	Easton	1877
EST.12	Unity Church of North Easton Parsonage	9 Main St	Easton	1878
EST.444	Falk, Beth Ann House	12 Main St	Easton	1930
EST.11	Unity Church of North Easton	13 Main St	Easton	1875
EST.445	Gilmore, Edwin W. Stable	14 Main St	Easton	1925
EST.446	Bisbee, John House	16 Main St	Easton	1855
EST.447	Craig, Edgar A. House	18 Main St	Easton	1920
EST.448	Porter, Theron M. House	22 Main St	Easton	1865
EST.10	Unity Close	23 Main St	Easton	1864
EST.397	Unity Close Garage	23 Main St	Easton	1937
EST.960	Unity Close Parterre Gardens	23 Main St	Easton	1925
EST.961	Unity Close Cast Iron Picket Fence	23-31 Main St	Easton	1951
EST.449	Buck, Benjamin House	24 Main St	Easton	1830

Inv. No.	Property Name	Street	Town	Year
EST.4	Ames Shovel and Tool Company Carriage House	28 Main St	Easton	1897
EST.5	Ames Shovel and Tool Company Long Shop	28 Main St	Easton	1852
EST.6	Ames Shovel and Tool Company Machine Shop	28 Main St	Easton	1857
EST.565	Ames Shovel and Tool Company Engine Shop	28 Main St	Easton	1853
EST.566	Ames Shovel and Tool Company Steam Hammer Shop	28 Main St	Easton	1853
EST.567	Ames Shovel and Tool Company Plate Polishing Shop	28 Main St	Easton	1867
EST.568	Ames Shovel and Tool Company Antrim Opening Shop	28 Main St	Easton	1868
EST.569	Ames Shovel and Tool Company Handle Storehouse	28 Main St	Easton	1870
EST.570	Ames Shovel and Tool Co. New Plate Polishing Shop	28 Main St	Easton	1880
EST.571	Ames Shovel and Tool Company Valve House	28 Main St	Easton	1908
EST.572	Ames Shovel and Tool Company Power House	28 Main St	Easton	1907
EST.573	Ames Shovel and Tool Company Laboratory	28 Main St	Easton	1926
EST.574	Ames Shovel and Tool Company Glass Storehouse	28 Main St	Easton	1928
EST.575	Ames Shovel and Tool Company New Handle Shop	28 Main St	Easton	1929
EST.576	Ames Shovel and Tool Company Blacksmith Shop	28 Main St	Easton	1934
EST.577	Ames Shovel and Tool Company Plating Shop	28 Main St	Easton	1934
EST.962	Ames, Hobart Estate Landscape	31 Main St	Easton	1895
EST.963	Ames, Hobart Estate Stone Arch Bridge	31 Main St	Easton	1892
EST.964	Ames, Hobart Estate Pond	31 Main St	Easton	1820
EST.7	Packard, Millie House	34 Main St	Easton	1842
EST.398	Ames Shovel and Tool Company Antrim Hammer Shop	45 Main St	Easton	1865
EST.9	Queset Lodge	51 Main St	Easton	1856
EST.965	Queset Lodge Walled Garden	51 Main St	Easton	1925
EST.966	Queset Lodge Italian Garden	51 Main St	Easton	1911
EST.967	Queset Lodge Pergola and Stage	51 Main St	Easton	1911
EST.450	North Easton Post Office	54 Main St	Easton	1860
EST.451	Randall, John - Harlow, Obed House	56 Main St	Easton	1750
EST.2	North Easton Savings Bank and Post Office	66-68 Main St	Easton	1904
EST.452	Andrews, Jason House	72 Main St	Easton	1850
EST.581	Sundell, Ernest Auto Repair Shop	72 Main St	Easton	1943
EST.582	Sundell, Ernest Gas Station	72 Main St	Easton	1980

Inv. No.	Property Name	Street	Town	Year
EST.453	Torrey, John Multi-Family House	91 Main St	Easton	1835
EST.454	Howard, Nathaniel Store	92 Main St	Easton	1850
EST.455	Ripley, Samuel B. House	100 Main St	Easton	1850
EST.456	Ripley, Samuel B. Store - Ripley's Hall	101 Main St	Easton	1859
EST.457		108 Main St	Easton	1980
EST.458	Packard, Asa W. House	114 Main St	Easton	1850
EST.399	North Easton Grammar School	115 Main St	Easton	1916
EST.460	Murphy, James Block	122 Main St	Easton	1895
EST.461	McMenamy, Frank J. Meat Market Building	126 Main St	Easton	1922
EST.580	Schindler Block	134 Main St	Easton	1980
EST.462	Meador, Reuben House	139 Main St	Easton	1860
EST.32	Central Methodist Church	140 Main St	Easton	1864
EST.464	Middleton, Francis Jr. House and Store	150 Main St	Easton	1880
EST.465	Harlow, Hugh House	153 Main St	Easton	1900
EST.466	Austin, William A. House	156 Main St	Easton	1870
EST.517	Williams, Monroe Store	165 Main St	Easton	1890
EST.467	Conant, Philip Crane House	166 Main St	Easton	1905
EST.468	Conant, Frderick A. House	168 Main St	Easton	1905
EST.518	Williams, Milo M. House	175 Main St	Easton	1820
EST.469	Smith, John H. House	176 Main St	Easton	1880
EST.470	Williams, Henry C. House	180 Main St	Easton	1875
EST.471	McCarthy, John J. Tenant House	182 Main St	Easton	1920
EST.472	Williams, Hiram House	186 Main St	Easton	1854
EST.473	Williams, Larned House	190 Main St	Easton	1820
EST.30	Immaculate Conception Roman Catholic Church	193 Main St	Easton	1902
EST.520	Immaculate Conception Church Rectory	193 Main St	Easton	1850
EST.578	Casey, Father John Parish Center	193 Main St	Easton	1962
EST.579	Immaculate Conception Church Garage	193 Main St	Easton	1920
EST.474	McCarthy, John J. House	194 Main St	Easton	1900
EST.475	Middleton, Josephine House	201 Main St	Easton	1903
EST.476	Carr, Henry House	202 Main St	Easton	1871
EST.477	Central Methodist Episcopal Church Parsonage	204 Main St	Easton	1900
EST.478	Carr, Frank House	205 Main St	Easton	1890
EST.479	Packard, William House	208 Main St	Easton	1840
EST.480	Carr, John House	209 Main St	Easton	1850
EST.481	Holmes, John P. House	211 Main St	Easton	1850
EST.482	Conant, Frederick A. Tenant House	211 1/2 Main St	Easton	1930
EST.483	Packard, William Tenant House	212 Main St	Easton	1890

Inv. No.	Property Name	Street	Town	Year
EST.484	Fecto, Philander W. House	215 Main St	Easton	1870
EST.485	Southworth, Marcus House	218 Main St	Easton	1840
EST.486	Lothrop, Augustus W. House	219 Main St	Easton	1871
EST.487	Goodier, E. Watson House	220 Main St	Easton	1923
EST.488	Randall, Elmer House	224 Main St	Easton	1908
EST.489	Field, Chester R. House	225 Main St	Easton	1890
EST.490	Stone, Gurdon House	228 Main St	Easton	1835
EST.491	Kennedy, George W. House	231 Main St	Easton	1885
EST.29	Ames Family Servants Cottage	235 Main St	Easton	1800
EST.28	Langwater Farm House	250 Main St	Easton	1827
EST.392	Langwater Farm House - Hay and Dairy Barn	250 Main St	Easton	1900
EST.393	Langwater Farm House - Horse Barn	250 Main St	Easton	1925
EST.394	Langwater Farm House - Carpenter's Shop	250 Main St	Easton	1850
EST.395	Langwater Farm House - Farm Office	250 Main St	Easton	1850
EST.396	Langwater Farm House - Wagon Shed	250 Main St	Easton	1880
EST.283	Peterson, Carl F. House	5 Maple St	Easton	1900
EST.284	O'Leary, John House	9 Maple St	Easton	1925
EST.285	Vendt, Melof House	10 Maple St	Easton	1925
EST.113	Borderland State Park - The Shooting Lodge	Massapoag Ave	Easton	1910
EST.138	Borderland State Park - Currivan Corn Crib	Massapoag Ave	Easton	
EST.139	Borderland State Park - Maintenance Garage	Massapoag Ave	Easton	1974
EST.142	Borderland State Park - Visitor Center	Massapoag Ave	Easton	1993
EST.114	Borderland State Park - Wilbur, George House	251 Massapoag Ave	Easton	1786
EST.143	Borderland State Park - Wilbur, George Cattle Barn	251 Massapoag Ave	Easton	1786
EST.112	Borderland State Park - Ames Mansion	257 Massapoag Ave	Easton	1910
EST.931	Borderland State Park - Currivan Barn Foundation	257 Massapoag Ave	Easton	
EST.943	Borderland State Park - Ames Mansion Rock Garden	257 Massapoag Ave	Easton	1910
EST.944	Borderland State Park - Ames Mansion Swimming Pool	257 Massapoag Ave	Easton	1910
EST.945	Borderland State Park - Ames Mansion Tennis Court	257 Massapoag Ave	Easton	1910
EST.526	North Easton Lock-Up	6 Mechanic St	Easton	1898
EST.527	McCarthy Tenement	7 Mechanic St	Easton	1890
EST.31	Easton Central Methodist Episcopal Church	9 Mechanic St	Easton	1845
EST.528	Willis, J. House	10 Mechanic St	Easton	1865
EST.529	Jones, Horace W. House	11 Mechanic St	Easton	1880

Inv. No.	Property Name	Street	Town	Year
EST.530	Blaisdell, Oliver House	12 Mechanic St	Easton	1865
EST.531	Andrews, George W. House	13 Mechanic St	Easton	1865
EST.532	Blaisdell, John G. House	14 Mechanic St	Easton	1865
EST.533	Anderson, John A. House	15 Mechanic St	Easton	1900
EST.534	Andrews, William S. House	15A Mechanic St	Easton	1850
EST.535	Moore, Patrick House	15R Mechanic St	Easton	1880
EST.536	Moore, Patrick Barn	15RR Mechanic St	Easton	1915
EST.537	Keith, Frank P. House	19 Mechanic St	Easton	1890
EST.538	Packard, Manley House	25 Mechanic St	Easton	1865
EST.539	Blaisdell, Benjamin House	27 Mechanic St	Easton	1885
EST.540	Keith, Frank P. House I	31 Mechanic St	Easton	1880
EST.541	Ladd, Thomas F. House	35 Mechanic St	Easton	1880
EST.542	Mack, Alexander House	37-39 Mechanic St	Easton	1880
EST.543	Randall, Joel House	43 Mechanic St	Easton	1832
EST.25	Randall, S. House	69 North Main St	Easton	1838
EST.26	Easton Public School	92 North Main St	Easton	1783
EST.8	Old Colony Railroad Station	Oliver St	Easton	1884
EST.492	Gilmore, Edwin W. House	8 Oliver St	Easton	1853
EST.17	Ames Shovel and Tool Company Company Tenement #52	10 Oliver St	Easton	1852
EST.562	Ames Shovel and Tool Company Company Tenement #10	14-16 Oliver St	Easton	1852
EST.16	Ames Shovel and Tool Company Handle Shop	18 Oliver St	Easton	1866
EST.563	Ames Shovel and Tool Company Company Tenement #12	26 Oliver St	Easton	1852
EST.20	Ames Shovel and Tool Company Company Tenement #13	30 Oliver St	Easton	1852
EST.19	Ames Shovel and Tool Company Rolling Mill	50 Oliver St	Easton	1910
EST.361	Fuller, Alvin E. House	23 Pine St	Easton	1910
EST.362	Porter, Donald House	24 Pine St	Easton	1928
EST.363	May, George W. House	27 Pine St	Easton	1910
EST.364	Weatherbee, Thomas House	28 Pine St	Easton	1910
EST.365	Canegaly, Harry J. House	31 Pine St	Easton	1910
EST.366	Ewell, Dexter House	33 Pine St	Easton	1910
EST.367	Bruce, Harrison W. House	34 Pine St	Easton	1910
EST.368	Gordon, James Shop	34 Pine St	Easton	1915
EST.369	Alger, Alton House	35 Pine St	Easton	1910
EST.370	Howard, James E. House	40 Pine St	Easton	1910
EST.371	Wright, Charles I. House	41 Pine St	Easton	1910

Inv. No.	Property Name	Street	Town	Year
EST.372	Willis, Charles W. House	42 Pine St	Easton	1910
EST.373	Howard, Ruby E. House	43 Pine St	Easton	1910
EST.374	Howard, Ruby E. House	45 Pine St	Easton	1910
EST.375	Staples, Earl E. House	53 Pine St	Easton	1910
EST.74	Howard, Jephtha House	59 Pine St	Easton	1817
EST.286	Eastondale Grammar School	70 Pine St	Easton	1930
EST.287	Southworth, W. H. House	87 Pine St	Easton	1856
EST.288	Carlson, Carl House	90 Pine St	Easton	1925
EST.289	Blood, Eugene W. House	95 Pine St	Easton	1905
EST.290	Davis, John House	103 Pine St	Easton	1920
EST.291	Howard, Thomas House	106 Pine St	Easton	1880
EST.292	Howard, Thomas Barn	106 Pine St	Easton	1880
EST.293	Lunn, Benjamin E. House	111 Pine St	Easton	1880
EST.294	Borack, Anthony M. House	116 Pine St	Easton	1945
EST.295	Alger, Frank W. House	120 Pine St	Easton	1905
EST.296	Packard, Orrin - Howard, H. T. House	121 Pine St	Easton	1880
EST.297	Alger, Frank W. House	122 Pine St	Easton	1905
EST.493	Packard, Ethel F. House	5 Pond St	Easton	1934
EST.494	McGlincy, Alice C. House	6 Pond St	Easton	1915
EST.495	Lufkin, John N. House	8 Pond St	Easton	1892
EST.496	Brett, George House	9 Pond St	Easton	1880
EST.497	Stevenson, Henry House	10 Pond St	Easton	1860
EST.498	Twohig, William J. House	16 Pond St	Easton	1890
EST.499		28 Pond St	Easton	1880
EST.500	Ames Shovel and Tool Company Boarding House	30 Pond St	Easton	1860
EST.501	Gilmore, Edwin C. Company Worker Housing	33 Pond St	Easton	1860
EST.502	Gilmore, Edwin C. Company Worker Housing	35 Pond St	Easton	1850
EST.503	Galligan, Bernard House	36 Pond St	Easton	1890
EST.33	Lion, Eliphalet III House	46 Pond St	Easton	1792
EST.504	Twohig, William House	48 Pond St	Easton	1880
EST.505	McArdle, Henry House	50 Pond St	Easton	1850
EST.506	Canan, Thomas J. House	52 Pond St	Easton	1865
EST.507	O'Beirne, Bartholomew House	54 Pond St	Easton	1868
EST.508	Carr, Georgia K. House	56 Pond St	Easton	1929
EST.509	Ames Shovel and Tool Company Tenement #26	58 Pond St	Easton	1850
EST.510	Ames Shovel and Tool Company Tenement #48	60 Pond St	Easton	1860
EST.511	Ames Shovel and Tool Company Tenement #45	64 Pond St	Easton	1850

Inv. No.	Property Name	Street	Town	Year
EST.512	Ames Shovel and Tool Company Tenement #47	68 Pond St	Easton	1860
EST.513	McDavit, John House	70 Pond St	Easton	1850
EST.514	Ames Shovel and Tool Company Tenement #11	72 Pond St	Easton	1850
EST.60	Read, Marcy House	Poquanticut Ave	Easton	1825
EST.928	Blacksmith Shop Foundation	Poquanticut Ave	Easton	
EST.929	Perry Cannon Foundry Walls	Poquanticut Ave	Easton	
EST.121		1OR Poquanticut Ave	Easton	1935
EST.77	Harmony Hall	8R Poquanticut Ave	Easton	1752
EST.91		10 Poquanticut Ave	Easton	1850
EST.92		14 Poquanticut Ave	Easton	1835
EST.78	Richardson Barn	15 Poquanticut Ave	Easton	1850
EST.93		18 Poquanticut Ave	Easton	1850
EST.95		19 Poquanticut Ave	Easton	1820
EST.94		20 Poquanticut Ave	Easton	1850
EST.120	Rosa House	22 Poquanticut Ave	Easton	1945
EST.119	Sandstrom House	24 Poquanticut Ave	Easton	1935
EST.96		27 Poquanticut Ave	Easton	1920
EST.97		31 Poquanticut Ave	Easton	1850
EST.98		34-36 Poquanticut Ave	Easton	1835
EST.99		35-37 Poquanticut Ave	Easton	1835
EST.118	Swanson House	39 Poquanticut Ave	Easton	1945
EST.100		49 Poquanticut Ave	Easton	1820
EST.101		60 Poquanticut Ave	Easton	1835
EST.215	Clapp, Fred House	3 Purchase St	Easton	1870
EST.216	Lincoln, Stillman House	6 Purchase St	Easton	1870
EST.73	Slocum House	308 Purchase St	Easton	1812
EST.298	McMenamy, Edward J. House	11 Reynolds St	Easton	1915
EST.299	Nyquist, Charles E. House	12 Reynolds St	Easton	1900
EST.300	Melin, Peter House	13 Reynolds St	Easton	1900
EST.301	Millen, Peter House	17 Reynolds St	Easton	1894
EST.302	Anderson, Charlotte House	26 Reynolds St	Easton	1911
EST.303	Kelly, Dennis House	10 Seaver St	Easton	1905
EST.304	Kennedy, Edward H. House	20 Seaver St	Easton	1890
EST.305	Bergland, Andrew House	22 Seaver St	Easton	1890
EST.306	Rosen, August House	33 Seaver St	Easton	1920
EST.307	Dahlborg, Adolph P. House	40 Seaver St	Easton	1914
EST.308	Anderson, Godfrey House	44 Seaver St	Easton	1925
EST.309	Carlson, Albert House	48 Seaver St	Easton	1900

Inv. No.	Property Name	Street	Town	Year
EST.909	Frothingham, Louis Adams Park Gate	Sheridan St	Easton	
EST.217		4 Short St	Easton	1870
EST.218		14 Short St	Easton	1900
EST.219		25 Short St	Easton	1940
EST.222	Howard, Oliver House	31 Short St	Easton	1815
EST.220		76 Short St	Easton	1840
EST.221		104 Short St	Easton	1940
EST.224		106 Short St	Easton	1940
EST.927	South Street Mill Foundation Walls	South St	Easton	1750
EST.122		3 South St	Easton	1945
EST.102		8 South St	Easton	1870
EST.103		16 South St	Easton	1850
EST.123	Roscoe House	21 South St	Easton	1870
EST.104		25 South St	Easton	1870
EST.79	Belcher Foundry Worker Housing	51 South St	Easton	1800
EST.80	Belcher Foundry Worker Housing	53 South St	Easton	1800
EST.105		55 South St	Easton	1850
EST.81	Belcher Foundry Worker Housing	58 South St	Easton	1800
EST.106		59 South St	Easton	1850
EST.82	Belcher Foundry Worker Housing	64 South St	Easton	1800
EST.90		69 South St	Easton	1974
EST.83		102 South St	Easton	1780
EST.515	Smith, Lewis H. House	5 Sullivan Ave	Easton	1850
EST.516	North Easton Fire Station	9 Sullivan Ave	Easton	1905
EST.310	Baker, Lucy Hall Double House	9-11 Turnpike St	Easton	1905
EST.311	Cunningham, Michael House	13 Turnpike St	Easton	1851
EST.312	Bruce, Walter House	17 Turnpike St	Easton	1880
EST.66	Morse House	24 Turnpike St	Easton	1790
EST.67	Morse, Solomon W. Company House and Tavern	39 Turnpike St	Easton	1820
EST.314	Howard, James M. Double House	48-50 Turnpike St	Easton	1910
EST.315	Lothrop, Albert House	56 Turnpike St	Easton	1840
EST.316	Orcutt, James House	64 Turnpike St	Easton	1910
EST.317	Howard, James M. House	70 Turnpike St	Easton	1910
EST.318	Howard, James M. Carriage House	70 Turnpike St	Easton	1905
EST.319	Howard Shoe Company Factory	71-75 Turnpike St	Easton	1886
EST.68	Howard's Shoe Factory	75 Turnpike St	Easton	1885
EST.320	Howard, James M. General Store and Post Office	77 Turnpike St	Easton	1931

Inv. No.	Property Name	Street	Town	Year
EST.321	Thayer, Lewis M. House	81 Turnpike St	Easton	1840
EST.322	Thayer, Charles House	82 Turnpike St	Easton	1840
EST.323	Howard, Asaph House	83 Turnpike St	Easton	1865
EST.324	Macomber - Carr, Albert C. House	87 Turnpike St	Easton	1830
EST.69	White, William - White, Alanson Jr. House	122 Turnpike St	Easton	1845
EST.326	Janco Products Factory	126 Turnpike St	Easton	1951
EST.327	Janco Products Factory Office	126 Turnpike St	Easton	1951
EST.328	Lunn, Robert House	129 Turnpike St	Easton	1851
EST.329	Eastondale United Unitarian Church	132 Turnpike St	Easton	1904
EST.330	White, Henry House	133 Turnpike St	Easton	1835
EST.331	Magner, James House	156 Turnpike St	Easton	1880
EST.332	Gifford, Edward House	164 Turnpike St	Easton	1920
EST.333	Southworth, Philip House	168 Turnpike St	Easton	1923
EST.334	Howard, Seba House	192 Turnpike St	Easton	1840
EST.335	Howard, Seba Barn	192 Turnpike St	Easton	1840
EST.72	Howard House and Tavern	220 Turnpike St	Easton	1815
EST.70	Taunton - South Boston Turnpike Toll House	537 Turnpike St	Easton	1807
EST.71	Gilmore House	538 Turnpike St	Easton	1790
EST.35	Webster, Dr. House	7 Union St	Easton	1850
EST.34		93 Union St	Easton	1780
EST.38	Unionville School	Washington St	Easton	1893
EST.36	Dickerman House	91 Washington St	Easton	1820
EST.37		140-142 Washington St	Easton	1806
EST.41	Ames, Frederick Lothrop Mansion - Langwater Farm	320 Washington St	Easton	1905
EST.40	Twin Cottages	359 Washington St	Easton	1912
EST.39	Ames, Frederick Lothrop Carriage House	411 Washington St	Easton	1900
EST.42	Southeast Easton Elementary School	560 Washington St	Easton	1913
EST.174		572 Washington St	Easton	1970
EST.175	Morse, Neubert House	573 Washington St	Easton	1920
EST.176		574 Washington St	Easton	1980
EST.177	Morse Thread Mill Storage Building	579 Washington St	Easton	1850
EST.223	Morse Thread Mill Storage Building	579 Washington St	Easton	1850
EST.178		588 Washington St	Easton	1970
EST.179		589 Washington St	Easton	1950
EST.180		590 Washington St	Easton	1996
EST.181	Copeland, George Jr. House	593 Washington St	Easton	1875
EST.182		594 Washington St	Easton	1980

Inv. No.	Property Name	Street	Town	Year
EST.183		597 Washington St	Easton	1950
EST.184		599 Washington St	Easton	1870
EST.185		604 Washington St	Easton	1960
EST.186	Morse Thread Mill Worker Housing	605 Washington St	Easton	1870
EST.43	Howard, Elijah House	606 Washington St	Easton	1815
EST.187	Morse Thread Mill Worker Housing	611 Washington St	Easton	1870
EST.188	Morse Thread Mill Worker Housing	613 Washington St	Easton	1870
EST.189	Morse Thread Mill Worker Housing	617 Washington St	Easton	1880
EST.47	Dean Grist Mill	670 Washington St	Easton	1750
EST.337	Rankin, James House	670 Washington St	Easton	1908
EST.389	Dean Grist Mill Warehouse	670 Washington St	Easton	1900
EST.338	Dean, Thomas H. House	679 Washington St	Easton	1865
EST.44	Dean, Capt. Barzilla House	682 Washington St	Easton	1827
EST.340	Dean, Capt. Barzilla Barn	682 Washington St	Easton	1827
EST.341	Simpson, Charles D. House	683 Washington St	Easton	1905
EST.342	Simpson, Samuel Dexter House	687 Washington St	Easton	1840
EST.343		688 Washington St	Easton	1915
EST.344	Kennedy, Edward H. House	691 Washington St	Easton	1890
EST.345	Eastman, Pearl House	713 Washington St	Easton	1910
EST.111	Simpson Spring Bottling Company Office Building	719 Washington St	Easton	1915
EST.376	Simpson Spring Bottling Company Building	719 Washington St	Easton	1878
EST.377	Simpson Spring Bottling Company Storehouse	719 Washington St	Easton	1900
EST.379	Simpson Spring Bottling Company Storage Building	719 Washington St	Easton	1915
EST.380	Simpson Spring Bottling Company Auto Repair Shop	719 Washington St	Easton	1915
EST.381	Simpson Spring Bottling Company Truck Garage	719 Washington St	Easton	1915
EST.382	Simpson Spring Bottling Company Garage and Storage	719 Washington St	Easton	1935
EST.383	Simpson Spring Bottling Company Loading Building	719 Washington St	Easton	1935
EST.384	Simpson Spring Bottling Company Warehouse	719 Washington St	Easton	1935
EST.75	Morse House	4 Water St	Easton	1765
EST.190		6 Water St	Easton	1960
EST.76		8 Water St	Easton	1754
EST.519	Burns, Bridget M. House	8 Williams St	Easton	1915
EST.346	O'Hanlon, John House	10 Williams St	Easton	1890
EST.347	North Easton Libanon Evangelical Lutheran Church	18 Williams St	Easton	1893

Inv. No.	Property Name	Street	Town	Year
EST.583	Clapp House	20 Williams St	Easton	
EST.348	Johnson, Andrew House	25 Williams St	Easton	1905
EST.349	Cahill, J. House	27 Williams St	Easton	1861
EST.350	Mitrano, Daniel House	30 Williams St	Easton	1905
EST.351	Johnson, Frank House	34 Williams St	Easton	1900
EST.352	Reynolds, Patrick House	36 Williams St	Easton	1870
EST.353	Todd, James House	39 Williams St	Easton	1895
EST.354	Dineen, Daniel J. House	43 Williams St	Easton	1890
EST.355	McMenamy, Frank House	46 Williams St	Easton	1926
EST.385	Dineen, Daniel House	51 Williams St	Easton	1871
EST.386	Dineen, Cornelius House	53 Williams St	Easton	1890
EST.387	Lyons, Thomas House	55 Williams St	Easton	1880
EST.388	Dineen, Joseph House	57 Williams St	Easton	1880



APPENDIX D

Laboratory Data - Groundwater Testing



ANALYTICAL REPORT

Lab Number:	L1007986
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	AMES SHOVEL WORKS
Project Number:	5031.9.00
Report Date:	06/07/10

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: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1007986-01	B-9 (OW)	EASTON, MA	05/27/10 07:50
L1007986-02	B-1 (OW)	EASTON, MA	05/27/10 08:40
L1007986-03	B-2 (OW)	EASTON, MA	05/27/10 09:20
L1007986-04	B-4 (OW)	EASTON, MA	05/27/10 10:00
L1007986-05	B-3 (OW)	EASTON, MA	05/27/10 11:00
L1007986-06	B-6 (OW)	EASTON, MA	05/27/10 11:50
L1007986-07	B-7 (OW)	EASTON, MA	05/27/10 12:30
L1007986-08	B-13 (OW)	EASTON, MA	05/27/10 13:30

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	YES
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

Case Narrative

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

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

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

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

MCP Related Narratives

Volatile Organics

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG415418-1 LCS recovery, associated with L1007986-08, is below the individual acceptance criteria for Tetrahydrofuran (64%), but within the overall method allowances. The results of the associated sample are reported; however, all results are considered to have a potentially low bias for this compound.

The initial calibration, associated with L1007986-01, -02, -04, -06 and -07 did not meet the method required minimum response factor for 1,4-Dioxane and utilized a quadratic fit for 1,1,2,2-Tetrachloroethane.

The initial calibration, associated with L1007986-08, did not meet the method required minimum response

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

Case Narrative (continued)

factor for Acetone, Tetrahydrofuran, 1,4-Dioxane, and 4-Methyl-2-pentanone and utilized a quadratic fit for : 2-Butanone, 1,1,1-Trichloroethane, 2,2-Dichloropropane, Carbon tetrachloride, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, 2-Hexanone, Dibromochloromethane, 1,2-Dibromoethane, 1,1,1,2-Tetrachloroethane, n-Butylbenzene, Bromoform, Hexachlorobutadiene, Naphthalene, and 1,2,3-Trichlorobenzene.

The continuing calibration standards, associated with L1007986-01, -02, -04, -06, -07 and -08, are outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

EPH

In reference to question H:

The WG415083-2/-3 LCS/LCSD RPD, associated with L1007986-03 through -08 is above the acceptance criteria for Hexatriacontane (C36) (65%); however, the individual LCS/LCSD recoveries are within method limits. The results of the associated samples are reported.

Metals

In reference to question I:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

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:



Michelle M. Morris

Title: Technical Director/Representative

Date: 06/07/10

ORGANICS

VOLATILES

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-01
Client ID: B-9 (OW)
Sample Location: EASTON, MA
Matrix: Water
Analytical Method: 97,8260B
Analytical Date: 05/28/10 16:30
Analyst: MM

Date Collected: 05/27/10 07:50
Date Received: 05/27/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-01
 Client ID: B-9 (OW)
 Sample Location: EASTON, MA

Date Collected: 05/27/10 07:50
 Date Received: 05/27/10
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-01

Date Collected: 05/27/10 07:50

Client ID: B-9 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	115		70-130

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-02
Client ID: B-1 (OW)
Sample Location: EASTON, MA
Matrix: Water
Analytical Method: 97,8260B
Analytical Date: 05/28/10 17:02
Analyst: MM

Date Collected: 05/27/10 08:40
Date Received: 05/27/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	3.0		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-02

Date Collected: 05/27/10 08:40

Client ID: B-1 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	4.7		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	25		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-02

Date Collected: 05/27/10 08:40

Client ID: B-1 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	127		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	122		70-130

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-04
Client ID: B-4 (OW)
Sample Location: EASTON, MA
Matrix: Water
Analytical Method: 97,8260B
Analytical Date: 05/28/10 17:35
Analyst: MM

Date Collected: 05/27/10 10:00
Date Received: 05/27/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-04

Date Collected: 05/27/10 10:00

Client ID: B-4 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-04

Date Collected: 05/27/10 10:00

Client ID: B-4 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	126		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	114		70-130

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-06
Client ID: B-6 (OW)
Sample Location: EASTON, MA
Matrix: Water
Analytical Method: 97,8260B
Analytical Date: 05/28/10 18:07
Analyst: MM

Date Collected: 05/27/10 11:50
Date Received: 05/27/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-06

Date Collected: 05/27/10 11:50

Client ID: B-6 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	25		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-06

Date Collected: 05/27/10 11:50

Client ID: B-6 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	116		70-130

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-07
Client ID: B-7 (OW)
Sample Location: EASTON, MA
Matrix: Water
Analytical Method: 97,8260B
Analytical Date: 05/28/10 18:39
Analyst: MM

Date Collected: 05/27/10 12:30
Date Received: 05/27/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-07

Date Collected: 05/27/10 12:30

Client ID: B-7 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	34		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-07

Date Collected: 05/27/10 12:30

Client ID: B-7 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	118		70-130

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-08
Client ID: B-13 (OW)
Sample Location: EASTON, MA
Matrix: Water
Analytical Method: 97,8260B
Analytical Date: 06/01/10 10:04
Analyst: MM

Date Collected: 05/27/10 13:30
Date Received: 05/27/10
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	5.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	5.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-08

Date Collected: 05/27/10 13:30

Client ID: B-13 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	10	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	5.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-08

Date Collected: 05/27/10 13:30

Client ID: B-13 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	89		70-130

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 05/28/10 09:30
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02,04,06-07 Batch: WG415129-3					
Methylene chloride	ND		ug/l	5.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	5.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
 Analytical Date: 05/28/10 09:30
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02,04,06-07 Batch: WG415129-3					
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	10	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	5.0	--
n-Propylbenzene	ND		ug/l	2.0	--

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
 Analytical Date: 05/28/10 09:30
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02,04,06-07 Batch: WG415129-3					
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	107		70-130

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
 Analytical Date: 06/01/10 09:01
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG415418-3					
Methylene chloride	ND		ug/l	5.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	5.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 06/01/10 09:01
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG415418-3					
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	10	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	5.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	5.0	--
n-Propylbenzene	ND		ug/l	2.0	--

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8260B
 Analytical Date: 06/01/10 09:01
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 08 Batch: WG415418-3					
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	85		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02,04,06-07 Batch: WG415129-1 WG415129-2								
Methylene chloride	112		110		70-130	2		20
1,1-Dichloroethane	106		105		70-130	1		20
Chloroform	105		107		70-130	2		20
Carbon tetrachloride	101		104		70-130	3		20
1,2-Dichloropropane	103		101		70-130	2		20
Dibromochloromethane	97		102		70-130	5		20
1,1,2-Trichloroethane	98		105		70-130	7		20
Tetrachloroethene	100		106		70-130	6		20
Chlorobenzene	95		102		70-130	7		20
Trichlorofluoromethane	123		123		70-130	0		20
1,2-Dichloroethane	107		104		70-130	3		20
1,1,1-Trichloroethane	104		105		70-130	1		20
Bromodichloromethane	107		107		70-130	0		20
trans-1,3-Dichloropropene	97		104		70-130	7		20
cis-1,3-Dichloropropene	94		94		70-130	0		20
1,1-Dichloropropene	103		105		70-130	2		20
Bromoform	95		104		70-130	9		20
1,1,2,2-Tetrachloroethane	103		107		70-130	4		20
Benzene	105		106		70-130	1		20
Toluene	98		104		70-130	6		20
Ethylbenzene	103		110		70-130	7		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02,04,06-07 Batch: WG415129-1 WG415129-2								
Chloromethane	92		88		70-130	4		20
Bromomethane	95		92		70-130	3		20
Vinyl chloride	93		93		70-130	0		20
Chloroethane	105		106		70-130	1		20
1,1-Dichloroethene	112		112		70-130	0		20
trans-1,2-Dichloroethene	105		103		70-130	2		20
Trichloroethene	105		103		70-130	2		20
1,2-Dichlorobenzene	97		103		70-130	6		20
1,3-Dichlorobenzene	102		106		70-130	4		20
1,4-Dichlorobenzene	98		101		70-130	3		20
Methyl tert butyl ether	86		88		70-130	2		20
p/m-Xylene	103		112		70-130	8		20
o-Xylene	100		109		70-130	9		20
cis-1,2-Dichloroethene	105		108		70-130	3		20
Dibromomethane	93		94		70-130	1		20
1,2,3-Trichloropropane	111		118		70-130	6		20
Styrene	100		104		70-130	4		20
Dichlorodifluoromethane	82		79		70-130	4		20
Acetone	121		111		70-130	9		20
Carbon disulfide	110		108		70-130	2		20
2-Butanone	118		116		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02,04,06-07 Batch: WG415129-1 WG415129-2								
4-Methyl-2-pentanone	93		104		70-130	11		20
2-Hexanone	87		102		70-130	16		20
Bromochloromethane	107		105		70-130	2		20
Tetrahydrofuran	125		123		70-130	2		20
2,2-Dichloropropane	104		103		70-130	1		20
1,2-Dibromoethane	93		101		70-130	8		20
1,3-Dichloropropane	100		106		70-130	6		20
1,1,1,2-Tetrachloroethane	100		107		70-130	7		20
Bromobenzene	98		102		70-130	4		20
n-Butylbenzene	92		102		70-130	10		20
sec-Butylbenzene	90		101		70-130	12		20
tert-Butylbenzene	92		99		70-130	7		20
o-Chlorotoluene	99		103		70-130	4		20
p-Chlorotoluene	99		105		70-130	6		20
1,2-Dibromo-3-chloropropane	89		93		70-130	4		20
Hexachlorobutadiene	91		106		70-130	15		20
Isopropylbenzene	96		106		70-130	10		20
p-Isopropyltoluene	90		101		70-130	12		20
Naphthalene	72		85		70-130	17		20
n-Propylbenzene	96		105		70-130	9		20
1,2,3-Trichlorobenzene	89		99		70-130	11		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02,04,06-07 Batch: WG415129-1 WG415129-2								
1,2,4-Trichlorobenzene	92		102		70-130	10		20
1,3,5-Trimethylbenzene	94		100		70-130	6		20
1,2,4-Trimethylbenzene	94		101		70-130	7		20
Ethyl ether	96		97		70-130	1		20
Isopropyl Ether	93		94		70-130	1		20
Ethyl-Tert-Butyl-Ether	90		94		70-130	4		20
Tertiary-Amyl Methyl Ether	91		94		70-130	3		20
1,4-Dioxane	86		78		70-130	10		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	105		98		70-130
Toluene-d8	97		102		70-130
4-Bromofluorobenzene	91		92		70-130
Dibromofluoromethane	106		100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG415418-1 WG415418-2								
Methylene chloride	92		94		70-130	2		20
1,1-Dichloroethane	86		87		70-130	1		20
Chloroform	85		90		70-130	6		20
Carbon tetrachloride	94		101		70-130	7		20
1,2-Dichloropropane	80		86		70-130	7		20
Dibromochloromethane	100		109		70-130	9		20
1,1,2-Trichloroethane	100		99		70-130	1		20
Tetrachloroethene	94		97		70-130	3		20
Chlorobenzene	92		96		70-130	4		20
Trichlorofluoromethane	92		96		70-130	4		20
1,2-Dichloroethane	85		90		70-130	6		20
1,1,1-Trichloroethane	90		94		70-130	4		20
Bromodichloromethane	102		117		70-130	14		20
trans-1,3-Dichloropropene	101		110		70-130	9		20
cis-1,3-Dichloropropene	86		92		70-130	7		20
1,1-Dichloropropene	87		90		70-130	3		20
Bromoform	116		120		70-130	3		20
1,1,2,2-Tetrachloroethane	101		106		70-130	5		20
Benzene	84		86		70-130	2		20
Toluene	93		94		70-130	1		20
Ethylbenzene	97		104		70-130	7		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG415418-1 WG415418-2								
Chloromethane	102		101		70-130	1		20
Bromomethane	79		87		70-130	10		20
Vinyl chloride	100		103		70-130	3		20
Chloroethane	90		97		70-130	7		20
1,1-Dichloroethene	88		92		70-130	4		20
trans-1,2-Dichloroethene	84		89		70-130	6		20
Trichloroethene	79		82		70-130	4		20
1,2-Dichlorobenzene	104		104		70-130	0		20
1,3-Dichlorobenzene	103		105		70-130	2		20
1,4-Dichlorobenzene	102		104		70-130	2		20
Methyl tert butyl ether	72		70		70-130	3		20
p/m-Xylene	97		104		70-130	7		20
o-Xylene	91		97		70-130	6		20
cis-1,2-Dichloroethene	89		92		70-130	3		20
Dibromomethane	84		87		70-130	4		20
1,2,3-Trichloropropane	110		110		70-130	0		20
Styrene	88		93		70-130	6		20
Dichlorodifluoromethane	104		106		70-130	2		20
Acetone	109		109		70-130	0		20
Carbon disulfide	90		95		70-130	5		20
2-Butanone	97		105		70-130	8		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG415418-1 WG415418-2								
4-Methyl-2-pentanone	90		92		70-130	2		20
2-Hexanone	98		110		70-130	12		20
Bromochloromethane	86		92		70-130	7		20
Tetrahydrofuran	64	Q	73		70-130	13		20
2,2-Dichloropropane	104		106		70-130	2		20
1,2-Dibromoethane	99		99		70-130	0		20
1,3-Dichloropropane	90		90		70-130	0		20
1,1,1,2-Tetrachloroethane	110		119		70-130	8		20
Bromobenzene	102		107		70-130	5		20
n-Butylbenzene	91		93		70-130	2		20
sec-Butylbenzene	102		103		70-130	1		20
tert-Butylbenzene	97		101		70-130	4		20
o-Chlorotoluene	97		100		70-130	3		20
p-Chlorotoluene	99		103		70-130	4		20
1,2-Dibromo-3-chloropropane	116		120		70-130	3		20
Hexachlorobutadiene	98		98		70-130	0		20
Isopropylbenzene	98		105		70-130	7		20
p-Isopropyltoluene	97		99		70-130	2		20
Naphthalene	77		76		70-130	1		20
n-Propylbenzene	101		105		70-130	4		20
1,2,3-Trichlorobenzene	92		89		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 08 Batch: WG415418-1 WG415418-2								
1,2,4-Trichlorobenzene	95		91		70-130	4		20
1,3,5-Trimethylbenzene	97		99		70-130	2		20
1,2,4-Trimethylbenzene	96		97		70-130	1		20
Ethyl ether	70		72		70-130	3		20
Isopropyl Ether	81		83		70-130	2		20
Ethyl-Tert-Butyl-Ether	80		81		70-130	1		20
Tertiary-Amyl Methyl Ether	81		86		70-130	6		20
1,4-Dioxane	90		99		70-130	10		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	97		105		70-130
Toluene-d8	105		107		70-130
4-Bromofluorobenzene	97		99		70-130
Dibromofluoromethane	97		95		70-130

PETROLEUM HYDROCARBONS

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-03
 Client ID: B-2 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 06/03/10 19:40
 Analyst: AS

M.S. Analytical Date: 06/03/10 09:58
 M.S. Analyst: HL

Date Collected: 05/27/10 09:20
 Date Received: 05/27/10
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/28/10 09:50
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 06/03/10

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved
 Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	103	--	1
C19-C36 Aliphatics	ND		ug/l	103	--	1
C11-C22 Aromatics	249		ug/l	103	--	1
C11-C22 Aromatics, Adjusted	237		ug/l	103	--	1
Naphthalene	ND		ug/l	0.412	--	1
2-Methylnaphthalene	1.23		ug/l	0.412	--	1
Acenaphthylene	ND		ug/l	0.412	--	1
Acenaphthene	3.22		ug/l	0.412	--	1
Fluorene	3.87		ug/l	0.412	--	1
Phenanthrene	3.47		ug/l	0.412	--	1
Anthracene	ND		ug/l	0.412	--	1
Fluoranthene	ND		ug/l	0.412	--	1
Pyrene	ND		ug/l	0.412	--	1
Benzo(a)anthracene	ND		ug/l	0.412	--	1
Chrysene	ND		ug/l	0.412	--	1
Benzo(b)fluoranthene	ND		ug/l	0.412	--	1
Benzo(k)fluoranthene	ND		ug/l	0.412	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.412	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.412	--	1
Benzo(ghi)perylene	ND		ug/l	0.412	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-03

Date Collected: 05/27/10 09:20

Client ID: B-2 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	56		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	79		40-140
O-Terphenyl-MS	70		40-140

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-04
 Client ID: B-4 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 06/03/10 20:27
 Analyst: AS

M.S. Analytical Date: 06/03/10 10:27
 M.S. Analyst: HL

Date Collected: 05/27/10 10:00
 Date Received: 05/27/10
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/28/10 09:50
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 06/03/10

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	103	--	1
C19-C36 Aliphatics	ND		ug/l	103	--	1
C11-C22 Aromatics	ND		ug/l	103	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	103	--	1
Naphthalene	ND		ug/l	0.412	--	1
2-Methylnaphthalene	ND		ug/l	0.412	--	1
Acenaphthylene	ND		ug/l	0.412	--	1
Acenaphthene	ND		ug/l	0.412	--	1
Fluorene	ND		ug/l	0.412	--	1
Phenanthrene	ND		ug/l	0.412	--	1
Anthracene	ND		ug/l	0.412	--	1
Fluoranthene	ND		ug/l	0.412	--	1
Pyrene	ND		ug/l	0.412	--	1
Benzo(a)anthracene	ND		ug/l	0.412	--	1
Chrysene	ND		ug/l	0.412	--	1
Benzo(b)fluoranthene	ND		ug/l	0.412	--	1
Benzo(k)fluoranthene	ND		ug/l	0.412	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.412	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.412	--	1
Benzo(ghi)perylene	ND		ug/l	0.412	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-04

Date Collected: 05/27/10 10:00

Client ID: B-4 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	55		40-140
o-Terphenyl	58		40-140
2-Fluorobiphenyl	66		40-140
2-Bromonaphthalene	68		40-140
O-Terphenyl-MS	73		40-140

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-05
 Client ID: B-3 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 06/03/10 21:15
 Analyst: AS

M.S. Analytical Date: 06/03/10 10:56
 M.S. Analyst: HL

Date Collected: 05/27/10 11:00
 Date Received: 05/27/10
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/28/10 09:50
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 06/03/10

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	129		ug/l	103	--	1
C19-C36 Aliphatics	ND		ug/l	103	--	1
C11-C22 Aromatics	360		ug/l	103	--	1
C11-C22 Aromatics, Adjusted	351		ug/l	103	--	1
Naphthalene	0.518		ug/l	0.412	--	1
2-Methylnaphthalene	ND		ug/l	0.412	--	1
Acenaphthylene	ND		ug/l	0.412	--	1
Acenaphthene	1.82		ug/l	0.412	--	1
Fluorene	4.50		ug/l	0.412	--	1
Phenanthrene	1.50		ug/l	0.412	--	1
Anthracene	ND		ug/l	0.412	--	1
Fluoranthene	ND		ug/l	0.412	--	1
Pyrene	ND		ug/l	0.412	--	1
Benzo(a)anthracene	ND		ug/l	0.412	--	1
Chrysene	ND		ug/l	0.412	--	1
Benzo(b)fluoranthene	ND		ug/l	0.412	--	1
Benzo(k)fluoranthene	ND		ug/l	0.412	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.412	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.412	--	1
Benzo(ghi)perylene	ND		ug/l	0.412	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-05

Date Collected: 05/27/10 11:00

Client ID: B-3 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	44		40-140
o-Terphenyl	64		40-140
2-Fluorobiphenyl	67		40-140
2-Bromonaphthalene	73		40-140
O-Terphenyl-MS	74		40-140

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-06
 Client ID: B-6 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 06/03/10 22:02
 Analyst: AS

M.S. Analytical Date: 06/03/10 11:24
 M.S. Analyst: HL

Date Collected: 05/27/10 11:50
 Date Received: 05/27/10
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/28/10 09:50
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 06/03/10

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved
 Sample Temperature upon receipt: Container Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	103	--	1
C19-C36 Aliphatics	ND		ug/l	103	--	1
C11-C22 Aromatics	ND		ug/l	103	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	103	--	1
Naphthalene	ND		ug/l	0.412	--	1
2-Methylnaphthalene	ND		ug/l	0.412	--	1
Acenaphthylene	ND		ug/l	0.412	--	1
Acenaphthene	ND		ug/l	0.412	--	1
Fluorene	ND		ug/l	0.412	--	1
Phenanthrene	ND		ug/l	0.412	--	1
Anthracene	ND		ug/l	0.412	--	1
Fluoranthene	ND		ug/l	0.412	--	1
Pyrene	ND		ug/l	0.412	--	1
Benzo(a)anthracene	ND		ug/l	0.412	--	1
Chrysene	ND		ug/l	0.412	--	1
Benzo(b)fluoranthene	ND		ug/l	0.412	--	1
Benzo(k)fluoranthene	ND		ug/l	0.412	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.412	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.412	--	1
Benzo(ghi)perylene	ND		ug/l	0.412	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-06

Date Collected: 05/27/10 11:50

Client ID: B-6 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	58		40-140
o-Terphenyl	68		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	72		40-140
O-Terphenyl-MS	91		40-140

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-07
 Client ID: B-7 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 06/03/10 22:49
 Analyst: AS

M.S. Analytical Date: 06/03/10 11:53
 M.S. Analyst: HL

Date Collected: 05/27/10 12:30
 Date Received: 05/27/10
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/28/10 09:50
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 06/03/10

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	103	--	1
C19-C36 Aliphatics	ND		ug/l	103	--	1
C11-C22 Aromatics	ND		ug/l	103	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	103	--	1
Naphthalene	ND		ug/l	0.412	--	1
2-Methylnaphthalene	ND		ug/l	0.412	--	1
Acenaphthylene	ND		ug/l	0.412	--	1
Acenaphthene	ND		ug/l	0.412	--	1
Fluorene	ND		ug/l	0.412	--	1
Phenanthrene	ND		ug/l	0.412	--	1
Anthracene	ND		ug/l	0.412	--	1
Fluoranthene	ND		ug/l	0.412	--	1
Pyrene	ND		ug/l	0.412	--	1
Benzo(a)anthracene	ND		ug/l	0.412	--	1
Chrysene	ND		ug/l	0.412	--	1
Benzo(b)fluoranthene	ND		ug/l	0.412	--	1
Benzo(k)fluoranthene	ND		ug/l	0.412	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.412	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.412	--	1
Benzo(ghi)perylene	ND		ug/l	0.412	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-07

Date Collected: 05/27/10 12:30

Client ID: B-7 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	59		40-140
o-Terphenyl	63		40-140
2-Fluorobiphenyl	68		40-140
2-Bromonaphthalene	71		40-140
O-Terphenyl-MS	79		40-140

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-08
 Client ID: B-13 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 06/03/10 23:36
 Analyst: AS

M.S. Analytical Date: 06/03/10 12:22
 M.S. Analyst: HL

Date Collected: 05/27/10 13:30
 Date Received: 05/27/10
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/28/10 09:50
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 06/03/10

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	103	--	1
C19-C36 Aliphatics	ND		ug/l	103	--	1
C11-C22 Aromatics	ND		ug/l	103	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	103	--	1
Naphthalene	ND		ug/l	0.412	--	1
2-Methylnaphthalene	ND		ug/l	0.412	--	1
Acenaphthylene	ND		ug/l	0.412	--	1
Acenaphthene	ND		ug/l	0.412	--	1
Fluorene	ND		ug/l	0.412	--	1
Phenanthrene	ND		ug/l	0.412	--	1
Anthracene	ND		ug/l	0.412	--	1
Fluoranthene	ND		ug/l	0.412	--	1
Pyrene	ND		ug/l	0.412	--	1
Benzo(a)anthracene	ND		ug/l	0.412	--	1
Chrysene	ND		ug/l	0.412	--	1
Benzo(b)fluoranthene	ND		ug/l	0.412	--	1
Benzo(k)fluoranthene	ND		ug/l	0.412	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.412	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.412	--	1
Benzo(ghi)perylene	ND		ug/l	0.412	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1007986**Project Number:** 5031.9.00**Report Date:** 06/07/10**SAMPLE RESULTS**

Lab ID: L1007986-08

Date Collected: 05/27/10 13:30

Client ID: B-13 (OW)

Date Received: 05/27/10

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	50		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	75		40-140
O-Terphenyl-MS	84		40-140

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
Analytical Date: 06/01/10 11:11
Analyst: AS

M.S. Analytical Date: 06/01/10 10:23
M.S. Analyst: HL

Extraction Method: EPA 3510C
Extraction Date: 05/28/10 09:49
Cleanup Method1: EPH-04-1
Cleanup Date1: 06/01/10

Parameter	Result	Qualifier	Units	RL	MDL
EPH w/MS Targets - Westborough Lab for sample(s): 03-08 Batch: WG415083-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	0.400	--
2-Methylnaphthalene	ND		ug/l	0.400	--
Acenaphthylene	ND		ug/l	0.400	--
Acenaphthene	ND		ug/l	0.400	--
Fluorene	ND		ug/l	0.400	--
Phenanthrene	ND		ug/l	0.400	--
Anthracene	ND		ug/l	0.400	--
Fluoranthene	ND		ug/l	0.400	--
Pyrene	ND		ug/l	0.400	--
Benzo(a)anthracene	ND		ug/l	0.400	--
Chrysene	ND		ug/l	0.400	--
Benzo(b)fluoranthene	ND		ug/l	0.400	--
Benzo(k)fluoranthene	ND		ug/l	0.400	--
Benzo(a)pyrene	ND		ug/l	0.200	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--
Benzo(ghi)perylene	ND		ug/l	0.400	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	67		40-140
o-Terphenyl	84		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	84		40-140
O-Terphenyl-MS	92		40-140



Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
EPH w/MS Targets - Westborough Lab Associated sample(s): 03-08 Batch: WG415083-2 WG415083-3								
C9-C18 Aliphatics	65		60		40-140	8		25
C19-C36 Aliphatics	88		84		40-140	5		25
C11-C22 Aromatics	90		99		40-140	10		25
Naphthalene	79		81		40-140	3		25
2-Methylnaphthalene	94		93		40-140	1		25
Acenaphthylene	95		90		40-140	5		25
Acenaphthene	91		93		40-140	2		25
Fluorene	97		95		40-140	2		25
Phenanthrene	98		93		40-140	5		25
Anthracene	123		113		40-140	8		25
Fluoranthene	115		113		40-140	2		25
Pyrene	112		108		40-140	4		25
Benzo(a)anthracene	103		104		40-140	1		25
Chrysene	93		94		40-140	1		25
Benzo(b)fluoranthene	94		99		40-140	5		25
Benzo(k)fluoranthene	95		99		40-140	4		25
Benzo(a)pyrene	85		87		40-140	2		25
Indeno(1,2,3-cd)Pyrene	85		90		40-140	6		25
Dibenzo(a,h)anthracene	84		86		40-140	2		25
Benzo(ghi)perylene	89		91		40-140	2		25
Nonane (C9)	52		50		30-140	4		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Project Number: 5031.9.00

Lab Number: L1007986

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
EPH w/MS Targets - Westborough Lab Associated sample(s): 03-08 Batch: WG415083-2 WG415083-3								
Decane (C10)	60		57		40-140	5		25
Dodecane (C12)	65		61		40-140	6		25
Tetradecane (C14)	73		66		40-140	10		25
Hexadecane (C16)	81		73		40-140	10		25
Octadecane (C18)	86		79		40-140	8		25
Nonadecane (C19)	88		82		40-140	7		25
Eicosane (C20)	87		82		40-140	6		25
Docosane (C22)	88		84		40-140	5		25
Tetracosane (C24)	90		86		40-140	5		25
Hexacosane (C26)	90		86		40-140	5		25
Octacosane (C28)	89		84		40-140	6		25
triacontane (C30)	92		88		40-140	4		25
Hexatriacontane (C36)	90		46		40-140	65	Q	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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EPH w/MS Targets - Westborough Lab Associated sample(s): 03-08 Batch: WG415083-2 WG415083-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	85		70		40-140
o-Terphenyl	92		96		40-140
2-Fluorobiphenyl	82		86		40-140
2-Bromonaphthalene	87		91		40-140
O-Terphenyl-MS	97		95		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 201004218

Parameter	% Recovery	QC Criteria
C9-C18 Aliphatics	79	40-140
C19-C36 Aliphatics	90	40-140
C11-C22 Aromatics	85	40-140
Naphthalene	80	40-140
2-Methylnaphthalene	80	40-140
Acenaphthylene	75	40-140
Acenaphthene	81	40-140
Fluorene	78	40-140
Phenanthrene	82	40-140
Anthracene	80	40-140
Fluoranthene	80	40-140
Pyrene	81	40-140
Benzo(a)anthracene	74	40-140
Chrysene	76	40-140
Benzo(b)fluoranthene	72	40-140
Benzo(k)fluoranthene	79	40-140
Benzo(a)pyrene	66	40-140
Indeno(1,2,3-cd)Pyrene	75	40-140
Dibenzo(a,h)anthracene	72	40-140
Benzo(g,h,i)perylene	76	40-140
Nonane	42	30-140
Decane	75	40-140
Dodecane	79	40-140
Tetradecane	83	40-140
Hexadecane	87	40-140
Octadecane	90	40-140
Nonadecane	90	40-140
Eicosane	90	40-140
Docosane	91	40-140
Tetracosane	91	40-140
Hexacosane	90	40-140
Octacosane	90	40-140
triacontane	90	40-140
Hexatriacontane	88	40-140
% Naphthalene Breakthrough	0	0-5
% 2-Methylnaphthalene Breakthrough	0	0-5

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 201004218

Surrogate	% Recovery	QC Criteria
Chloro-Octadecane	79	40-140
o-Terphenyl	75	40-140
2-Fluorobiphenyl	76	40-140
2-Bromonaphthalene	80	40-140

METALS

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-01
 Client ID: B-9 (OW)
 Sample Location: EASTON, MA
 Matrix: Water

Date Collected: 05/27/10 07:50
 Date Received: 05/27/10
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 21:25	EPA 3005A	97,6020A	BM
Arsenic, Total	ND		mg/l	0.005	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Beryllium, Total	ND		mg/l	0.004	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Cadmium, Total	ND		mg/l	0.004	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Chromium, Total	ND		mg/l	0.01	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Copper, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Lead, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Mercury, Total	ND		mg/l	0.0002	--	1	06/03/10 19:00	06/04/10 12:06	EPA 7470A	97,7470A	EZ
Nickel, Total	ND		mg/l	0.025	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Selenium, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Silver, Total	ND		mg/l	0.007	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI
Thallium, Total	ND		mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 21:25	EPA 3005A	97,6020A	BM
Zinc, Total	ND		mg/l	0.050	--	1	06/02/10 16:00	06/04/10 18:28	EPA 3005A	97,6010B	AI



Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-02
 Client ID: B-1 (OW)
 Sample Location: EASTON, MA
 Matrix: Water

Date Collected: 05/27/10 08:40
 Date Received: 05/27/10
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 21:37	EPA 3005A	97,6020A	BM
Arsenic, Total	ND		mg/l	0.005	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Beryllium, Total	ND		mg/l	0.004	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Cadmium, Total	ND		mg/l	0.004	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Chromium, Total	ND		mg/l	0.01	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Copper, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Lead, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Mercury, Total	ND		mg/l	0.0002	--	1	06/03/10 19:00	06/04/10 12:08	EPA 7470A	97,7470A	EZ
Nickel, Total	ND		mg/l	0.025	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Selenium, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Silver, Total	ND		mg/l	0.007	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI
Thallium, Total	ND		mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 21:37	EPA 3005A	97,6020A	BM
Zinc, Total	0.118		mg/l	0.050	--	1	06/02/10 16:00	06/04/10 19:03	EPA 3005A	97,6010B	AI



Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-07
 Client ID: B-7 (OW)
 Sample Location: EASTON, MA
 Matrix: Water

Date Collected: 05/27/10 12:30
 Date Received: 05/27/10
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 21:43	EPA 3005A	97,6020A	BM
Arsenic, Total	ND		mg/l	0.005	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Beryllium, Total	ND		mg/l	0.004	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Cadmium, Total	ND		mg/l	0.004	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Chromium, Total	ND		mg/l	0.01	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Copper, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Lead, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Mercury, Total	ND		mg/l	0.0002	--	1	06/03/10 19:00	06/04/10 12:09	EPA 7470A	97,7470A	EZ
Nickel, Total	ND		mg/l	0.025	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Selenium, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Silver, Total	ND		mg/l	0.007	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI
Thallium, Total	ND		mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 21:43	EPA 3005A	97,6020A	BM
Zinc, Total	ND		mg/l	0.050	--	1	06/02/10 16:00	06/04/10 19:06	EPA 3005A	97,6010B	AI



Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

SAMPLE RESULTS

Lab ID: L1007986-08
 Client ID: B-13 (OW)
 Sample Location: EASTON, MA
 Matrix: Water

Date Collected: 05/27/10 13:30
 Date Received: 05/27/10
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Antimony, Total	0.0006		mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 21:49	EPA 3005A	97,6020A	BM
Arsenic, Total	ND		mg/l	0.005	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Beryllium, Total	ND		mg/l	0.004	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Cadmium, Total	ND		mg/l	0.004	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Chromium, Total	ND		mg/l	0.01	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Copper, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Lead, Total	0.017		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Mercury, Total	0.0002		mg/l	0.0002	--	1	06/03/10 19:00	06/04/10 12:11	EPA 7470A	97,7470A	EZ
Nickel, Total	ND		mg/l	0.025	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Selenium, Total	ND		mg/l	0.010	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Silver, Total	ND		mg/l	0.007	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI
Thallium, Total	ND		mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 21:49	EPA 3005A	97,6020A	BM
Zinc, Total	ND		mg/l	0.050	--	1	06/02/10 16:00	06/04/10 19:09	EPA 3005A	97,6010B	AI



Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-02,07-08 Batch: WG415765-1									
Antimony, Total	ND	mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 19:24	97,6020A	BM
Thallium, Total	ND	mg/l	0.0005	--	1	06/02/10 14:00	06/02/10 19:24	97,6020A	BM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-02,07-08 Batch: WG415775-1									
Arsenic, Total	ND	mg/l	0.005	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Beryllium, Total	ND	mg/l	0.004	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Cadmium, Total	ND	mg/l	0.004	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Chromium, Total	ND	mg/l	0.01	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Copper, Total	ND	mg/l	0.010	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Lead, Total	ND	mg/l	0.010	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Nickel, Total	ND	mg/l	0.025	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Selenium, Total	ND	mg/l	0.010	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Silver, Total	ND	mg/l	0.007	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI
Zinc, Total	ND	mg/l	0.050	--	1	06/02/10 16:00	06/04/10 18:16	97,6010B	AI

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-02,07-08 Batch: WG416067-1									
Mercury, Total	ND	mg/l	0.0002	--	1	06/03/10 19:00	06/04/10 12:31	97,7470A	EZ

Prep Information

Digestion Method: EPA 7470A



Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Total Metals - Westborough Lab Associated sample(s): 01-02,07-08 Batch: WG415765-2 WG415765-3								
Antimony, Total	94		90		80-120	4		20
Thallium, Total	106		100		80-120	6		20
MCP Total Metals - Westborough Lab Associated sample(s): 01-02,07-08 Batch: WG415775-2 WG415775-3								
Arsenic, Total	108		109		80-120	1		20
Beryllium, Total	99		101		80-120	2		20
Cadmium, Total	107		108		80-120	1		20
Chromium, Total	100		95		80-120	5		20
Copper, Total	102		102		80-120	0		20
Lead, Total	104		104		80-120	0		20
Nickel, Total	94		95		80-120	1		20
Selenium, Total	108		108		80-120	0		20
Silver, Total	100		99		80-120	1		20
Zinc, Total	100		101		80-120	1		20
MCP Total Metals - Westborough Lab Associated sample(s): 01-02,07-08 Batch: WG416067-2 WG416067-3								
Mercury, Total	114		115		80-120	1		20

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1007986-01A	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-01B	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-01C	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-TL-6020T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-CU-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-SB-6020T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1007986-02A	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-02B	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-02C	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-TL-6020T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-CU-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-SB-6020T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1007986-03A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-03B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-04A	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-04B	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-04C	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-04D	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)

*Values in parentheses indicate holding time in days

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1007986-05A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-05B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-06A	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-06B	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-06C	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-06D	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-07A	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-07B	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-07C	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-07D	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-07E	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-TL-6020T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-CU-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-SB-6020T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1007986-08A	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-08B	Vial HCl preserved	A	N/A	3	Y	Absent	MCP-8260-10(14)
L1007986-08C	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-08D	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1007986-08E	Plastic 250ml HNO3 preserved	A	<2	3	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-TL-6020T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-CU-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-SB-6020T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)

Container Comments

*Values in parentheses indicate holding time in days

Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
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Container Comments

L1007986-06D

*Values in parentheses indicate holding time in days

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

GLOSSARY

Acronyms

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

Terms

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.

Report Format: Data Usability Report



Project Name: AMES SHOVEL WORKS

Lab Number: L1007986

Project Number: 5031.9.00

Report Date: 06/07/10

Data Qualifiers

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.00

Lab Number: L1007986
Report Date: 06/07/10

REFERENCES

- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.

LIMITATION OF LIABILITIES

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

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



Certificate/Approval Program Summary

Last revised May 19, 2010 - Westboro Facility

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

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

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

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

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

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-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, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624.)

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

Drinking Water

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

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

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B.

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

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

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

Non-Potable Water

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

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

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

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

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

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

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

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

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

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

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

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 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, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. *Organic Parameters: MA-EPH, MA-VPH.***Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.***

Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NY-DOH.*

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

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

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. NELAP Accredited.

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 314, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.



CHAIN OF CUSTODY

PAGE 1 OF 2

WESTBORO, MA MANSFIELD, MA
 TEL: 508-898-9220 TEL: 508-822-9300
 FAX: 508-898-9193 FAX: 508-822-3288

Client Information

Client: McPhad Assoc LLC
 Address: 2269 Moss Ave
Cambridge, MA
 Phone: 617-868-1420
 Fax: 617-868-1423
 Email: pdehaves@mcphadgeo.com
 These samples have been previously analyzed by Alpha

Project Information

Project Name: Ames Shovel works
 Project Location: Easton, MA
 Project #: 50319-00
 Project Manager: BTD
 ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)
 Date Due: 6/4/10 Time:

Date Rec'd in Lab: 5/27/10ALPHA Job #: L1007986

Report Information - Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program MA MCP | Criteria RC-GW-1

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

Yes No Are MCP Analytical Methods Required?
 Yes No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
 (Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

ANALYSIS	EPHw/targets	VOL's	PP-13 metals	SAMPLE HANDLING		TOTAL # BOTTLES
				Filtration _____		
				<input type="checkbox"/> Done		
				<input type="checkbox"/> Not needed		
				<input type="checkbox"/> Lab to do		
			Preservation			
			<input type="checkbox"/> Lab to do			
			(Please specify below)			
			Sample Specific Comments			

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS			TOTAL # BOTTLES
		Date	Time			EPHw/targets	VOL's	PP-13 metals	
07986-1	B-9(ow)	5/27/10	7:30	H2O	TMC	X	X		3
2	B-1(ow)		8:40			X	X		3
3	B-2(ow)		9:20		X				2
4	B-4(ow)		10:00		X	X			4
5	B-3(ow)		11:00		X				2

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
 MA MCP or CT RCP?

Container Type A V P P
 Preservative B B C

Relinquished By: [Signature] Date/Time: 5/27/10 16:30
[Signature] 5/27/10 18:35
 Received By: [Signature] Date/Time: 5/27/10 17:30
[Signature] 5/27/10 18:35

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



CHAIN OF CUSTODY

PAGE 2 OF 2

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 5/27/10

ALPHA Job #: 21057986

Client Information

Client: McPhail Assoc LLC
Address: 2269 Mass Ave
Cambridge, MA
Phone: 617-868-1420
Fax: 617-868-1423
Email: Pdechant@mcphailco.com

Project Information

Project Name: Ames Shovel works
Project Location: Easton, MA
Project #: 5031
Project Manager: PJD
ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)
Date Due: 6/4/10 Time:

Report Information - Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program Criteria RC-GW-7

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

Yes No Are MCP Analytical Methods Required?
 Yes No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

ANALYSIS	EPH w/ targets	VOCs	PP-13 meth	TOTAL # BOTTLES
	SAMPLE HANDLING			
	Filtration _____			
	<input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do <small>(Please specify below)</small>			

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS			Sample Specific Comments	TOTAL # BOTTLES
		Date	Time			EPH w/ targets	VOCs	PP-13 meth		
07986.6	B-6 (cow)	5/27/10	1150	A20	TMC	X	X			4
	7 B-7 (cow)		1230			X	X	X		5
	8 B-13 (cow)		1330			X	X	X		5

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MA MCP or CT RCP?

Container Type	A	V	P
Preservative	B	B	C

Relinquished By: [Signature] Date/Time: 5/27/10 1630
 Received By: [Signature] Date/Time: 5/27/10 1835

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

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1007986

Instrument ID: Quimby.i Calibration Date: 01-JUN-2010 Time: 07:26

Lab File ID: 0601A01.D Init. Calib. Date(s): 11-MAR-2 11-MAR-2

Sample No: 8260CCAL Init. Calib. Times : 05:23 09:03

Compound	RRF	RRF	MIN RRF	%D	MAX %D
dichlorodifluoromethane	.40254	.42029	.05	-4	20
chloromethane	.5695	.58355	.05	-2	20
vinyl chloride	.37537	.3768	.05	0	20
bromomethane	.26677	.21165	.05	21	20
chloroethane	.30557	.2755	.05	10	20
trichlorofluoromethane	.48765	.44909	.05	8	20
ethyl ether	.091	.06412	.05	30	20
acrolin	100	109	.05	-9	20
freon-113	.27279	.29241	.05	-7	20
acetone	.04029	.04405	.05	-9	20
1,1,-dichloroethene	.25328	.22224	.05	12	20
tert-butyl alcohol	500	450	.05	10	20
iodomethane	.45303	.39516	.05	13	20
methylene chloride	.35421	.32501	.05	8	20
carbon disulfide	.87075	.78549	.05	10	20
methyl tert butyl ether	.28673	.20794	.05	27	20
Halothane	.18873	.15667	.05	17	20
trans-1,2-dichloroethene	.28364	.23683	.05	17	20
vinyl acetate	.39129	.32013	.05	18	20
Diisopropyl Ether	.79919	.64791	.05	19	20
1,1-dichloroethane	.56259	.48489	.05	14	20
Ethyl-Tert-Butyl-Ether	.46587	.37265	.05	20	20
2-butanone	100	97.254	.05	3	20
2,2-dichloropropane	100	104	.05	-4	20
cis-1,2-dichloroethene	.2975	.26565	.05	11	20
chloroform	.48665	.41398	.05	15	20
bromochloromethane	.10143	.08675	.05	14	20
tetrahydrofuran	.03164	.02028	.05	36	20
1,1,1-trichloroethane	100	90.069	.05	10	20
1,1-dichloropropene	.35454	.30969	.05	13	20
carbontetrachloride	100	94.376	.05	6	20
Tertiary-Amyl Methyl Ether	.3091	.25171	.05	19	20
1,2-dichloroethane	.27922	.2383	.05	15	20
benzene	1.1929	1.0014	.05	16	20
trichloroethene	.29082	.23033	.05	21	20
1,2-dichloropropane	.25577	.20541	.05	20	20
bromodichloromethane	.21762	.22281	.05	-2	20
1,4-dioxane	.00148	.00133	.05	10	20

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1007986

Instrument ID: Quimby.i Calibration Date: 01-JUN-2010 Time: 07:26

Lab File ID: 0601A01.D Init. Calib. Date(s): 11-MAR-2 11-MAR-2

Sample No: 8260CCAL Init. Calib. Times : 05:23 09:03

Compound	RRF	RRF	MIN RRF	%D	MAX %D
dibromomethane	.09801	.08206	.05	16	20
2-chloroethylvinyl ether	.05977	.05484	.05	8	20
4-methyl-2-pentanone	.03708	.03355	.05	10	20
cis-1,3-dichloropropene	100	86.188	.05	14	20
toluene	.95719	.88672	.05	7	20
trans-1,3-dichloropropene	100	101	.05	-1	20
1,1,2-trichloroethane	.1097	.11005	.05	0	20
2-hexanone	100	98.269	.05	2	20
1,3-dichloropropane	.26543	.23823	.05	10	20
tetrachloroethene	.36426	.34305	.05	6	20
chlorodibromomethane	100	100	.05	0	20
1,2-dibromoethane	100	98.563	.05	1	20
chlorobenzene	1.0165	.93575	.05	8	20
1,1,1,2-tetrachloroethane	100	110	.05	-10	20
ethyl benzene	2.1383	2.0650	.05	3	20
p/m xylene	.79289	.76712	.05	3	20
o xylene	.7588	.68712	.05	9	20
styrene	1.1644	1.0268	.05	12	20
isopropylbenzene	2.1444	2.112	.05	2	20
bromoform	100	116	.05	-16	20
1,1,2,2,-tetrachloroethane	.27793	.28164	.05	-1	20
1,2,3-trichloropropane	.20473	.22618	.05	-10	20
n-propylbenzene	4.2687	4.3294	.05	-1	20
bromobenzene	.59441	.60525	.05	-2	20
1,3,5-trimethylbenzene	2.7655	2.6800	.05	3	20
2-chlorotoluene	2.8419	2.7447	.05	3	20
4-chlorotoluene	2.5215	2.4902	.05	1	20
tert-butylbenzene	2.3901	2.3263	.05	3	20
1,2,4-trimethylbenzene	2.8386	2.7325	.05	4	20
sec-butylbenzene	3.5407	3.6294	.05	-3	20
p-isopropyltoluene	100	96.791	.05	3	20
1,3-dichlorobenzene	1.4076	1.4491	.05	-3	20
1,4-dichlorobenzene	1.3842	1.4134	.05	-2	20
n-butylbenzene	100	90.800	.05	9	20
1,2-dichlorobenzene	1.1657	1.2100	.05	-4	20
1,2-dibromo-3-chloropropane	100	116	.05	-16	20
1,2,4-trichlorobenzene	.63527	.60402	.05	5	20
hexachlorobutadiene	100	97.866	.05	2	20

F

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1007986

Instrument ID: Jack.i Calibration Date: 28-MAY-2010 Time: 07:54

Lab File ID: 0528A01.D Init. Calib. Date(s): 11-MAY-2 11-MAY-2

Sample No: 8260CCAL Init. Calib. Times : 08:37 14:32

Compound	RRF	RRF	MIN RRF	%D	MAX %D
dichlorodifluoromethane	.56547	.46193	.05	18	20
chloromethane	.92719	.84836	.05	9	20
vinyl chloride	.66083	.61198	.05	7	20
bromomethane	.33346	.31765	.05	5	20
chloroethane	.2698	.28241	.05	-5	20
trichlorofluoromethane	.7661	.94289	.05	-23	20
ethyl ether	.19343	.18466	.05	5	20
1,1,-dichloroethene	.40215	.44952	.05	-12	20
carbon disulfide	1.0350	1.1376	.05	-10	20
freon-113	.43543	.47447	.05	-9	20
iodomethane	.85558	.72108	.05	16	20
acrolin	.00465	.00785	.05	-69	20
methylene chloride	.6331	.70871	.05	-12	20
acetone	.1238	.14937	.05	-21	20
trans-1,2-dichloroethene	.64193	.67716	.05	-5	20
methyl tert butyl ether	1.2568	1.0851	.05	14	20
tert butyl alcohol	.03107	.02641	.05	15	20
Diisopropyl Ether	2.5389	2.3555	.01	7	20
1,1-dichloroethane	1.1762	1.2445	.05	-6	20
Halothane	.5266	.58043	.05	-10	20
Ethyl-Tert-Butyl-Ether	1.7326	1.5599	.05	10	20
vinyl acetate	.98248	.47894	.05	51	20
cis-1,2-dichloroethene	.70818	.74379	.05	-5	20
2,2-dichloropropane	.88385	.91837	.05	-4	20
bromochloromethane	.32504	.34794	.05	-7	20
chloroform	1.1112	1.1676	.05	-5	20
carbontetrachloride	.8862	.89322	.05	-1	20
ethyl acetate	.50975	.40998	.05	20	20
1,1,1-trichloroethane	.99109	1.0337	.05	-4	20
2-butanone	.20883	.24593	.05	-18	20
1,1-dichloropropene	.87962	.90332	.05	-3	20
benzene	2.6485	2.7928	.05	-5	20
Tertiary-Amyl Methyl Ether	1.3196	1.1976	.05	9	20
tetrahydrofuran	.10175	.12755	.05	-25	20
1,2-dichloroethane	.74597	.79539	.05	-7	20
trichloroethene	.72946	.76624	.05	-5	20
dibromomethane	.3446	.31946	.05	7	20
1,2-dichloropropane	.71705	.74203	.05	-3	20

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1007986

Instrument ID: Jack.i Calibration Date: 28-MAY-2010 Time: 07:54

Lab File ID: 0528A01.D Init. Calib. Date(s): 11-MAY-2 11-MAY-2

Sample No: 8260CCAL Init. Calib. Times : 08:37 14:32

Compound	RRF	RRF	MIN RRF	%D	MAX %D
bromodichloromethane	.76449	.81671	.05	-7	20
1,4-dioxane	.00385	.0033	.05	14	20
2-chloroethylvinyl ether	.07357	.28919	.05	-293	20
cis-1,3-dichloropropene	.89684	.84526	.05	6	20
toluene	2.1672	2.1136	.05	2	20
tetrachloroethene	1.0484	1.0430	.05	1	20
4-methyl-2-pentanone	.15389	.14305	.05	7	20
trans-1,3-dichloropropene	.90335	.87294	.05	3	20
1,1,2-trichloroethane	.48074	.46949	.05	2	20
chlorodibromomethane	.67153	.65197	.05	3	20
1,3-dichloropropane	.98173	.98683	.05	-1	20
1,2-dibromoethane	.5807	.54194	.05	7	20
2-hexanone	.34074	.29795	.05	13	20
chlorobenzene	2.4620	2.3328	.05	5	20
ethyl benzene	4.0550	4.1869	.05	-3	20
1,1,1,2-tetrachloroethane	.84866	.84966	.05	0	20
p/m xylene	1.6385	1.6938	.05	-3	20
o xylene	1.5361	1.5386	.05	0	20
bromoform	.65084	.61912	.05	5	20
styrene	2.4534	2.4609	.05	0	20
isopropylbenzene	4.1563	3.9716	.05	4	20
bromobenzene	1.8514	1.8213	.05	2	20
n-propylbenzene	8.0073	7.7079	.05	4	20
1,1,2,2,-tetrachloroethane	100	103	.05	-3	20
2-chlorotoluene	5.4147	5.3726	.05	1	20
1,2,3-trichloropropane	.76732	.85301	.05	-11	20
1,3,5-trimethylbenzene	5.6499	5.2827	.05	6	20
4-chlorotoluene	4.8572	4.7921	.05	1	20
tert-butylbenzene	4.9298	4.5143	.05	8	20
1,2,4-trimethylbenzene	5.6768	5.3475	.05	6	20
sec-butylbenzene	6.9372	6.2552	.01	10	20
p-isopropyltoluene	5.6394	5.0584	.05	10	20
1,3-dichlorobenzene	3.4762	3.5557	.05	-2	20
1,4-dichlorobenzene	3.5481	3.4879	.05	2	20
n-butylbenzene	4.4817	4.1125	.05	8	20
1,2-dichlorobenzene	3.1601	3.0685	.05	3	20
1,2-dibromo-3-chloropropane	.14322	.12803	.05	11	20
hexachlorobutadiene	.67093	.60874	.05	9	20

F
F

FORM VII MCP-8260-10



ANALYTICAL REPORT

Lab Number:	L1112002
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	AMES SHOVEL
Project Number:	5031
Report Date:	08/12/11

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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: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1112002-01	MW-A	EASTON, MA	08/08/11 09:15
L1112002-02	B-102 (OW)	EASTON, MA	08/08/11 08:00
L1112002-03	B-101 (OW)	EASTON, MA	08/08/11 10:45
L1112002-04	B-9 (OW)	EASTON, MA	08/08/11 12:00
L1112002-05	B-106 (OW)	EASTON, MA	08/08/11 13:00

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	YES
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Case Narrative

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

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

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

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

MCP Related Narratives

Volatile Organics

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG484012-1 LCS recovery, associated with L1112002-03, is below the acceptance criteria for Carbon disulfide (69%); however, it has been identified as a "difficult" analyte and is within the 40-160% acceptance limits. The results of the associated sample are reported; however, all results are considered to have a potentially low bias for this compound.

The WG484012-1 LCS recovery, associated with L1112002-03, is above the individual acceptance criteria for 1,2-Dibromoethane (136%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for this compound. In

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Case Narrative (continued)

addition, the associated WG484012-1/-2 LCS/LCSD RPD is above the acceptance criteria for 1,2-Dibromoethane (24%).

The WG484310-1/-2 LCS/LCSD recoveries, associated with L1112002-05, are below the acceptance criteria for Carbon disulfide (62%/65%) and 2-Hexanone (LCSD at 68%); however, they have been identified as "difficult" analytes and are within the 40-160% acceptance limits. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for these compounds.

The WG484310-1 LCS recovery, associated with L1112002-05, is above the individual acceptance criteria for 1,2-Dibromoethane (133%), but within the overall method allowances. The results of the associated sample are reported; however, all positive detects are considered to have a potentially high bias for this compound. In addition, the associated WG484310-1/-2 LCS/LCSD RPD is above the acceptance criteria for 1,2-Dibromoethane (21%).

The WG484310-1/-2 LCS/LCSD RPD, associated with L1112002-05, is above the acceptance criteria for 1,2-Dibromo-3-chloropropane (25%); however, the individual LCS/LCSD recoveries are within method limits. The initial calibrations, associated with L1112002-03 and -05, did not meet the method required minimum response factors on the lowest calibration standards for 1,4-Dioxane (0.00290), as well as the average response factor for 1,4-Dioxane. In addition, a quadratic fit was utilized for Acetone, Carbon tetrachloride, 2-Butanone, 1,4-Dioxane, Tetrachloroethene, Chlorodibromomethane, 1,1,1,2-Tetrachloroethane, Bromoform and Hexachlorobutadiene.

The continuing calibration standards, associated with L1112002-03 and -05, are outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

EPH

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG483891-2/-3 LCS/LCSD RPD, associated with L1112002-01 through -05, is above the acceptance criteria for Tetracosane (C24) (67%); however, the individual LCS/LCSD recoveries are within method limits.

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Case Narrative (continued)

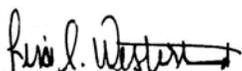
VPH

In reference to question I:

All samples were analyzed for a subset of MCP compounds per the Chain of Custody.

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:



Lisa Westerlind

Title: Technical Director/Representative

Date: 08/12/11

ORGANICS

VOLATILES

Project Name: AMES SHOVEL**Lab Number:** L1112002**Project Number:** 5031**Report Date:** 08/12/11**SAMPLE RESULTS**

Lab ID: L1112002-03
 Client ID: B-101 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 97,8260B
 Analytical Date: 08/10/11 18:24
 Analyst: MM

Date Collected: 08/08/11 10:45
 Date Received: 08/08/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-03
 Client ID: B-101 (OW)
 Sample Location: EASTON, MA

Date Collected: 08/08/11 10:45
 Date Received: 08/08/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	19		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1

Project Name: AMES SHOVEL**Lab Number:** L1112002**Project Number:** 5031**Report Date:** 08/12/11**SAMPLE RESULTS**

Lab ID: L1112002-03
 Client ID: B-101 (OW)
 Sample Location: EASTON, MA

Date Collected: 08/08/11 10:45
 Date Received: 08/08/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Volatile Organics - Westborough Lab

1,4-Dioxane	ND		ug/l	250	--	1
-------------	----	--	------	-----	----	---

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	88		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	105		70-130

Project Name: AMES SHOVEL**Lab Number:** L1112002**Project Number:** 5031**Report Date:** 08/12/11**SAMPLE RESULTS**

Lab ID: L1112002-05
 Client ID: B-106 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 97,8260B
 Analytical Date: 08/11/11 09:07
 Analyst: MM

Date Collected: 08/08/11 13:00
 Date Received: 08/08/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	1.7		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-05
 Client ID: B-106 (OW)
 Sample Location: EASTON, MA

Date Collected: 08/08/11 13:00
 Date Received: 08/08/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1

Project Name: AMES SHOVEL**Lab Number:** L1112002**Project Number:** 5031**Report Date:** 08/12/11**SAMPLE RESULTS**

Lab ID: L1112002-05
 Client ID: B-106 (OW)
 Sample Location: EASTON, MA

Date Collected: 08/08/11 13:00
 Date Received: 08/08/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	88		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	103		70-130

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 08/10/11 10:49
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG484012-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 08/10/11 10:49
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG484012-3					
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	5.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 08/10/11 10:49
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG484012-3					
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	85		70-130
Toluene-d8	88		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	105		70-130

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 08/11/11 08:35
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG484310-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 08/11/11 08:35
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG484310-3					
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	5.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--



Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260B
Analytical Date: 08/11/11 08:35
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 05 Batch: WG484310-3					
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	87		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	107		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG484012-1 WG484012-2								
Methylene chloride	86		90		70-130	5		20
1,1-Dichloroethane	83		88		70-130	6		20
Chloroform	84		89		70-130	6		20
Carbon tetrachloride	93		99		70-130	6		20
1,2-Dichloropropane	74		75		70-130	1		20
Dibromochloromethane	89		87		70-130	2		20
1,1,2-Trichloroethane	85		85		70-130	0		20
Tetrachloroethene	106		113		70-130	6		20
Chlorobenzene	83		88		70-130	6		20
Trichlorofluoromethane	91		98		70-130	7		20
1,2-Dichloroethane	84		87		70-130	4		20
1,1,1-Trichloroethane	88		96		70-130	9		20
Bromodichloromethane	83		87		70-130	5		20
trans-1,3-Dichloropropene	86		82		70-130	5		20
cis-1,3-Dichloropropene	90		87		70-130	3		20
1,1-Dichloropropene	84		90		70-130	7		20
Bromoform	98		104		70-130	6		20
1,1,2,2-Tetrachloroethane	83		84		70-130	1		20
Benzene	83		88		70-130	6		20
Toluene	80		79		70-130	1		20
Ethylbenzene	80		83		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG484012-1 WG484012-2								
Chloromethane	81		91		70-130	12		20
Bromomethane	95		107		70-130	12		20
Vinyl chloride	97		103		70-130	6		20
Chloroethane	82		87		70-130	6		20
1,1-Dichloroethene	83		89		70-130	7		20
trans-1,2-Dichloroethene	90		98		70-130	9		20
Trichloroethene	85		93		70-130	9		20
1,2-Dichlorobenzene	92		96		70-130	4		20
1,3-Dichlorobenzene	92		95		70-130	3		20
1,4-Dichlorobenzene	92		95		70-130	3		20
Methyl tert butyl ether	89		93		70-130	4		20
p/m-Xylene	81		82		70-130	1		20
o-Xylene	82		83		70-130	1		20
cis-1,2-Dichloroethene	95		99		70-130	4		20
Dibromomethane	108		105		70-130	3		20
1,2,3-Trichloropropane	93		91		70-130	2		20
Styrene	78		79		70-130	1		20
Dichlorodifluoromethane	102		85		70-130	18		20
Acetone	93		92		70-130	1		20
Carbon disulfide	69	Q	75		70-130	8		20
2-Butanone	100		99		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Project Number: 5031

Lab Number: L112002

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG484012-1 WG484012-2								
4-Methyl-2-pentanone	92		82		70-130	11		20
2-Hexanone	77		75		70-130	3		20
Bromochloromethane	109		116		70-130	6		20
Tetrahydrofuran	92		86		70-130	7		20
2,2-Dichloropropane	78		80		70-130	3		20
1,2-Dibromoethane	136	Q	107		70-130	24	Q	20
1,3-Dichloropropane	88		86		70-130	2		20
1,1,1,2-Tetrachloroethane	85		86		70-130	1		20
Bromobenzene	102		101		70-130	1		20
n-Butylbenzene	85		82		70-130	4		20
sec-Butylbenzene	88		86		70-130	2		20
tert-Butylbenzene	94		94		70-130	0		20
o-Chlorotoluene	84		84		70-130	0		20
p-Chlorotoluene	78		81		70-130	4		20
1,2-Dibromo-3-chloropropane	92		82		70-130	11		20
Hexachlorobutadiene	111		117		70-130	5		20
Isopropylbenzene	85		84		70-130	1		20
p-Isopropyltoluene	94		91		70-130	3		20
Naphthalene	91		88		70-130	3		20
n-Propylbenzene	82		84		70-130	2		20
1,2,3-Trichlorobenzene	114		111		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG484012-1 WG484012-2								
1,2,4-Trichlorobenzene	111		114		70-130	3		20
1,3,5-Trimethylbenzene	81		82		70-130	1		20
1,2,4-Trimethylbenzene	85		86		70-130	1		20
Ethyl ether	86		89		70-130	3		20
Isopropyl Ether	82		79		70-130	4		20
Ethyl-Tert-Butyl-Ether	84		88		70-130	5		20
Tertiary-Amyl Methyl Ether	92		94		70-130	2		20
1,4-Dioxane	92		107		70-130	15		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	89		93		70-130
Toluene-d8	90		91		70-130
4-Bromofluorobenzene	88		90		70-130
Dibromofluoromethane	101		103		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG484310-1 WG484310-2								
Methylene chloride	95		94		70-130	1		20
1,1-Dichloroethane	85		91		70-130	7		20
Chloroform	89		89		70-130	0		20
Carbon tetrachloride	98		99		70-130	1		20
1,2-Dichloropropane	80		78		70-130	3		20
Dibromochloromethane	92		87		70-130	6		20
1,1,2-Trichloroethane	85		86		70-130	1		20
Tetrachloroethene	108		115		70-130	6		20
Chlorobenzene	88		88		70-130	0		20
Trichlorofluoromethane	90		94		70-130	4		20
1,2-Dichloroethane	87		85		70-130	2		20
1,1,1-Trichloroethane	92		94		70-130	2		20
Bromodichloromethane	88		85		70-130	3		20
trans-1,3-Dichloropropene	88		85		70-130	3		20
cis-1,3-Dichloropropene	93		87		70-130	7		20
1,1-Dichloropropene	89		88		70-130	1		20
Bromoform	107		103		70-130	4		20
1,1,2,2-Tetrachloroethane	90		86		70-130	5		20
Benzene	89		90		70-130	1		20
Toluene	80		88		70-130	10		20
Ethylbenzene	83		84		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG484310-1 WG484310-2								
Chloromethane	81		84		70-130	4		20
Bromomethane	100		96		70-130	4		20
Vinyl chloride	95		99		70-130	4		20
Chloroethane	82		85		70-130	4		20
1,1-Dichloroethene	83		88		70-130	6		20
trans-1,2-Dichloroethene	97		99		70-130	2		20
Trichloroethene	92		92		70-130	0		20
1,2-Dichlorobenzene	95		95		70-130	0		20
1,3-Dichlorobenzene	96		91		70-130	5		20
1,4-Dichlorobenzene	96		92		70-130	4		20
Methyl tert butyl ether	90		84		70-130	7		20
p/m-Xylene	81		85		70-130	5		20
o-Xylene	80		81		70-130	1		20
cis-1,2-Dichloroethene	99		99		70-130	0		20
Dibromomethane	111		101		70-130	9		20
1,2,3-Trichloropropane	95		88		70-130	8		20
Styrene	75		74		70-130	1		20
Dichlorodifluoromethane	87		80		70-130	8		20
Acetone	83		74		70-130	11		20
Carbon disulfide	62	Q	65	Q	70-130	5		20
2-Butanone	96		86		70-130	11		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Project Number: 5031

Lab Number: L1112002

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG484310-1 WG484310-2								
4-Methyl-2-pentanone	82		77		70-130	6		20
2-Hexanone	75		68	Q	70-130	10		20
Bromochloromethane	114		110		70-130	4		20
Tetrahydrofuran	87		83		70-130	5		20
2,2-Dichloropropane	84		84		70-130	0		20
1,2-Dibromoethane	133	Q	108		70-130	21	Q	20
1,3-Dichloropropane	88		88		70-130	0		20
1,1,1,2-Tetrachloroethane	88		85		70-130	3		20
Bromobenzene	108		103		70-130	5		20
n-Butylbenzene	84		78		70-130	7		20
sec-Butylbenzene	92		85		70-130	8		20
tert-Butylbenzene	99		94		70-130	5		20
o-Chlorotoluene	88		84		70-130	5		20
p-Chlorotoluene	81		93		70-130	14		20
1,2-Dibromo-3-chloropropane	90		70		70-130	25	Q	20
Hexachlorobutadiene	128		127		70-130	1		20
Isopropylbenzene	83		83		70-130	0		20
p-Isopropyltoluene	96		89		70-130	8		20
Naphthalene	85		77		70-130	10		20
n-Propylbenzene	87		82		70-130	6		20
1,2,3-Trichlorobenzene	112		105		70-130	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 05 Batch: WG484310-1 WG484310-2								
1,2,4-Trichlorobenzene	113		107		70-130	5		20
1,3,5-Trimethylbenzene	88		82		70-130	7		20
1,2,4-Trimethylbenzene	90		85		70-130	6		20
Ethyl ether	84		82		70-130	2		20
Isopropyl Ether	81		78		70-130	4		20
Ethyl-Tert-Butyl-Ether	84		81		70-130	4		20
Tertiary-Amyl Methyl Ether	89		85		70-130	5		20
1,4-Dioxane	81		86		70-130	6		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	87		88		70-130
Toluene-d8	96		98		70-130
4-Bromofluorobenzene	92		91		70-130
Dibromofluoromethane	109		102		70-130

PETROLEUM HYDROCARBONS

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-01
 Client ID: MW-A
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 08/12/11 08:16
 Analyst: NH

Date Collected: 08/08/11 09:15
 Date Received: 08/08/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 08/10/11 15:46
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 08/11/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved
 Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-01

Date Collected: 08/08/11 09:15

Client ID: MW-A

Date Received: 08/08/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	76		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	86		40-140
2-Bromonaphthalene	83		40-140

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-02
 Client ID: B-102 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 08/12/11 09:00
 Analyst: NH

Date Collected: 08/08/11 08:00
 Date Received: 08/08/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 08/10/11 15:46
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 08/11/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	194		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	194		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-02

Date Collected: 08/08/11 08:00

Client ID: B-102 (OW)

Date Received: 08/08/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	77		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	75		40-140

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-03
 Client ID: B-101 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 08/12/11 09:45
 Analyst: NH

Date Collected: 08/08/11 10:45
 Date Received: 08/08/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 08/10/11 15:46
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 08/11/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-03

Date Collected: 08/08/11 10:45

Client ID: B-101 (OW)

Date Received: 08/08/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	76		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	79		40-140

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-04
 Client ID: B-9 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 08/12/11 10:29
 Analyst: NH

Date Collected: 08/08/11 12:00
 Date Received: 08/08/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 08/10/11 15:46
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 08/11/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-04

Date Collected: 08/08/11 12:00

Client ID: B-9 (OW)

Date Received: 08/08/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	83		40-140

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-05
 Client ID: B-106 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 100,VPH-04-1.1
 Analytical Date: 08/10/11 14:29
 Analyst: TT

Date Collected: 08/08/11 13:00
 Date Received: 08/08/11
 Field Prep: Not Specified

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Petroleum Hydrocarbons - Westborough Lab

C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	155		ug/l	50.0	--	1
C9-C10 Aromatics	114		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	108		70-130
2,5-Dibromotoluene-FID	97		70-130

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-05
 Client ID: B-106 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 08/12/11 11:44
 Analyst: NH

Date Collected: 08/08/11 13:00
 Date Received: 08/08/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 08/10/11 15:46
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 08/11/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved
 Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	316		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	316		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

SAMPLE RESULTS

Lab ID: L1112002-05

Date Collected: 08/08/11 13:00

Client ID: B-106 (OW)

Date Received: 08/08/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	80		40-140

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 100, VPH-04-1.1
Analytical Date: 08/10/11 12:08
Analyst: TT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 05 Batch: WG483816-11					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	110		70-130
2,5-Dibromotoluene-FID	101		70-130

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
Analytical Date: 08/12/11 00:19
Analyst: NH

Extraction Method: EPA 3510C
Extraction Date: 08/10/11 15:46
Cleanup Method1: EPH-04-1
Cleanup Date1: 08/11/11

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-05 Batch: WG483891-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	79		40-140
2-Fluorobiphenyl	71		40-140
2-Bromonaphthalene	71		40-140



Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Project Number: 5031

Lab Number: L1112002

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 05 Batch: WG483816-9 WG483816-10								
C5-C8 Aliphatics	96		88		70-130	8		25
C9-C12 Aliphatics	88		91		70-130	0		25
C9-C10 Aromatics	117		117		70-130	5		25
Benzene	114		106		70-130	1		25
Toluene	117		113		70-130	3		25
Ethylbenzene	111		109		70-130	0		25
p/m-Xylene	117		115		70-130	2		25
o-Xylene	121		120		70-130	5		25
Methyl tert butyl ether	114		112		70-130	3		25
Naphthalene	108		110		70-130	7		25
1,2,4-Trimethylbenzene	114		115		70-130	1		25
Pentane	90		74		70-130	19		25
2-Methylpentane	102		98		70-130	4		25
2,2,4-Trimethylpentane	96		94		70-130	2		25
n-Nonane	88		89		30-130	1		25
n-Decane	91		96		70-130	5		25
n-Butylcyclohexane	93		94		70-130	1		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
Report Date: 08/12/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 05 Batch: WG483816-9 WG483816-10

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	104		104		70-130
2,5-Dibromotoluene-FID	94		94		70-130

Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05 Batch: WG483891-2 WG483891-3

C9-C18 Aliphatics	56		62		40-140	10	25
C19-C36 Aliphatics	78		88		40-140	12	25
C11-C22 Aromatics	94		91		40-140	3	25
Naphthalene	66		69		40-140	4	25
2-Methylnaphthalene	74		77		40-140	4	25
Acenaphthylene	76		71		40-140	7	25
Acenaphthene	79		82		40-140	4	25
Fluorene	82		83		40-140	1	25
Phenanthrene	90		92		40-140	2	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05 Batch: WG483891-2 WG483891-3								
Anthracene	88		89		40-140	1		25
Fluoranthene	95		96		40-140	1		25
Pyrene	98		100		40-140	2		25
Benzo(a)anthracene	93		91		40-140	2		25
Chrysene	94		94		40-140	0		25
Benzo(b)fluoranthene	95		95		40-140	0		25
Benzo(k)fluoranthene	95		95		40-140	0		25
Benzo(a)pyrene	99		91		40-140	8		25
Indeno(1,2,3-cd)Pyrene	97		96		40-140	1		25
Dibenzo(a,h)anthracene	90		89		40-140	1		25
Benzo(ghi)perylene	96		95		40-140	1		25
Nonane (C9)	40		47		30-140	16		25
Decane (C10)	48		54		40-140	12		25
Dodecane (C12)	57		61		40-140	7		25
Tetradecane (C14)	65		69		40-140	6		25
Hexadecane (C16)	73		78		40-140	7		25
Octadecane (C18)	80		85		40-140	6		25
Nonadecane (C19)	82		88		40-140	7		25
Eicosane (C20)	82		87		40-140	6		25
Docosane (C22)	83		87		40-140	5		25
Tetracosane (C24)	44		88		40-140	67	Q	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-05 Batch: WG483891-2 WG483891-3								
Hexacosane (C26)	85		89		40-140	5		25
Octacosane (C28)	85		88		40-140	3		25
Triacotane (C30)	89		93		40-140	4		25
Hexatriacontane (C36)	94		99		40-140	5		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	64		75		40-140
o-Terphenyl	83		86		40-140
2-Fluorobiphenyl	73		78		40-140
2-Bromonaphthalene	75		84		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Project Name: AMES SHOVEL

Lab Number: L1112002

Project Number: 5031

Report Date: 08/12/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1112002-01A	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-01B	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-02A	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-02B	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-03A	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-10(14)
L1112002-03B	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-10(14)
L1112002-03C	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-03D	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-04A	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-04B	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-05A	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-10(14)
L1112002-05B	Vial HCl preserved	A	N/A	2	Y	Absent	VPH-10(14)
L1112002-05E	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)
L1112002-05F	Amber 1000ml HCl preserved	A	<2	2	Y	Absent	EPH-DELUX-10(14)

Container Comments

L1112002-05B

*Values in parentheses indicate holding time in days



Project Name: AMES SHOVEL
Project Number: 5031

Lab Number: L1112002
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GLOSSARY

Acronyms

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

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

Report Format: Data Usability Report



Project Name: AMES SHOVEL
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Data Qualifiers

than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Project Name: AMES SHOVEL
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REFERENCES

- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 2010.

LIMITATION OF LIABILITIES

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

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



Certificate/Approval Program Summary

Last revised July 28, 2011 - Westboro Facility

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

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-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, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 8081, 8082, 8330, 8151A, 624, 8260, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

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

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl, V,Zn); 245.1, SM4500H,B, EPA 120.1,

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

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

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, 9050A, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050C, 9065,1311, 1312, 3005A, 3050B. Organic Parameters: SW-846 3540C, 3546, 3580A, 5030B, 5035, 8260B, 8270C, 8330, 8151A, 8015B, 8082, 8081A.)

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

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, 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, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 6020A, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-04-1-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540D, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 9010B, 9030B.. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8015B, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. **NELAP Accredited.**
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE.
Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 6010B, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-H. Organic Parameters: 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5035, 8015B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. **NELAP Accredited via NY-DOH.**
 Refer to MA-DEP Certificate for Potable and Non-Potable Water.
 Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 5220D, 5310C, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8270C, 8330A, 625, 8082, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9010, 9012A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8270C, 8330A/B-prep, 8082, 8081A, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1112002

Instrument ID: Jack.i Calibration Date: 10-AUG-2011 Time: 09:11

Lab File ID: 0810Z02 Init. Calib. Date(s): 04-JUL-2 07-AUG-2

Sample No: 8260 CCAL Init. Calib. Times : 08:13 16:01

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
dichlorodifluoromethane	.42898	.44013	.1	-3	20	
chloromethane	.71359	.57796	.1	19	20	
vinyl chloride	.59225	.57568	.1	3	20	
bromomethane	.4824	.45932	.1	5	20	
chloroethane	.52532	.42947	.1	18	20	
trichlorofluoromethane	1.2336	1.1205	.1	9	20	
ethyl ether	.38326	.32771	.05	14	20	
1,1,-dichloroethene	.75794	.62832	.1	17	20	
carbon disulfide	2.2974	1.5888	.05	31	20	F
freon-113	.74397	.61001	.1	18	20	
iodomethane	.46054	.50414	.05	-9	20	
acrolin	.09358	.03459	.05	63	20	F
methylene chloride	.60914	.52402	.05	14	20	
acetone	100	92.962	.1	7	20	
trans-1,2-dichloroethene	.57085	.51425	.1	10	20	
methyl acetate	100	97.580	.1	2	20	
methyl tert butyl ether	1.3044	1.1664	.1	11	20	
Diisopropyl Ether	1.5648	1.2908	.05	18	20	
tert butyl alcohol	.03627	.02988	.05	18	20	F
1,1-dichloroethane	1.0817	.90272	.2	17	20	
acrylonitrile	.1171	.10158	.05	13	20	
halothane	.42614	.39741	.05	7	20	
Ethyl-Tert-Butyl-Ether	1.5075	1.2735	.05	16	20	
vinyl acetate	1.0207	.722	.05	29	20	F
cis-1,2-dichloroethene	.6215	.58998	.1	5	20	
2,2-dichloropropane	.98127	.76203	.05	22	20	F
cyclohexane	.8512	.73023	.01	14	30	
bromochloromethane	.25168	.27558	.05	-9	20	
chloroform	1.1119	.9303	.2	16	20	
carbontetrachloride	100	93.364	.1	7	20	
ethyl acetate	100	80.437	.05	20	0	F
tetrahydrofuran	.12273	.11275	.05	8	20	
1,1,1-trichloroethane	.96504	.84699	.1	12	20	
1,1-dichloropropene	.87369	.73707	.05	16	20	
2-butanone	100	100	.1	0	20	
benzene	2.5275	2.1070	.5	17	20	
Tertiary-Amyl Methyl Ether	1.3244	1.2179	.05	8	20	
1,2-dichloroethane	.71565	.60259	.1	16	20	

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1112002

Instrument ID: Jack.i Calibration Date: 10-AUG-2011 Time: 09:11

Lab File ID: 0810Z02 Init. Calib. Date(s): 04-JUL-2 07-AUG-2

Sample No: 8260 CCAL Init. Calib. Times : 08:13 16:01

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
methyl cyclohexane	.81624	.81207	.01	1	30	
trichloroethene	.67386	.57439	.2	15	20	
dibromomethane	.24373	.26359	.05	-8	20	
1,2-dichloropropane	.62391	.46145	.1	26	20	F
bromodichloromethane	.88549	.73405	.2	17	20	
1,4-dioxane	10000	9230	.05	8	20	
2-chloroethylvinyl ether	.26196	.22885	.05	13	20	
cis-1,3-dichloropropene	.66365	.59685	.2	10	20	
toluene	2.1496	1.7114	.4	20	20	F
tetrachloroethene	100	107	.2	-7	20	
4-methyl-2-pentanone	.13789	.12753	.1	8	20	
trans-1,3-dichloropropene	.78559	.67973	.1	13	20	
1,1,2-trichloroethane	.51208	.43626	.1	15	20	
ethyl-methacrylate	.80982	.61162	.01	24	30	
chlorodibromomethane	100	88.880	.1	11	20	
1,3-dichloropropane	.91063	.80456	.05	12	20	
1,2-dibromoethane	.23809	.32443	.1	-36	20	F
2-hexanone	.33722	.2601	.1	23	20	F
chlorobenzene	2.2869	1.8976	.5	17	20	
ethyl benzene	3.9504	3.1812	.1	19	20	
1,1,1,2-tetrachloroethane	100	85.042	.05	15	20	
p/m xylene	1.5935	1.2946	.1	19	20	
o xylene	1.5936	1.3108	.3	18	20	
bromoform	100	97.698	.1	2	20	
styrene	2.6490	2.0611	.3	22	20	F
isopropylbenzene	3.8715	3.2802	.1	15	20	
bromobenzene	1.4548	1.4816	.05	-2	20	
n-propylbenzene	6.9377	5.6983	.05	18	20	
1,4-dichloro-2-butane	1.5433	1.1359	.01	26	20	F
1,1,2,2,-tetrachloroethane	1.1153	.92694	.3	17	20	
4-ethyltoluene	5.7686	5.2956	.05	8	20	
2-chlorotoluene	4.7608	3.9804	.05	16	20	
1,2,3-trichloropropane	.79931	.7461	.05	7	20	
1,3,5-trimethylbenzene	5.2435	4.2350	.05	19	20	
trans-1,4-dichloro-2-butene	.17454	.16337	.05	6	20	
4-chlorotoluene	4.3050	3.3574	.05	22	20	F
tert-butylbenzene	4.0038	3.7718	.05	6	20	
1,2,4-trimethylbenzene	5.0533	4.2728	.05	15	20	

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1112002

Instrument ID: Jack.i Calibration Date: 11-AUG-2011 Time: 06:58

Lab File ID: 0811A02 Init. Calib. Date(s): 04-JUL-2 07-AUG-2

Sample No: 8260 CCAL Init. Calib. Times : 08:13 16:01

Compound	RRF	RRF	MIN RRF	%D	MAX %D
dichlorodifluoromethane	.42898	.37283	.1	13	20
chloromethane	.71359	.57697	.1	19	20
vinyl chloride	.59225	.56152	.1	5	20
bromomethane	.4824	.48041	.1	0	20
chloroethane	.52532	.43268	.1	18	20
trichlorofluoromethane	1.2336	1.1101	.1	10	20
ethyl ether	.38326	.32015	.05	16	20
1,1,-dichloroethene	.75794	.62749	.1	17	20
carbon disulfide	2.2974	1.4234	.05	38	20
freon-113	.74397	.61703	.1	17	20
iodomethane	.46054	.38778	.05	16	20
acrolin	.09358	.05777	.05	38	20
methylene chloride	.60914	.58026	.05	5	20
acetone	100	83.180	.1	17	20
trans-1,2-dichloroethene	.57085	.55155	.1	3	20
methyl acetate	100	94.583	.1	5	20
methyl tert butyl ether	1.3044	1.1736	.1	10	20
Diisopropyl Ether	1.5648	1.2725	.05	19	20
tert butyl alcohol	.03627	.03074	.05	15	20
1,1-dichloroethane	1.0817	.92119	.2	15	20
acrylonitrile	.1171	.10045	.05	14	20
halothane	.42614	.37484	.05	12	20
Ethyl-Tert-Butyl-Ether	1.5075	1.2734	.05	16	20
vinyl acetate	1.0207	.84401	.05	17	20
cis-1,2-dichloroethene	.6215	.61469	.1	1	20
2,2-dichloropropane	.98127	.82778	.05	16	20
cyclohexane	.8512	.77521	.01	9	30
bromochloromethane	.25168	.28705	.05	-14	20
chloroform	1.1119	.99194	.2	11	20
carbontetrachloride	100	97.566	.1	2	20
ethyl acetate	100	82.167	.05	18	0
tetrahydrofuran	.12273	.10646	.05	13	20
1,1,1-trichloroethane	.96504	.88548	.1	8	20
1,1-dichloropropene	.87369	.77546	.05	11	20
2-butanone	100	95.816	.1	4	20
benzene	2.5275	2.2508	.5	11	20
Tertiary-Amyl Methyl Ether	1.3244	1.1836	.05	11	20
1,2-dichloroethane	.71565	.62498	.1	13	20

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1112002

Instrument ID: Jack.i Calibration Date: 11-AUG-2011 Time: 06:58

Lab File ID: 0811A02 Init. Calib. Date(s): 04-JUL-2 07-AUG-2

Sample No: 8260 CCAL Init. Calib. Times : 08:13 16:01

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
methyl cyclohexane	.81624	.78857	.01	3	30	
trichloroethene	.67386	.61904	.2	8	20	
dibromomethane	.24373	.26991	.05	-11	20	
1,2-dichloropropane	.62391	.49915	.1	20	20	
bromodichloromethane	.88549	.78154	.2	12	20	
1,4-dioxane	10000	8083	.05	19	20	
2-chloroethylvinyl ether	.26196	.22451	.05	14	20	
cis-1,3-dichloropropene	.66365	.61423	.2	7	20	
toluene	2.1496	1.7178	.4	20	20	F
tetrachloroethene	100	108	.2	-8	20	
4-methyl-2-pentanone	.13789	.11261	.1	18	20	
trans-1,3-dichloropropene	.78559	.69504	.1	12	20	
1,1,2-trichloroethane	.51208	.43514	.1	15	20	
ethyl-methacrylate	.80982	.62707	.01	23	30	
chlorodibromomethane	100	91.603	.1	8	20	
1,3-dichloropropane	.91063	.80018	.05	12	20	
1,2-dibromoethane	.23809	.31648	.1	-33	20	F
2-hexanone	.33722	.25409	.1	25	20	F
chlorobenzene	2.2869	2.0060	.5	12	20	
ethyl benzene	3.9504	3.2881	.1	17	20	
1,1,1,2-tetrachloroethane	100	88.295	.05	12	20	
p/m xylene	1.5935	1.2930	.1	19	20	
o xylene	1.5936	1.2798	.3	20	20	
bromoform	100	107	.1	-7	20	
styrene	2.6490	1.9941	.3	25	20	F
isopropylbenzene	3.8715	3.2121	.1	17	20	
bromobenzene	1.4548	1.5786	.05	-9	20	
n-propylbenzene	6.9377	6.0392	.05	13	20	
1,4-dichloro-2-butane	1.5433	1.1668	.01	24	20	F
1,1,2,2,-tetrachloroethane	1.1153	.9984	.3	10	20	
4-ethyltoluene	5.7686	5.0958	.05	12	20	
2-chlorotoluene	4.7608	4.1840	.05	12	20	
1,2,3-trichloropropane	.79931	.75654	.05	5	20	
1,3,5-trimethylbenzene	5.2435	4.5947	.05	12	20	
trans-1,4-dichloro-2-butene	.17454	.15958	.05	9	20	
4-chlorotoluene	4.3050	3.5002	.05	19	20	
tert-butylbenzene	4.0038	3.9749	.05	1	20	
1,2,4-trimethylbenzene	5.0533	4.5254	.05	10	20	

FORM VII MCP-8260-10



ANALYTICAL REPORT

Lab Number:	L1115203
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	AMES SHOVEL WORKS
Project Number:	5031.9.01
Report Date:	10/10/11

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

Certifications & Approvals: MA (M-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: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1115203-01	B-2	EASTON, MA	09/23/11 08:20
L1115203-02	B-3	EASTON, MA	09/23/11 08:20
L1115203-03	NRG-1	EASTON, MA	09/23/11 08:20
L1115203-04	NRG-14	EASTON, MA	09/23/11 08:20
L1115203-05	B-102	EASTON, MA	09/23/11 08:20
L1115203-06	NRG-16	EASTON, MA	09/23/11 08:20
L1115203-07	NRG-9	EASTON, MA	09/23/11 08:20
L1115203-08	NRG-7	EASTON, MA	09/23/11 08:20
L1115203-09	B-7	EASTON, MA	09/23/11 08:20
L1115203-10	NRG-11	EASTON, MA	09/23/11 08:20
L1115203-11	B-13	EASTON, MA	09/23/11 08:20

Project Name: AMES SHOVEL WORKS

Lab Number: L1115203

Project Number: 5031.9.01

Report Date: 10/10/11

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	YES
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

Case Narrative

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

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

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

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

Report Submission

This final report replaces the partial report issued September 30, 2011, and includes the results of all requested analyses.

MCP Related Narratives

Report Submission

The analysis of VPH was subcontracted. A copy of the laboratory report is included as an addendum.

Dissolved Metals

In reference to question I:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

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:

 Michelle M. Morris

Title: Technical Director/Representative

Date: 10/10/11

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-01
 Client ID: B-2
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 09/29/11 04:55
 Analyst: TT

M.S. Analytical Date: 09/28/11 12:02
 M.S. Analyst: JC

Date Collected: 09/23/11 08:20
 Date Received: 09/23/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/11 04:34
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 09/28/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved
 Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	1.61		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-01

Date Collected: 09/23/11 08:20

Client ID: B-2

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	82		40-140
o-Terphenyl	76		40-140
2-Fluorobiphenyl	80		40-140
2-Bromonaphthalene	76		40-140
O-Terphenyl-MS	81		40-140

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-02
 Client ID: B-3
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 09/29/11 05:26
 Analyst: TT

M.S. Analytical Date: 09/28/11 12:35
 M.S. Analyst: JC

Date Collected: 09/23/11 08:20
 Date Received: 09/23/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/11 04:34
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 09/28/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	ND		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-02

Date Collected: 09/23/11 08:20

Client ID: B-3

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	92		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	87		40-140
2-Bromonaphthalene	82		40-140
O-Terphenyl-MS	92		40-140

Project Name: AMES SHOVEL WORKS

Lab Number: L1115203

Project Number: 5031.9.01

Report Date: 10/10/11

SAMPLE RESULTS

Lab ID: L1115203-03
 Client ID: NRG-1
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 09/29/11 05:58
 Analyst: TT

M.S. Analytical Date: 09/28/11 13:07
 M.S. Analyst: JC

Date Collected: 09/23/11 08:20
 Date Received: 09/23/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/11 04:34
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 09/28/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	ND		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-03

Date Collected: 09/23/11 08:20

Client ID: NRG-1

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	65		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	73		40-140
O-Terphenyl-MS	74		40-140

Project Name: AMES SHOVEL WORKS

Lab Number: L1115203

Project Number: 5031.9.01

Report Date: 10/10/11

SAMPLE RESULTS

Lab ID: L1115203-04
 Client ID: NRG-14
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 09/29/11 06:29
 Analyst: TT

M.S. Analytical Date: 09/28/11 13:39
 M.S. Analyst: JC

Date Collected: 09/23/11 08:20
 Date Received: 09/23/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/11 04:34
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 09/28/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	ND		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-04

Date Collected: 09/23/11 08:20

Client ID: NRG-14

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	46		40-140
o-Terphenyl	78		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	77		40-140
O-Terphenyl-MS	89		40-140

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-05
 Client ID: B-102
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 09/29/11 07:00
 Analyst: TT

M.S. Analytical Date: 09/28/11 14:12
 M.S. Analyst: JC

Date Collected: 09/23/11 08:20
 Date Received: 09/23/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/11 04:34
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 09/28/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	0.442		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-05

Date Collected: 09/23/11 08:20

Client ID: B-102

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	57		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	79		40-140
O-Terphenyl-MS	90		40-140

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

SAMPLE RESULTS

Lab ID:	L1115203-06	Date Collected:	09/23/11 08:20
Client ID:	NRG-16	Date Received:	09/23/11
Sample Location:	EASTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	09/26/11 04:34
Analytical Date:	09/29/11 07:31	M.S. Analytical Date:	09/28/11 14:44
Analyt:	TT	M.S. Analyst:	JC
		Cleanup Method1:	EPH-04-1
		Cleanup Date1:	09/28/11

Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	ND		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-06

Date Collected: 09/23/11 08:20

Client ID: NRG-16

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	41		40-140
o-Terphenyl	76		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	79		40-140
O-Terphenyl-MS	85		40-140

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

SAMPLE RESULTS

Lab ID:	L1115203-07	Date Collected:	09/23/11 08:20
Client ID:	NRG-9	Date Received:	09/23/11
Sample Location:	EASTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	09/26/11 04:34
Analytical Date:	09/29/11 08:03	M.S. Analytical Date:	09/28/11 15:16
Analyt:	TT	M.S. Analyst:	JC
		Cleanup Method1:	EPH-04-1
		Cleanup Date1:	09/28/11

Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	ND		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-07

Date Collected: 09/23/11 08:20

Client ID: NRG-9

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	81		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	78		40-140
O-Terphenyl-MS	90		40-140

Project Name: AMES SHOVEL WORKS

Lab Number: L1115203

Project Number: 5031.9.01

Report Date: 10/10/11

SAMPLE RESULTS

Lab ID: L1115203-08
 Client ID: NRG-7
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 09/29/11 08:34
 Analyst: TT

M.S. Analytical Date: 09/28/11 15:49
 M.S. Analyst: JC

Date Collected: 09/23/11 08:20
 Date Received: 09/23/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/11 04:34
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 09/28/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved
 Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	ND		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-08

Date Collected: 09/23/11 08:20

Client ID: NRG-7

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	87		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	80		40-140
O-Terphenyl-MS	105		40-140

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-09
 Client ID: B-7
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 09/29/11 09:06
 Analyst: TT

M.S. Analytical Date: 09/28/11 16:21
 M.S. Analyst: JC

Date Collected: 09/23/11 08:20
 Date Received: 09/23/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/11 04:34
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 09/28/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
EPH w/MS Targets - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	0.400	--	1
2-Methylnaphthalene	ND		ug/l	0.400	--	1
Acenaphthylene	ND		ug/l	0.400	--	1
Acenaphthene	ND		ug/l	0.400	--	1
Fluorene	ND		ug/l	0.400	--	1
Phenanthrene	ND		ug/l	0.400	--	1
Anthracene	ND		ug/l	0.400	--	1
Fluoranthene	ND		ug/l	0.400	--	1
Pyrene	ND		ug/l	0.400	--	1
Benzo(a)anthracene	ND		ug/l	0.400	--	1
Chrysene	ND		ug/l	0.400	--	1
Benzo(b)fluoranthene	ND		ug/l	0.400	--	1
Benzo(k)fluoranthene	ND		ug/l	0.400	--	1
Benzo(a)pyrene	ND		ug/l	0.200	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--	1
Benzo(ghi)perylene	ND		ug/l	0.400	--	1

Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**SAMPLE RESULTS**

Lab ID: L1115203-09

Date Collected: 09/23/11 08:20

Client ID: B-7

Date Received: 09/23/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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EPH w/MS Targets - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	57		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	74		40-140
O-Terphenyl-MS	91		40-140

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
 Analytical Date: 09/29/11 04:23
 Analyst: TT

M.S. Analytical Date: 09/28/11 10:25
 M.S. Analyst: JC

Extraction Method: EPA 3510C
 Extraction Date: 09/26/11 04:34
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 09/28/11

Parameter	Result	Qualifier	Units	RL	MDL
EPH w/MS Targets - Westborough Lab for sample(s): 01-09 Batch: WG492056-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	0.400	--
2-Methylnaphthalene	ND		ug/l	0.400	--
Acenaphthylene	ND		ug/l	0.400	--
Acenaphthene	ND		ug/l	0.400	--
Fluorene	ND		ug/l	0.400	--
Phenanthrene	ND		ug/l	0.400	--
Anthracene	ND		ug/l	0.400	--
Fluoranthene	ND		ug/l	0.400	--
Pyrene	ND		ug/l	0.400	--
Benzo(a)anthracene	ND		ug/l	0.400	--
Chrysene	ND		ug/l	0.400	--
Benzo(b)fluoranthene	ND		ug/l	0.400	--
Benzo(k)fluoranthene	ND		ug/l	0.400	--
Benzo(a)pyrene	ND		ug/l	0.200	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.400	--
Dibenzo(a,h)anthracene	ND		ug/l	0.400	--
Benzo(ghi)perylene	ND		ug/l	0.400	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	81		40-140
o-Terphenyl	64		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	72		40-140
O-Terphenyl-MS	70		40-140



Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1115203

Project Number: 5031.9.01

Report Date: 10/10/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
EPH w/MS Targets - Westborough Lab Associated sample(s): 01-09 Batch: WG492056-2 WG492056-3								
C9-C18 Aliphatics	63		57		40-140	10		25
C19-C36 Aliphatics	88		84		40-140	5		25
C11-C22 Aromatics	76		71		40-140	7		25
Naphthalene	73		63		40-140	15		25
2-Methylnaphthalene	92		80		40-140	14		25
Acenaphthylene	89		80		40-140	11		25
Acenaphthene	86		77		40-140	11		25
Fluorene	99		90		40-140	10		25
Phenanthrene	95		85		40-140	11		25
Anthracene	97		88		40-140	10		25
Fluoranthene	98		88		40-140	11		25
Pyrene	97		87		40-140	11		25
Benzo(a)anthracene	103		95		40-140	8		25
Chrysene	84		79		40-140	6		25
Benzo(b)fluoranthene	117		110		40-140	6		25
Benzo(k)fluoranthene	88		82		40-140	7		25
Benzo(a)pyrene	94		88		40-140	7		25
Indeno(1,2,3-cd)Pyrene	97		90		40-140	7		25
Dibenzo(a,h)anthracene	95		89		40-140	7		25
Benzo(ghi)perylene	95		90		40-140	5		25
Nonane (C9)	46		37		30-140	22		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1115203

Project Number: 5031.9.01

Report Date: 10/10/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
EPH w/MS Targets - Westborough Lab Associated sample(s): 01-09 Batch: WG492056-2 WG492056-3								
Decane (C10)	53		45		40-140	16		25
Dodecane (C12)	63		57		40-140	10		25
Tetradecane (C14)	76		71		40-140	7		25
Hexadecane (C16)	83		77		40-140	8		25
Octadecane (C18)	89		83		40-140	7		25
Nonadecane (C19)	91		85		40-140	7		25
Eicosane (C20)	90		85		40-140	6		25
Docosane (C22)	90		85		40-140	6		25
Tetracosane (C24)	91		86		40-140	6		25
Hexacosane (C26)	91		87		40-140	4		25
Octacosane (C28)	88		84		40-140	5		25
triacontane (C30)	92		88		40-140	4		25
Hexatriacontane (C36)	97		92		40-140	5		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMES SHOVEL WORKS

Lab Number: L1115203

Project Number: 5031.9.01

Report Date: 10/10/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
EPH w/MS Targets - Westborough Lab Associated sample(s): 01-09 Batch: WG492056-2 WG492056-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	85		86		40-140
o-Terphenyl	84		79		40-140
2-Fluorobiphenyl	87		78		40-140
2-Bromonaphthalene	83		76		40-140
O-Terphenyl-MS	80		75		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

METALS

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

SAMPLE RESULTS

Lab ID: L1115203-11
 Client ID: B-13
 Sample Location: EASTON, MA
 Matrix: Water

Date Collected: 09/23/11 08:20
 Date Received: 09/23/11
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Lead, Dissolved	ND		mg/l	0.010	--	1	09/24/11 10:00	09/26/11 11:56	EPA 3005A	97,6010B	MS



Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab for sample(s): 11 Batch: WG491984-1										
Lead, Dissolved	ND		mg/l	0.010	--	1	09/24/11 10:00	09/26/11 11:01	97,6010B	MS

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis Batch Quality Control

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Dissolved Metals - Westborough Lab Associated sample(s): 11 Batch: WG491984-2 WG491984-3								
Lead, Dissolved	100		102		80-120	2		20

Project Name: AMES SHOVEL WORKS

Lab Number: L1115203

Project Number: 5031.9.01

Report Date: 10/10/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent
B Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1115203-01A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-01B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-02A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-02B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-03A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-03B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-04A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-04B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-05A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-05B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-06A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-06B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-07A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-07B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-08A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-08B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-09A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1115203-09B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)

*Values in parentheses indicate holding time in days



Project Name: AMES SHOVEL WORKS**Lab Number:** L1115203**Project Number:** 5031.9.01**Report Date:** 10/10/11**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1115203-10A	Vial HCl preserved	A	N/A	3	Y	Absent	SUB-VPHDELUXE(14)
L1115203-10B	Vial HCl preserved	A	N/A	3	Y	Absent	SUB-VPHDELUXE(14)
L1115203-11A	Vial HCl preserved	A	N/A	3	Y	Absent	SUB-VPHDELUXE(14)
L1115203-11B	Vial HCl preserved	A	N/A	3	Y	Absent	SUB-VPHDELUXE(14)
L1115203-11C	Plastic 1000ml unpreserved	A	7	3	Y	Absent	-
L1115203-11X	Plastic 1000ml HNO3 preserved sp	A	<2	3	Y	Absent	MCP-PB-6010S-10(180)

*Values in parentheses indicate holding time in days

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

GLOSSARY

Acronyms

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

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

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

Data Qualifiers

- | | |
|-----------|---|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| NJ | - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. |

Report Format: Data Usability Report



Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: AMES SHOVEL WORKS
Project Number: 5031.9.01

Lab Number: L1115203
Report Date: 10/10/11

REFERENCES

- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.

LIMITATION OF LIABILITIES

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

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



Certificate/Approval Program Summary

Last revised September 19, 2011 - Westboro Facility

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

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-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, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 8081, 8082, 8330, 8151A, 624, 8260, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

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

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

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

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050C, 9065,1311, 1312, 3005A, 3050B. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8330, 8151A, 8015B, 8082, 8081A.)

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

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, 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, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 6020A, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-04-1-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 9010B, 9030B.. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8015B, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. **NELAP Accredited.**
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE.
Organic Parameters: EPA 3510C, 3005A, 3630C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 6010B, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-H. Organic Parameters: 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5035, 8015B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. **NELAP Accredited via NY-DOH.**
 Refer to MA-DEP Certificate for Potable and Non-Potable Water.
 Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

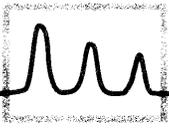
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 5220D, 5310C, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8270C, 8330A, 625, 8082, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9010, 9012A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8270C, 8330A/B-prep, 8082, 8081A, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix.



eastern analytical

professional laboratory services

Leslie Coon
Alpha Analytical Labs (MA)
8 Walkup Drive
Westborough, MA 01581



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 103881
Client Identification: L1115203
Date Received: 10/6/2011

Dear Ms. Coon:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

- Solid samples are reported on a dry weight basis, unless otherwise noted
- < : "less than" followed by the reporting limit
- > : "greater than" followed by the reporting limit
- %R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

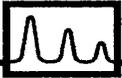
We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director

10.7.11
Date

6
of pages (excluding cover letter)



Analytical Method Report Certification Form

EAI ID#: 103881

Client: **Alpha Analytical Labs (MA)**Client Designation: **L1115203**

This Form provides certification for the following data set.

Received on ice or cold packs (Yes/No): **Y**Temperature upon receipt (°C): **1.7**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Rec'd	Date Samp'd	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
103881.01	NRG-11	10/6/2011	9/23/2011	aqueous		Adheres to Sample Acceptance Policy
103881.02	B-13	10/6/2011	9/23/2011	aqueous		Adheres to Sample Acceptance Policy

CAM Protocol(s) Reported

8260 () 8082 () VPH (✓) 6010 () 9014 () 8270 () 8081 () EPH () 6020 () 7196 ()

CERTIFICATION: Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A Were all samples received in a condition consistent with that described on the chain-of-custody, properly preserved, and prepared/analyzed within holding times? Yes ___ NoB Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? Yes ___ NoC Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? Yes ___ NoD Does the laboratory report comply with all the reporting requirements in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? Yes ___ NoE VPH and EPH Methods only: Was each CAM protocol selected above run without significant modifications? Yes ___ No ___ NAF Were all applicable CAM protocol and QC performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? Yes ___ No

Responses to questions G, H and I below are required for "Presumptive Certainty" status

G Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)? Yes ___ NoH Were all QC performance standards specified in the CAM protocol(s) achieved? Yes ___ NoI Were results reported for the complete analyte list specified in the selected CAM protocol(s)? Yes ___ No

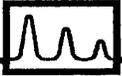
I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: Lorraine Olashaw Lorraine Olashaw, Laboratory DirectorDate: 10-7-11

eastern analytical, inc.

www.eailabs.com

Phone: (603) 228-0525

**CASE NARRATIVE REPORT**

EAI ID#: 103881

Client Designation: **L1115203**Samples Received on: **10/6/2011**

MA VPH

All QC acceptance criteria were met.

SAMPLE RECEIPT

All samples were stored and analyzed in accordance with all quality control and method requirements unless otherwise noted below.

No field QC was designated for this sample delivery group.

QUALITY CONTROL

All samples were analyzed as part of an analytical QC batch consisting of a method blank, a laboratory control sample (LCS), a matrix duplicate, a matrix spike (MS) and a matrix spike duplicate (MSD), where applicable. Any deviations from QC acceptance criteria are noted below, this includes sample preservation and holding time requirements.

Method References:

EPA SW-846 Update III

Mass. Dept. of Environmental Protection Bureau of Waste Site Cleanup - Compendium of Analytical Methods (CAM)

MA VPH

All QC acceptance criteria were met.



LABORATORY REPORT

EAI ID#: 103881

Client: **Alpha Analytical Labs (MA)**Client Designation: **L1115203**

Client Sample ID: NRG-11
 Lab Sample ID: 103881.01
 Matrix: aqueous
 Date Sampled: 9/23/11
 Date Received: 10/6/11
 Date Prepared:

	Reporting Limit	Dilution Factor	Units	Date Analyzed	Analytical Method	Analyst
Methyl-t-butyl ether(MTBE)	< 5	5	ug/l	10/6/11	MA VPH	VG
Benzene	< 1	1	ug/l	10/6/11	MA VPH	VG
Toluene	< 1	1	ug/l	10/6/11	MA VPH	VG
Ethylbenzene	< 1	1	ug/l	10/6/11	MA VPH	VG
mp-Xylene	< 1	1	ug/l	10/6/11	MA VPH	VG
o-Xylene	< 1	1	ug/l	10/6/11	MA VPH	VG
Naphthalene	< 5	5	ug/l	10/6/11	MA VPH	VG
Unadjusted C5-C8 Aliphatics 1	< 100	100	ug/l	10/6/11	MA VPH	VG
Unadjusted C9-C12 Aliphatics 1	< 100	100	ug/l	10/6/11	MA VPH	VG
C5-C8 Aliphatics Hydrocarbons 1,2	< 100	100	ug/l	10/6/11	MA VPH	VG
C9-C12 Aliphatic Hydrocarbons 1,3	< 100	100	ug/l	10/6/11	MA VPH	VG
C9-C10 Aromatic Hydrocarbons 1	< 100	100	ug/l	10/6/11	MA VPH	VG
PID 2,5-Dibromotoluene (surr)	108 %R		%	10/6/11	MA VPH	VG
FID 2,5-Dibromotoluene (surr)	85 %R		%	10/6/11	MA VPH	VG

- 1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
- 2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of MTBE, benzene and toluene eluting in that range.
- 3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of ethylbenzene and xylenes eluting in that range and the concentration of C9-C10 Aromatic Hydrocarbons.



LABORATORY REPORT

EAI ID#: 103881

Client: **Alpha Analytical Labs (MA)**Client Designation: **L1115203**

Client Sample ID: B-13
 Lab Sample ID: 103881.02
 Matrix: aqueous
 Date Sampled: 9/23/11
 Date Received: 10/6/11
 Date Prepared:

	Reporting Limit	Dilution Factor	Units	Date Analyzed	Analytical Method	Analyst
Methyl-t-butyl ether(MTBE)	< 5	5	1.0 ug/l	10/6/11	MA VPH	VG
Benzene	< 1	1	1.0 ug/l	10/6/11	MA VPH	VG
Toluene	< 1	1	1.0 ug/l	10/6/11	MA VPH	VG
Ethylbenzene	< 1	1	1.0 ug/l	10/6/11	MA VPH	VG
mp-Xylene	< 1	1	1.0 ug/l	10/6/11	MA VPH	VG
o-Xylene	< 1	1	1.0 ug/l	10/6/11	MA VPH	VG
Naphthalene	< 5	5	1.0 ug/l	10/6/11	MA VPH	VG
Unadjusted C5-C8 Aliphatics 1	< 100	100	1.0 ug/l	10/6/11	MA VPH	VG
Unadjusted C9-C12 Aliphatics 1	< 100	100	1.0 ug/l	10/6/11	MA VPH	VG
C5-C8 Aliphatics Hydrocarbons 1,2	< 100	100	1.0 ug/l	10/6/11	MA VPH	VG
C9-C12 Aliphatic Hydrocarbons 1,3	< 100	100	1.0 ug/l	10/6/11	MA VPH	VG
C9-C10 Aromatic Hydrocarbons 1	< 100	100	1.0 ug/l	10/6/11	MA VPH	VG
PID 2,5-Dibromotoluene (surr)	106 %R		%	10/6/11	MA VPH	VG
FID 2,5-Dibromotoluene (surr)	86 %R		%	10/6/11	MA VPH	VG

- 1 Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
- 2 C5-C8 Aliphatic Hydrocarbons exclude the concentration of MTBE, benzene and toluene eluting in that range.
- 3 C9-C12 Aliphatic Hydrocarbons exclude the concentration of ethylbenzene and xylenes eluting in that range and the concentration of C9-C10 Aromatic Hydrocarbons.



QC REPORT

EAI ID#: 103881

Client: Alpha Analytical Labs (MA)

Client Designation: L1115203

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Methyl-t-butyl ether(MTBE)	< 5	45 (112 %R)	44 (110 %R) (2 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
Benzene	< 1	41 (103 %R)	42 (104 %R) (1 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
Toluene	< 1	40 (101 %R)	42 (104 %R) (3 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
Ethylbenzene	< 1	42 (105 %R)	43 (107 %R) (2 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
mp-Xylene	< 1	85 (106 %R)	86 (107 %R) (1 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
o-Xylene	< 1	42 (105 %R)	43 (107 %R) (2 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
Naphthalene	< 5	43 (109 %R)	48 (119 %R) (9 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
Unadjusted C5-C8 Aliphatics 1	< 100	< 100 (80 %R)	< 100 (75 %R) (6 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
Unadjusted C9-C12 Aliphatics 1	< 100	< 100 (85 %R)	< 100 (71 %R) (18 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
C5-C8 Aliphatics Hydrocarbons	< 100	< 100 (%R N/A)	< 100 (%R N/A) (RPD N/A)	10/6/2011	ug/l	70 - 130	25	MA VPH
C9-C12 Aliphatic Hydrocarbons	< 100	< 100 (%R N/A)	< 100 (%R N/A) (RPD N/A)	10/6/2011	ug/l	70 - 130	25	MA VPH
C9-C10 Aromatic Hydrocarbons 1	< 100	< 100 (104 %R)	< 100 (106 %R) (2 RPD)	10/6/2011	ug/l	70 - 130	25	MA VPH
PID 2,5-Dibromotoluene (surr)	108 %R	99 %R	109 %R	10/6/2011	% Rec	70 - 130	25	MA VPH
FID 2,5-Dibromotoluene (surr)	85 %R	90 %R	90 %R	10/6/2011	% Rec	70 - 130	25	MA VPH

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

*! Flagged analyte recoveries deviated from the QA/QC limits. Any impact to data is addressed below.



ANALYTICAL REPORT

Lab Number:	L1116017
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	Not Specified
Project Number:	5031.9.00
Report Date:	10/07/11

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

Certifications & Approvals: MA (M-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: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1116017-01	B-106 (OW)	EASTON, MA	10/05/11 10:00

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	YES
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

Case Narrative

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

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

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

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

MCP Related Narratives

EPH

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG494124-2/-3 LCS/LCSD RPD, associated with L1116017-01, is above the acceptance criteria for Benzo(a)pyrene (28%).

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:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 10/07/11

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

SAMPLE RESULTS

Lab ID: L1116017-01
 Client ID: B-106 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 10/07/11 00:31
 Analyst: AS

Date Collected: 10/05/11 10:00
 Date Received: 10/05/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/05/11 20:23
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 10/06/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

SAMPLE RESULTS

Lab ID: L1116017-01

Date Collected: 10/05/11 10:00

Client ID: B-106 (OW)

Date Received: 10/05/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	78		40-140
o-Terphenyl	68		40-140
2-Fluorobiphenyl	64		40-140
2-Bromonaphthalene	63		40-140

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 98,EPH-04-1.1
Analytical Date: 10/06/11 23:59
Analyst: AS

Extraction Method: EPA 3510C
Extraction Date: 10/05/11 20:23
Cleanup Method1: EPH-04-1
Cleanup Date1: 10/06/11

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG494124-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	77		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	73		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG494124-2 WG494124-3								
C9-C18 Aliphatics	58		55		40-140	5		25
C19-C36 Aliphatics	83		89		40-140	7		25
C11-C22 Aromatics	64		72		40-140	12		25
Naphthalene	55		54		40-140	2		25
2-Methylnaphthalene	61		61		40-140	0		25
Acenaphthylene	54		60		40-140	11		25
Acenaphthene	63		66		40-140	5		25
Fluorene	62		68		40-140	9		25
Phenanthrene	66		74		40-140	11		25
Anthracene	61		71		40-140	15		25
Fluoranthene	68		78		40-140	14		25
Pyrene	70		81		40-140	15		25
Benzo(a)anthracene	61		73		40-140	18		25
Chrysene	66		77		40-140	15		25
Benzo(b)fluoranthene	66		77		40-140	15		25
Benzo(k)fluoranthene	66		77		40-140	15		25
Benzo(a)pyrene	55		73		40-140	28	Q	25
Indeno(1,2,3-cd)Pyrene	64		77		40-140	18		25
Dibenzo(a,h)anthracene	58		71		40-140	20		25
Benzo(ghi)perylene	64		76		40-140	17		25
Nonane (C9)	38		33		30-140	14		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG494124-2 WG494124-3								
Decane (C10)	47		41		40-140	14		25
Dodecane (C12)	60		53		40-140	12		25
Tetradecane (C14)	71		66		40-140	7		25
Hexadecane (C16)	77		77		40-140	0		25
Octadecane (C18)	82		86		40-140	5		25
Nonadecane (C19)	83		88		40-140	6		25
Eicosane (C20)	83		89		40-140	7		25
Docosane (C22)	83		89		40-140	7		25
Tetracosane (C24)	83		90		40-140	8		25
Hexacosane (C26)	85		92		40-140	8		25
Octacosane (C28)	85		92		40-140	8		25
Triacontane (C30)	89		96		40-140	8		25
Hexatriacontane (C36)	96		100		40-140	4		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	74		89		40-140
o-Terphenyl	66		72		40-140
2-Fluorobiphenyl	68		74		40-140
2-Bromonaphthalene	69		74		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		



Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal**Cooler**

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1116017-01A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-DELUX-10(14)
L1116017-01B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-DELUX-10(14)

*Values in parentheses indicate holding time in days

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

GLOSSARY

Acronyms

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

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

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

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report



Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.

LIMITATION OF LIABILITIES

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

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



Certificate/Approval Program Summary

Last revised September 19, 2011 - Westboro Facility

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

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-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, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 8081, 8082, 8330, 8151A, 624, 8260, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

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

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

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

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050C, 9065,1311, 1312, 3005A, 3050B. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8330, 8151A, 8015B, 8082, 8081A.)

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

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, 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, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 6020A, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-04-1-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 9010B, 9030B.. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8015B, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters:

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. **NELAP Accredited.**
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE.
Organic Parameters: EPA 3510C, 3005A, 3630C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 6010B, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-H. Organic Parameters: 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5035, 8015B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. **NELAP Accredited via NY-DOH.**
 Refer to MA-DEP Certificate for Potable and Non-Potable Water.
 Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 5220D, 5310C, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8270C, 8330A, 625, 8082, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9010, 9012A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8270C, 8330A/B-prep, 8082, 8081A, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix.



ANALYTICAL REPORT

Lab Number:	L1116017
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	Not Specified
Project Number:	5031.9.00
Report Date:	10/07/11

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

Certifications & Approvals: MA (M-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: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1116017-01	B-106 (OW)	EASTON, MA	10/05/11 10:00

Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	YES
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

Case Narrative

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

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

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

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

MCP Related Narratives

EPH

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The WG494124-2/-3 LCS/LCSD RPD, associated with L1116017-01, is above the acceptance criteria for Benzo(a)pyrene (28%).

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:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 10/07/11

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

SAMPLE RESULTS

Lab ID: L1116017-01
 Client ID: B-106 (OW)
 Sample Location: EASTON, MA
 Matrix: Water
 Analytical Method: 98,EPH-04-1.1
 Analytical Date: 10/07/11 00:31
 Analyst: AS

Date Collected: 10/05/11 10:00
 Date Received: 10/05/11
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/05/11 20:23
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 10/06/11

Quality Control Information

Condition of sample received: Satisfactory
 Aqueous Preservative: Laboratory Provided Preserved Container
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

SAMPLE RESULTS

Lab ID: L1116017-01

Date Collected: 10/05/11 10:00

Client ID: B-106 (OW)

Date Received: 10/05/11

Sample Location: EASTON, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	78		40-140
o-Terphenyl	68		40-140
2-Fluorobiphenyl	64		40-140
2-Bromonaphthalene	63		40-140

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 98,EPH-04-1.1
Analytical Date: 10/06/11 23:59
Analyst: AS

Extraction Method: EPA 3510C
Extraction Date: 10/05/11 20:23
Cleanup Method1: EPH-04-1
Cleanup Date1: 10/06/11

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG494124-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	77		40-140
o-Terphenyl	74		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	73		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG494124-2 WG494124-3								
C9-C18 Aliphatics	58		55		40-140	5		25
C19-C36 Aliphatics	83		89		40-140	7		25
C11-C22 Aromatics	64		72		40-140	12		25
Naphthalene	55		54		40-140	2		25
2-Methylnaphthalene	61		61		40-140	0		25
Acenaphthylene	54		60		40-140	11		25
Acenaphthene	63		66		40-140	5		25
Fluorene	62		68		40-140	9		25
Phenanthrene	66		74		40-140	11		25
Anthracene	61		71		40-140	15		25
Fluoranthene	68		78		40-140	14		25
Pyrene	70		81		40-140	15		25
Benzo(a)anthracene	61		73		40-140	18		25
Chrysene	66		77		40-140	15		25
Benzo(b)fluoranthene	66		77		40-140	15		25
Benzo(k)fluoranthene	66		77		40-140	15		25
Benzo(a)pyrene	55		73		40-140	28	Q	25
Indeno(1,2,3-cd)Pyrene	64		77		40-140	18		25
Dibenzo(a,h)anthracene	58		71		40-140	20		25
Benzo(ghi)perylene	64		76		40-140	17		25
Nonane (C9)	38		33		30-140	14		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG494124-2 WG494124-3								
Decane (C10)	47		41		40-140	14		25
Dodecane (C12)	60		53		40-140	12		25
Tetradecane (C14)	71		66		40-140	7		25
Hexadecane (C16)	77		77		40-140	0		25
Octadecane (C18)	82		86		40-140	5		25
Nonadecane (C19)	83		88		40-140	6		25
Eicosane (C20)	83		89		40-140	7		25
Docosane (C22)	83		89		40-140	7		25
Tetracosane (C24)	83		90		40-140	8		25
Hexacosane (C26)	85		92		40-140	8		25
Octacosane (C28)	85		92		40-140	8		25
Triacontane (C30)	89		96		40-140	8		25
Hexatriacontane (C36)	96		100		40-140	4		25

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
Chloro-Octadecane	74		89		40-140
o-Terphenyl	66		72		40-140
2-Fluorobiphenyl	68		74		40-140
2-Bromonaphthalene	69		74		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Project Name: Not Specified

Lab Number: L1116017

Project Number: 5031.9.00

Report Date: 10/07/11

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal**Cooler**

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1116017-01A	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-DELUX-10(14)
L1116017-01B	Amber 1000ml HCl preserved	A	<2	3	Y	Absent	EPH-DELUX-10(14)

*Values in parentheses indicate holding time in days

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

GLOSSARY

Acronyms

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

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

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

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report



Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: Not Specified
Project Number: 5031.9.00

Lab Number: L1116017
Report Date: 10/07/11

REFERENCES

- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.

LIMITATION OF LIABILITIES

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

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



Certificate/Approval Program Summary

Last revised September 19, 2011 - Westboro Facility

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

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-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, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 8081, 8082, 8330, 8151A, 624, 8260, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

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

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B;Enterolert-QT: SM9222D-MF.)

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

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050C, 9065,1311, 1312, 3005A, 3050B. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8330, 8151A, 8015B, 8082, 8081A.)

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

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, 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, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 6020, 6020A, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-04-1-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 9010B, 9030B.. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8015B, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters:

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. *NELAP Accredited.**Drinking Water (Organic Parameters: EPA 524.2, 504.1)**Non-Potable Water (Inorganic Parameters: EPA 1312, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE. Organic Parameters: EPA 3510C, 3005A, 3630C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)**Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 6010B, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-H. Organic Parameters: 3540C, 3545, 3546, 3550B, 3580A, 3630C, 5035, 8015B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)***Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NY-DOH.***

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

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

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. *NELAP Accredited.**Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)**Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)***Department of Defense Certificate/Lab ID: L2217.***Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)**Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 5220D, 5310C, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8270C, 8330A, 625, 8082, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)**Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9010, 9012A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8270C, 8330A/B-prep, 8082, 8081A, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)***The following analytes are not included in our current NELAP/TNI Scope of Accreditation:****EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix.

