



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

**5 Post Office Square, Suite 100
BOSTON, MA 02109-3912**

CERTIFIED MAIL RETURN RECEIPT REQUESTED

AUG 05 2013

Amy Roth,
Senior Project Manager
Wilcox & Barton, Inc.
57 Hoit Road
Concord, NH 03301

Re: Authorization to discharge under the Remediation General Permit (RGP) –
MAG910000. 2 Mechanics Court site located at 120 Merrimac Street, Newburyport, MA
01950, Essex County; Authorization # MAG910591

Dear Ms. Roth:

Based on the review of a Notice of Intent (NOI) submitted by your firm the Wilcox & Barton, Inc., on behalf of Chart House Development, LLC, 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. Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on selected dilution ranges and technology-based ceiling limitations. With the absence of dilution of freshwater into tidal water, EPA determined that the Dilution Factor Range (DFR) for each parameter for this site is in the one and five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities). Therefore, the limits for arsenic of 36ug/L, copper of 3.7ug/L, lead of 8.5 ug/L, nickel of 8.2ug/L, and iron of 1,000ug/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 August 31, 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, Chief
Storm Water and Construction
Permits Section

Enclosure

cc: Robert Kubit, MassDEP
Julia Godtfredsen, Newburyport Conservation Commission
Russell W. Barton, Wilcox & Barton Inc.

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

NPDES Authorization Number:	MAG910591
Authorization Issued:	July 2013
Facility/Site Name:	2 Mechanics Court
Facility/Site Address:	120 Merrimac Street, Newburyport, MA 01950, Essex County
	Email address of owner: cwpessina@comcasr.net
Legal Name of Operator:	Wilcox & Barton, Inc.
Operator contact name, title, and Address:	Amy Roth, LSP, 57 Hoit Road, Concord, NH 03301, Merrimack NH
	Email: aroth@wilcoxandbarton.com
Estimated date of Completion:	August 31, 2013
Category and Sub-Category:	Category III Contaminated Construction Dewatering. Sub - category B. Known Contaminated Sites
RGP Termination Date:	September 10, 2015
Receiving Water:	Merrimack River

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#160.2/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
	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) ⁴	100 ug/L/ Me#8260C/ ML 2ug/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)
	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
V	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
	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

	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)
✓	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/ML 5ug/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/ML 5ug/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 100 ug/L

		Total Recoverable MA/Metal Limit H ¹⁰ = 50 mg/l CaCO₃, Units = ug/l ^(11/12)	Minimum level=ML
	Metal Parameters	Saltwater Limits	
	39. Antimony	5.6	ML 10
✓	40. Arsenic **	36	ML 20

	Metal Parameters	Total Recoverable MA/Metal Limit $H^{10} = 50 \text{ mg/l CaCO}_3$, Units = $\mu\text{g/l}^{(11/12)}$		Minimum level=ML	
			Saltwater Limits		
	41. Cadmium **		8.9	ML	10
	42. Chromium III (trivalent) **		100	ML	15
	43. Chromium VI (hexavalent) **		50.3	ML	10
✓	44. Copper **		3.7	ML	15
✓	45. Lead **		8.5	ML	20
	46. Mercury **		1.1	ML	02
✓	47. Nickel **		8.2	ML	20
	48. Selenium **		71	ML	20
	49. Silver		2.2	ML	10
	50. Zinc **		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 11 $\mu\text{g/l}$ and 7.5 $\mu\text{g/l}$ 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 $\mu\text{g/l}$).

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 "Oroclor 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.

⁹ Although 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 $DF \times 1,000 \text{ ug/L}$ (the iron base limit). Therefore DF is 1.5, the iron limit will be 1,500 ug/L; DF 2, then iron limit = $1,000 \times 2 = 2,000 \text{ ug/L}$, 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

July 11, 2013

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEPO6-4
Boston, MA 02109-3912
Attn: Remediation General Permit NOI Processing

**RE: Remediation General Permit Notice of Intent – Excavation Dewatering
120 Merrimac Street, Newburyport, Massachusetts, MassDEP RTN 3-26894**

To Whom It May Concern:


Wilcox & Barton, Inc. has prepared the enclosed Notice of Intent (NOI) for general permit coverage under Remediation General Permit MAG910000. The project proponent, Chart House Development, LLC, is constructing two new retail buildings and relocating one existing building on the site. Due to the high water table, dewatering will be required for the foundation excavation and installation. Water will be treated and discharged to a stormwater catch basin on the site, thence to the Merrimac River at a point shown in the permit application package.

Because this is a former disposal site under the Massachusetts Contingency Plan (RTN 3-26894), we are applying for permit coverage as a conservative measure. Based upon the need for dewatering at a known contaminated site, this RGP should be classified as Category III (Contaminated Construction Dewatering), Subcategory B (Known Contaminated Sites). Treatment capacity will be adequate to remove metals and petroleum-related constituents that are encountered in groundwater at the site.

We very much appreciate your attention to this matter. If you have any questions or concerns regarding this project, please do not hesitate to contact the undersigned at (603) 369-4190 x502.

Very truly yours,

WILCOX & BARTON, INC.



Russell W. Barton
Principal Geologist

Attachment: US EPA Notice of Intent (NOI) for Remediation General Permit (and attachments)

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 : 2 Mechanics Court		Facility/site mailing address:	
Location of facility/site :	Facility SIC code(s):	Street:	
longitude: 42d48'48.19"N	1542	120 Merrimac Street	
latitude: 70d52'32.97"W			
b) Name of facility/site owner : Chart House Development, LLC		Town: Newburyport	
Email address of facility/site owner:		State:	Zip:
cwpeessina@comcast.net		Massachusetts	01950
Telephone no. of facility/site owner : (978) 987-7312		County: Essex	
Fax no. of facility/site owner :		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: 11A Liberty Street			
Town: Newburyport	State: MA	Zip: 01950	County: Essex
c) Legal name of operator :		Operator telephone no: (603) 369-4190	
Wilcox & Barton, Inc.		Operator fax no.: (603) 369-6639	Operator email: aroth@wilcoxandbarton.com
Operator contact name and title: Amy Roth, LSP			
Address of operator (if different from owner):		Street: 57 Hoit Road	
Town: Concord	State: NH	Zip: 03301	County: Merrimack

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 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:			
Dewatering for purposes of retail store construction. Discharge to catchbasin on project site will follow treatment by settling, sediment filtration, and carbon filtration. Low levels of metal contaminants have been detected in groundwater by the limited sampling conducted to date.			
b) Provide the following information about each discharge:			
1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)?		
2	Max. flow	75 gpm	Is maximum flow a design value ? Y <input type="radio"/> N <input checked="" type="radio"/>
	Average flow (include units)	50 gpm	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.	42d48'48.21"N	long.	70d52'34.26"W
pt.2: lat.	42d48'48.12"N	long.	70d52'34.29"W
pt.3: lat.		long.	
pt.4: lat.		long.	
pt.5: lat.		long.	
pt.6: lat.		long.	
pt.7: lat.		long.	
pt.8: lat.		long.	
etc.			
4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent <input 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 July 2013 end August 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).			
See attached Figure 1 - Site Location Map, Figure 2 - Site Plan, and Figure 3 - Process & Instrumentation Diagram			

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"/>	1	grab	2540D	5.0e-1	1.3	0.037	1.3	0.025
2. Total Residual Chlorine (TRC)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	4500 CL G	10	0.004	0.0001	0.004	0.0001
3. Total Petroleum Hydrocarbons (TPH)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	8100	10	0.12	0.003	0.12	0.002
4. Cyanide (CN)	57125	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	4500	5				
5. Benzene (B)	71432	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	2				
6. Toluene (T)	108883	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	2				
7. Ethylbenzene (E)	100414	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	2				
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	4				
9. Total BTEX ²	n/a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	2				
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	10				
11. Methyl-tert-Butyl Ether (MtBE)	1634044	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	grab	8260B	10	5	0.143	5	0.095
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	10				

* 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"/>	7	grab	8260B	10				
14. Naphthalene	91203	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	grab	8260B	2	1	0.029	1	0.019
15. Carbon Tetrachloride	56235	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
16. 1,2 Dichlorobenzene (o-DCB)	95501	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
17. 1,3 Dichlorobenzene (m-DCB)	541731	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
18. 1,4 Dichlorobenzene (p-DCB)	106467	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
18a. Total dichlorobenzene		<input checked="" type="checkbox"/>	<input type="checkbox"/>	0							
19. 1,1 Dichloroethane (DCA)	75343	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
20. 1,2 Dichloroethane (DCA)	107062	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
21. 1,1 Dichloroethene (DCE)	75354	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
22. cis-1,2 Dichloroethene (DCE)	156592	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5	0.40	0.011	0.40	0.008
23. Methylene Chloride	75092	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
24. Tetrachloroethene (PCE)	127184	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	grab	8260B	5	2	0.057	2	0.038
25. 1,1,1 Trichloro-ethane (TCA)	71556	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
26. 1,1,2 Trichloro-ethane (TCA)	79005	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	5				
27. Trichloroethene (TCE)	79016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	7	grab	8260B	5	10	0.285	10	0.190

<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"/>	7	grab	8260B	5	0.29	0.008	0.29	0.006
29. Acetone	67641	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	50				
30. 1,4 Dioxane	123911	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7	grab	8260B	50				
31. Total Phenols	108952	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
32. Pentachlorophenol (PCP)	87865	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
33. Total Phthalates (Phthalate esters) ⁴		<input checked="" type="checkbox"/>	<input type="checkbox"/>	0							
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		<input checked="" type="checkbox"/>	<input type="checkbox"/>								
a. Benzo(a) Anthracene	56553	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
b. Benzo(a) Pyrene	50328	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
c. Benzo(b)Fluoranthene	205992	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
d. Benzo(k)Fluoranthene	207089	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
e. Chrysene	21801	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
f. Dibenzo(a,h)anthracene	53703	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
g. Indeno(1,2,3-cd) Pyrene	193395	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		<input checked="" type="checkbox"/>	<input type="checkbox"/>								

⁴ The 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"/>	1	grab	8270D	5				
i. Acenaphthylene	208968	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
j. Anthracene	120127	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
k. Benzo(ghi) Perylene	191242	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
l. Fluoranthene	206440	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
m. Fluorene	86737	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
n. Naphthalene	91203	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
o. Phenanthrene	85018	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
p. Pyrene	129000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8270D	5				
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	8082A	5.0e-1				
38. Chloride	16887006	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	4500	1.0e-2	2000	57.1	2000	38.0
39. Antimony	7440360	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	6020A	5.0e-1				
40. Arsenic	7440382	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	6020A	1.0	19	0.542	19	0.361
41. Cadmium	7440439	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	6020A	2.0e-1				
42. Chromium III (trivalent)	16065831	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	6020A	1.0				
43. Chromium VI (hexavalent)	18540299	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	7196A	10				
44. Copper	7440508	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	6020A	5.0e-1	2.5	0.071	2.5	0.048
45. Lead	7439921	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	6020A	2.0e-1	0.72	0.021	0.72	0.014
46. Mercury	7439976	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	7470A	2.0e-1				
47. Nickel	7440020	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	6020A	2.0e-1	3.2	0.091	3.2	0.061
48. Selenium	7782492	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	6020A	2				
49. Silver	7440224	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	6020A	2.0e-1				
50. Zinc	7440666	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	grab	6020A	5				
51. Iron	7439896	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	grab	6010C	50	0.98	0.028	0.98	0.028
Other (describe):		<input type="checkbox"/>	<input type="checkbox"/>								

<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>
		<input type="checkbox"/>	<input type="checkbox"/>								
		<input type="checkbox"/>	<input type="checkbox"/>								

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 type="radio"/> N <input checked="" type="radio"/></p>	<p>If yes, which metals?</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> <p>Metal: <input type="text"/> DF: <input type="text"/></p> <p>Metal: <input type="text"/> DF: <input type="text"/></p> <p>Metal: <input type="text"/> DF: <input type="text"/></p> <p>Metal: <input type="text"/> DF: <input type="text"/></p> <p>Etc.</p>	<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)?</p> <p>Y <input type="radio"/> N <input checked="" type="radio"/> If Y, list which metals:</p>

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

See attached Figure 3 for a schematic of the treatment train. Extracted groundwater will be routed to a 21,000-gallon fractionation tank. Water will be treated in batches to provide for settling of sediments in the frac tank. The treatment train will consist of dual 5-micron filter bags in pressure housings, followed by two 1000-lb granular activated carbon canisters in series. Influent, midfluent and effluent sample ports will be provided, along with a totalizing flow meter. Following treatment, water will be discharged by overland pipe to catchbasins located along the property boundary in Merrimac Street. The catchbasins discharge to the Merrimack River, which is a tidal estuary (saltwater) at the point of discharge.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank <input checked="" type="checkbox"/>	Air stripper <input type="checkbox"/>	Oil/water separator <input type="checkbox"/>	Equalization tanks <input type="checkbox"/>	Bag filter <input checked="" type="checkbox"/>	GAC filter <input checked="" type="checkbox"/>
	Chlorination <input type="checkbox"/>	De-chlorination <input type="checkbox"/>	Other (please describe):			

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate(s)** (gallons per minute) of the treatment system:

Average flow rate of discharge 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):

None

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 type="text"/>
------------------------------------	--	--	---	-----------------------------------	---

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

Discharge to catchbasins located in Merrimac Street. Catchbasins ultimately discharge to the Merrimack River within the tidal estuary.

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)?
2010 data: Bacteria (fecal coliform), PCBs in fish tissue

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.

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 ☒ B ☐ C ☐ D ☐ E ☐ F ☐

b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ☐ N ☒ Underway ☐

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 ☒ N ☐

d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.

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 ☐ 2 ☒ 3 ☐

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.

7. Supplemental information.

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

Attachments

Figure 1, Site Location Map

Figure 2, Site Plan showing treatment system and discharge location

Figure 3, Process & Instrumentation Diagram


Fish & Wildlife Concurrence

Historic Resources MACRIS on-line Database

Laboratory Analytical Data

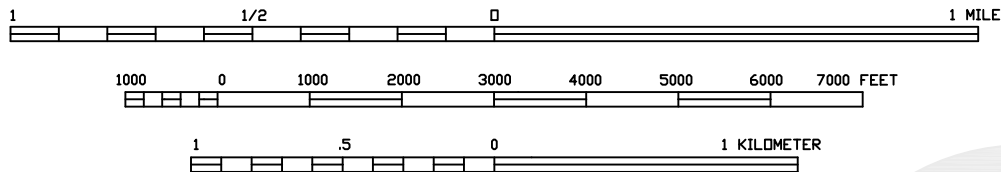
8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

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.

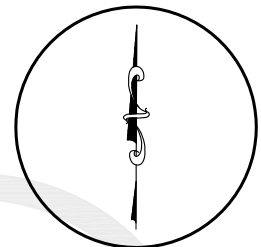
Facility/Site Name:	120 Merrimac Street
Operator signature:	
Printed Name & Title:	Amy A. Roth, LSP, Senior Project Manager
Date:	7/11/13



SCALE: 1:25 000



CONTOUR INTERVAL 3 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

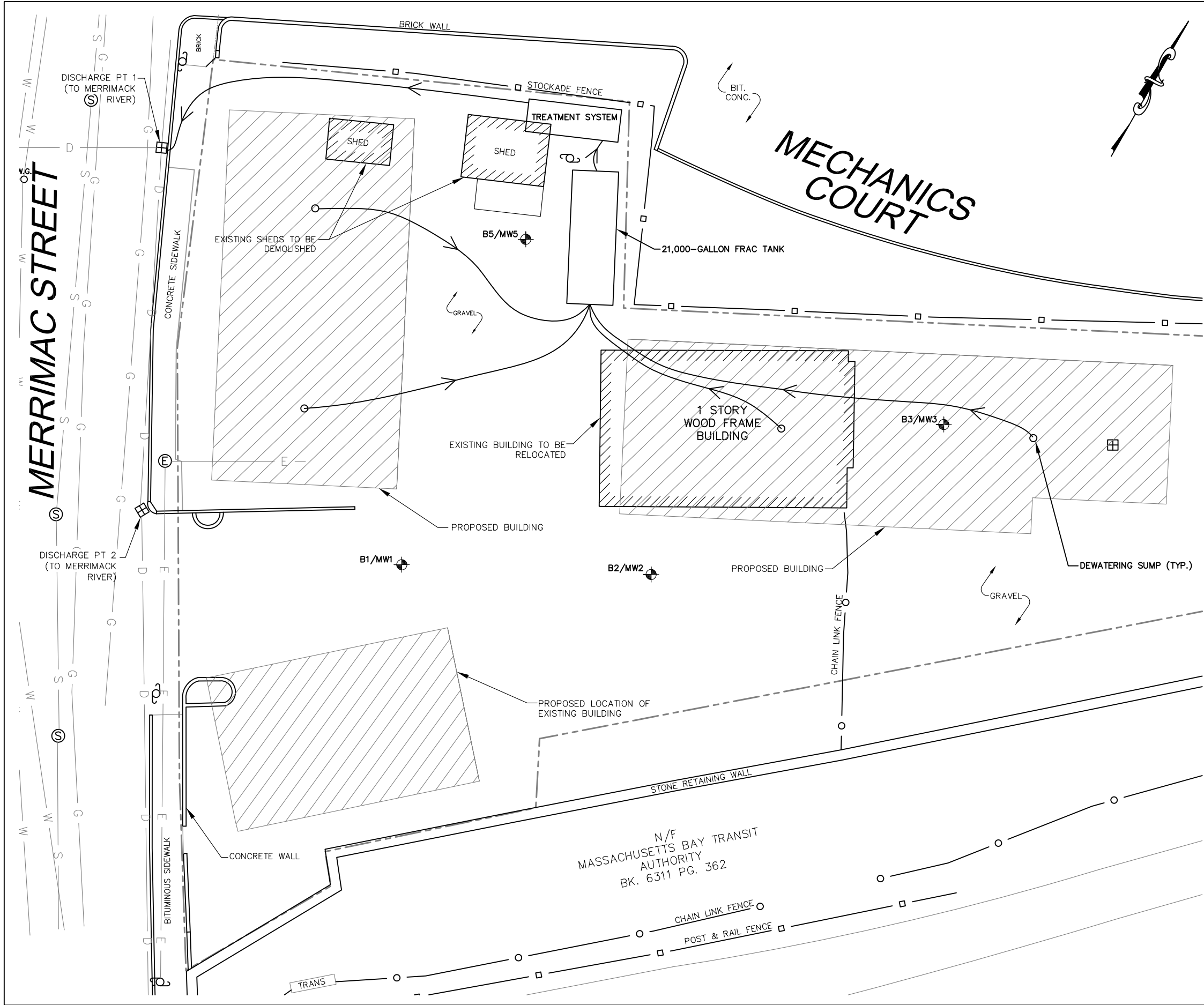


DATE June 25, 2012	SCALE As shown	FILE Newburyport Site Loc Map
APPROVED BY RWR	DRAWN BY JDD	REVISED
CLIENT Chart House Development, LLC	JOB NUMBER CHART0001	
LOCATION 120 Merrimac Street Newburyport, Massachusetts	MAP SOURCE Nexburyport, Mass. USGS QUAD 1987	

Wilcox & Barton INC.
ENVIRONMENTAL AND ENGINEERING SERVICES

SITE LOCATION MAP

Figure 1



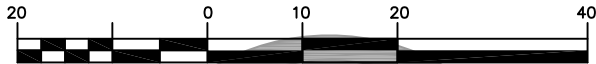
LEGEND

- B3/MW3 MONITORING WELL
- E ELECTRICAL MANHOLE
- S SANITARY SEWER MANHOLE
- D DRAIN MANHOLE
- UTILITY POLE
- CATCH BASIN
- W.G. WATER GATE VALVE
- G.G. NATURAL GAS GATE VALVE
- PROPERTY LINE
- W WATER LINE
- S SANITARY SEWER LINE
- E ELECTRIC LINE
- D STORMWATER SEWER LINE
- G NATURAL GAS LINE

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- PLAN BASED ON WILCOX & BARTON, INC. SITE VISITS AND THE "EXISTING CONDITIONS PLAN" DATED APRIL 16, 2013, PREPARED BY DESIGN CONSULTANTS, INC..
- THIS PLAN IS NOT A PROFESSIONAL SURVEY AND IS NOT INTENDED FOR SURVEY PURPOSES.
- FRAC TANK AND TREATMENT SYSTEM LOCATION DEPICTED WILL VARY WITH SITE DEVELOPMENT PROCESS.

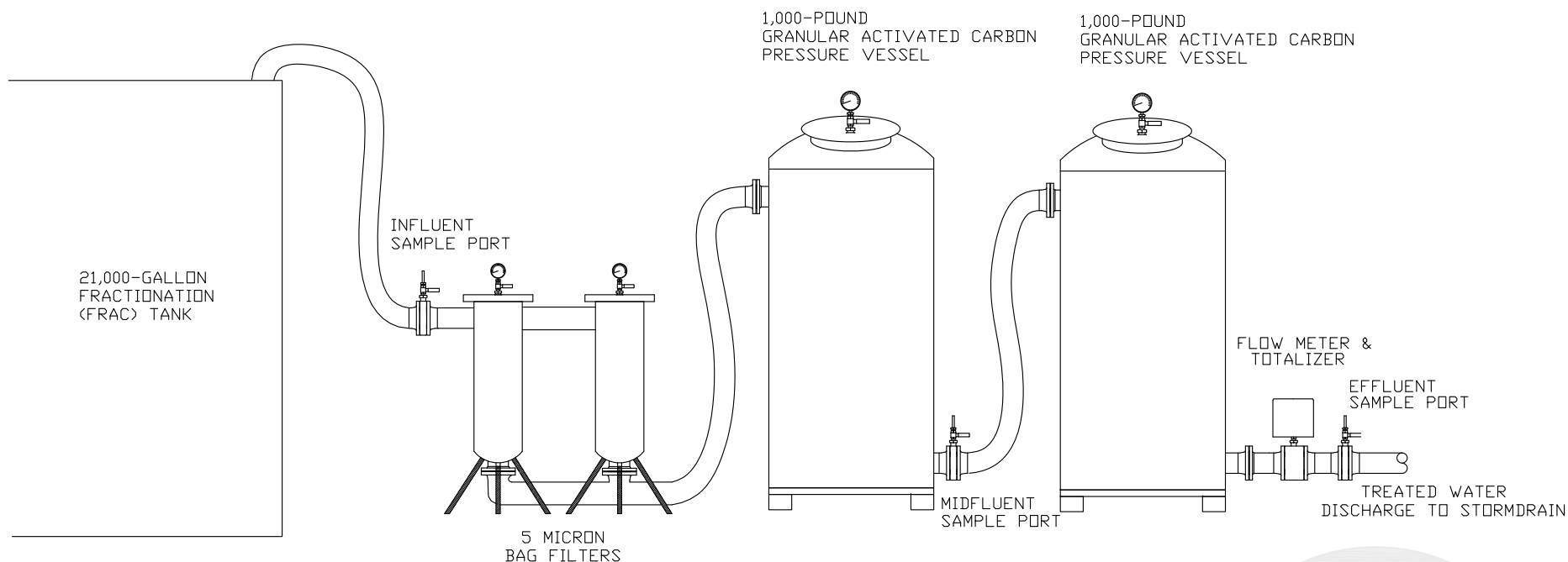
GRAPHIC SCALE



(IN FEET)

1 inch = 20 feet

Wilcox & Barton INC. ENVIRONMENTAL AND ENGINEERING SERVICES		
TITLE SITE PLAN		
DATE June 24, 2013	SCALE AS SHOWN	FILE topeka_st_master
APPROVED BY	DRAWN BY JDD	REVISED
CLIENT Chart House Development, LLC	JOB NUMBER CHART0001	
LOCATION 120 Merrimac Street Street Newburyport, Massachusetts RTN 3-26894	DRAWING NUMBER FIGURE 2	



Wilcox & Barton INC.
 ENVIRONMENTAL AND ENGINEERING SERVICES

TITLE
PROCESS AND INSTRUMENTATION DIAGRAM

DATE June 24, 2013	SCALE Not To Scale	FILE P & I Diagram
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APPROVED BY RWR	DRAWN BY JDD	REVISED
--------------------	-----------------	---------

CLIENT Chart House Development, LLC	JOB NUMBER CHART0001
--	-------------------------

LOCATION 120 Merrimac Street Newburyport, Massachusetts RTN 3-26894	DRAWING NUMBER FIGURE 3
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United States Department of the Interior

FISH AND WILDLIFE SERVICE
NEW ENGLAND ECOLOGICAL SERVICES FIELD OFFICE
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland



Consultation Tracking Number: 05E1NE00-2013-SLI-0222

July 03, 2013

Project Name: 2 Mechanics Court

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: 2 Mechanics Court

Official Species List

Provided by:

NEW ENGLAND ECOLOGICAL SERVICES FIELD OFFICE
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
<http://www.fws.gov/newengland>

Consultation Tracking Number: 05E1NE00-2013-SLI-0222

Project Type: Development

Project Description: Redevelopment of an existing commercial parcel.



United States Department of Interior
Fish and Wildlife Service

Project name: 2 Mechanics Court

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-70.8762418 42.8134178, -70.8762487 42.8134213, -70.8762538 42.8134272, -70.8762562 42.8134346, -70.8762557 42.8134424, -70.8762522 42.8134494, -70.8762463 42.8134545, -70.8759346 42.8136324, -70.8759285 42.8136346, -70.875922 42.8136348, -70.8759157 42.8136329, -70.8758448 42.8135972, -70.8754475 42.8139087, -70.8754412 42.8139121, -70.875434 42.813913, -70.875427 42.8139112, -70.8753162 42.8138614, -70.8753092 42.8138562, -70.8753051 42.8138485, -70.8753047 42.8138397, -70.8753462 42.8136028, -70.8753501 42.8135941, -70.8757342 42.813096, -70.8757398 42.813091, -70.8757468 42.8130885, -70.8757543 42.8130887, -70.8757612 42.8130917, -70.8762418 42.8134178), (-70.8761977 42.8134361, -70.8757543 42.8131353, -70.8753847 42.8136146, -70.8753468 42.8138313, -70.8754324 42.8138698, -70.8758301 42.8135579, -70.8758367 42.8135544, -70.8758442 42.8135537, -70.8758514 42.8135557, -70.8759241 42.8135923, -70.8761977 42.8134361)))



United States Department of Interior
Fish and Wildlife Service

Project name: 2 Mechanics Court

Project Counties: Essex, MA



United States Department of Interior
Fish and Wildlife Service

Project name: 2 Mechanics Court

Endangered Species Act Species List

Species lists are not entirely based upon the current range of a species but may also take into consideration actions that affect a species that exists in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Please contact the designated FWS office if you have questions.

There are no listed species identified for the vicinity of your project.




Massachusetts Cultural Resource Information System

MACRIS

[MHC Home](#) | [MACRIS Home](#)[Login](#)

For more information about this page and how to use it, [click here](#).

Inventory No: NWB.1801
Historic Name:
Common Name:
Address: 120 Merrimac St
City/Town: Newburyport
Village/Neighborhood:
Local No: 50-61,62,63,64; L
Year Constructed: C 1800
Architect(s):
Architectural Style(s):
Use(s): Other Commercial; Single Family Dwelling House
Significance: Architecture; Commerce
Area(s):  [NWB.L: Newburyport Historic District](#)
Designation(s): Nat'l Register District (8/2/1984)

Digital Photo
Not Yet
Available

There is no form for this resource. Information can be found on the [NWB.L](#) form and/or the appropriate area forms listed below.

[New Search](#)[Previous](#)[MHC Home](#) | [MACRIS Home](#)

United States Department of the Interior
National Park Service

For NPS use only

National Register of Historic Places
Inventory—Nomination Form

received

date entered

See instructions in *How to Complete National Register Forms*

Type all entries—complete applicable sections

1. Name

historic Newburyport Historic District

and/or common same

2. Location

street & number multiple (See District Data Sheets) N/A not for publication

city, town Newburyport N/A vicinity of

state Massachusetts code 025 county Essex code 009

3. Classification

Category	Ownership	Status	Present Use
<input checked="" type="checkbox"/> district	<input type="checkbox"/> public	<input checked="" type="checkbox"/> occupied	<input type="checkbox"/> agriculture <input checked="" type="checkbox"/> museum
<input type="checkbox"/> building(s)	<input type="checkbox"/> private	<input type="checkbox"/> unoccupied	<input checked="" type="checkbox"/> commercial <input checked="" type="checkbox"/> park
<input type="checkbox"/> structure	<input checked="" type="checkbox"/> both	<input type="checkbox"/> work in progress	<input checked="" type="checkbox"/> educational <input checked="" type="checkbox"/> private residence
<input type="checkbox"/> site	Public Acquisition	Accessible	<input type="checkbox"/> entertainment <input checked="" type="checkbox"/> religious
<input type="checkbox"/> object	<input type="checkbox"/> in process	<input checked="" type="checkbox"/> yes: restricted	<input type="checkbox"/> government <input type="checkbox"/> scientific
	N/A being considered	<input checked="" type="checkbox"/> yes: unrestricted	<input checked="" type="checkbox"/> industrial <input type="checkbox"/> transportation
		<input type="checkbox"/> no	<input type="checkbox"/> military <input type="checkbox"/> other:

4. Owner of Property

name multiple

street & number

city, town N/A vicinity of state

5. Location of Legal Description

courthouse, registry of deeds, etc. Essex County Registry of Deeds

street & number 32 Federal Street

city, town Salem state Massachusetts 01970

6. Representation in Existing Surveys

title Inventory of Historic Assets of the Commonwealth (waterfront archeology)
has this property been determined eligible? ☒ yes ☐ no
date 1980 ☐ federal ☒ state ☐ county ☐ local

depository for survey records Massachusetts Historical Commission
294 Washington Street

city, town Boston state MA 02108

7. Description

Newburyport Historic District

Newburyport

Condition

☐ excellent
☒ good
☐ fair

☐ deteriorated
☐ ruins
☐ unexposed

Check one

☒ unaltered
☒ altered

Check one

☒ original site
☐ moved date _____

Describe the present and original (if known) physical appearance

The City of Newburyport, in which the Newburyport Historic District is located, covers an area of approximately ten square miles at the mouth of the Merrimack River in the north section of Essex County. The city is situated 40 miles north of Boston, 20 miles south of Portsmouth, New Hampshire and 25 miles north of Salem, Massachusetts, the county seat. The current population of the city is 15,900 (1980 Census), of which the majority live within the boundaries of the Newburyport Historic District.

Containing approximately 750 acres of land, 2,500 contributing structures (pre-1930) and 200 non-contributing structures (post 1930), the District consists of densely-built neighborhoods of wood-frame houses laid out north and south of a commercial district of brick row buildings related to maritime commerce. The District possesses fine examples of architectural styles dating from the late seventeenth to the early twentieth centuries, although most of the District is dominated by Federal Period architecture which ranges from vernacular cottages to high-style mansions built along "the Ridge" of High Street.

POLITICAL DEVELOPMENT

Originally part of a larger territory occupied by the Pawtucket Indians, the Newburyport Historic District was included in the 30,000 acres granted to proprietors of Newbury between 1635, when the town was first settled by English immigrants, and 1764 when the residents of the commercial offshoot known as Waterside successfully petitioned the General Court to be set off in a separate town (now Newburyport), since their interests were in conflict with those of the farmers who occupied the rest of Newbury. As established in 1764, the new town of Newburyport contained only 647 acres of land and was bounded by Bromfield Street (formerly South Street) on the southeast, Oakland Street (formerly North Street) on the northwest and an irregular line on the south extending out to a point on Hale Street (outside of the district). At the time of the town's incorporation, this area contained a population of 2,882 people and 357 houses.

NEWBURYPORT
DISTRICT DATA SHEET

Street Address	Map & Parcel	Historic Name	Date of Construction	Style	Status
1762 81	47-37	Double House	ca 1875	Second Empire	C
83	47-38	Double House	ca 1875	Second Empire	C
1763 87	47-39	gas station	ca 1940	contemporary	INT
93-95	47-60	parking lot			
U.S. Route 1	-----	-----	-----	-----	-----
916 408 no #	50-3	raised railroad bed	late 19th c		
1764 111-113	50-4	commercial bldg.	ca 1850; 1920s	Greek Revival/ Italianate; storefronts altered	C
✓ 115-117 #452	50-16	commercial bldg.	ca 1845; ca 1950	Greek Revival; minor alterations	C
1765 119 USGS Newbury W.	50-17	commercial bldg.	ca 1940 1970s	astylistic	INT
✓ 125-129 #453	50-18	former commercial building industrial shed	pre 1875 ca 1935-1945	mid-Victorian astylistic	C INT
1766 131-135 USGS - W.	50-19	commercial bldg. & apartment	ca 1890; 1960s	Italianate; alterations	C
1767 137-139 USGS - W.	50-20	commercial bldg. & apartments	ca 1880; 1960s	Italianate; alterations	C

GROUNDWATER ANALYTICAL

Groundwater Analytical, Inc.
P.O. Box 1200
228 Main Street
Buzzards Bay, MA 02532

Telephone (508) 759-4441
FAX (508) 759-4475
www.groundwateranalytical.com

July 26, 2006

Mr. William Simmons
Simmons Environmental Services, Inc.
213 Elm Street
Salisbury, MA 01952

LABORATORY REPORT

Project: **120 Merrimac St/060501**
Lab ID: **96856**
Received: **07-14-06**

Dear Bill:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority turnaround.

This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

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.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Jonathan R. Sanford
President

JRS/jll
Enclosures

Sample Receipt Report

Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Lab ID: 96856

Delivery: GWA Courier
Airbill: n/a
Lab Receipt: 07-14-06

Temperature: 2.0°C
Chain of Custody: Present
Custody Seal(s): n/a

Lab ID	Field ID		Matrix	Sampled	Method				Notes
96856-1	MW 1		Aqueous	7/14/06 0:00	EPA 8260B Volatile Organics with Oxygenates				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C726499	40 mL VOA Vial	Proline	BX21477	HCl	R-4683B	05-10-06	n/a		
C726481	40 mL VOA Vial	Proline	BX21477	HCl	R-4683B	05-10-06	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
96856-2	MW 2		Aqueous	7/14/06 0:00	EPA 8260B Volatile Organics with Oxygenates				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C726486	40 mL VOA Vial	Proline	BX21477	HCl	R-4683B	05-10-06	n/a		
C726480	40 mL VOA Vial	Proline	BX21477	HCl	R-4683B	05-10-06	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
96856-3	MW 3		Aqueous	7/14/06 0:00	EPA 8260B Volatile Organics with Oxygenates				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C726512	40 mL VOA Vial	Proline	BX21477	HCl	R-4683B	05-10-06	n/a		
C726492	40 mL VOA Vial	Proline	BX21477	HCl	R-4683B	05-10-06	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
96856-4	MW 4		Aqueous	7/14/06 0:00	EPA 8260B Volatile Organics with Oxygenates				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C726514	40 mL VOA Vial	Proline	BX21477	HCl	R-4683B	05-10-06	n/a		
C726509	40 mL VOA Vial	Proline	BX21477	HCl	R-4683B	05-10-06	n/a		

Lab ID	Field ID		Matrix	Sampled	Method			Notes
96856-5	B2, 1'-3'		Soil	7/13/06 0:00	EPA 6010B/7471A 5 RCRA Metals MA DEP EPH with PAHs			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C812835	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
96856-6	B3, 1'-3'		Soil	7/13/06 0:00	EPA 6010B/7471A 5 RCRA Metals MA DEP EPH with PAHs			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C812834	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
96856-7	B4, 1'-3'		Soil	7/13/06 0:00	EPA 6010B/7471A 5 RCRA Metals MA DEP EPH with PAHs			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C812833	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a	

Lab ID	Field ID	Matrix	Sampled	Method					Notes
96856-8	B5, 1'-3'	Soil	7/13/06 0:00	EPA 6010B/7471A 5 RCRA Metals MA DEP EPH with PAHs					
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C812832	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method			Notes
96856-9	SS 1		Soil	7/13/06 0:00	EPA 6010B As Total			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C619654	250 mL Glass	Proline	8X17287	None	n/a	n/a	07-22-05	

Sample Receipt Report (Continued)

Project: 120 Merrimac St/060501

Client: Simmons Environmental Services, Inc.

Lab ID: 96856

Delivery: GWA Courier

Airbill: n/a

Lab Receipt: 07-14-06

Temperature: 2.0°C

Chain of Custody: Present

Custody Seal(s): n/a

Lab ID	Field ID		Matrix	Sampled	Method			Notes
96856-10	SS 2		Soil	7/13/06 0:00	EPA 6010B As Total			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C727986	250 mL Glass	Proline	BX21043	None	n/a	n/a	n/a	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
96856-11	SS 3		Soil	7/13/06 0:00	EPA 6010B As Total			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C619651	250 mL Glass	Proline	BX17287	None	n/a	n/a	07-22-05	

Lab ID	Field ID		Matrix	Sampled	Method				Notes
96856-12	MW 1		Aqueous	7/14/06 0:00	MA DEP EPH with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C890150	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06		
C890148	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
96856-13	MW 2		Aqueous	7/14/06 0:00	MA DEP EPH with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C890157	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06		
C890149	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06		

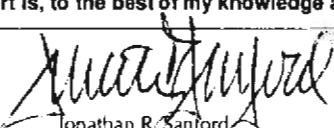
Lab ID	Field ID		Matrix	Sampled	Method			Notes
96856-14	MW 3		Aqueous	7/14/06 0:00	MA DEP EPH with PAHs			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C890156	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06	
C890151	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06	

Lab ID	Field ID		Matrix	Sampled	Method			Notes
96856-15	MW 4		Aqueous	7/14/06 0:00	MA DEP EPH with PAHs			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C890155	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06	
C890152	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06	

Data Certification

Project: **120 Merrimac SU/060501**
Client: **Simmons Environmental Services, Inc.**

Lab ID: **96856**
Received: **07-14-06 19:15**

MA DEP Compendium of Analytical Methods					
Project Location: n/a		MA DEP RTN: n/a			
This Form provides certifications for the following data set:					
EPA 8260B:	96856-01,-02,-03,-04				
MA DEP EPH:	96856-05,-06,-07,-08,-12,-13,-14,-15				
EPA 6010B:	96856-05,-06,-07,-08,-09,-10,-11				
EPA 7470A/1A:	96856-05,-06,-07,-08				
Sample Matrices:	Groundwater (X)	Soil/Sediment (X)	Drinking Water ()	Other ()	
MCP SW-846	8260B (X)	8151A ()	8330 ()	6010B (X)	7470A/1A (X)
Methods Used	8270C ()	8081A ()	VPH ()	6020 ()	9012A ² ()
As specified in MA DEP Compendium of Analytical Methods.	8082 ()	8021B ()	EPH (X)	7000 S ³ ()	Other ()
(check all that apply)	1. List Release Tracking Number (RTN), if known. 2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method 3. S-SW-846 Methods 7000 Series. List individual method and analyte.				
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.					
A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?				Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, <i>Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data</i> ?				Yes
D.	<u>VPH and EPH methods only:</u> Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?				Yes
A response to questions E and F below is required for "Presumptive Certainty" status.					
E.	Were all QC performance standards and recommendations for the specified methods achieved?				No
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?				No
All No answers are addressed in the attached Project Narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature: 		Position: President			
Printed Name: Jonathan R. Sanford		Date: 07-26-06			

GROUNDWATER ANALYTICAL

EPA Method 8260B Volatile Organics by GC/MS

Field ID: **MW 1**
Project: **120 Merrimac St/060501**
Client: **Simmons Environmental Services, Inc.**

Laboratory ID: **96856-01**
Sampled: **07-14-06 00:00**
Received: **07-14-06 19:15**
Analyzed: **07-20-06 13:50**
Analyst: **KMC**

Matrix: **Aqueous**
Container: **40 mL VOA Vial**
Preservation: **HCl/Cool**

QC Batch ID: **VM5-3396-W**
Instrument ID: **MS-5 HP 6890**
Sample Volume: **25 mL**
Dilution Factor: **1**

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	trans-1,2-Dichloroethene	0.8		ug/L	0.5
1634-04-4	Methyl tert-butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	cis-1,2-Dichloroethene	0.6		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
106-38-3/106-42-3	meta-Xylene and para-Xylene	BRL		ug/L	0.5
95-47-6	ortho-Xylene	BRL		ug/L	0.5

EPA Method 8260B (Continued) Volatile Organics by GC/MS

Field ID: MW 1
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-01
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Analyzed: 07-20-06 13:50
Analyst: KMC

Matrix: Aqueous
Container: 40 mL VOA Vial
Preservation: HCl/Cool
QC Batch ID: VM5-3396-W
Instrument ID: MS-5 HP 6890
Sample Volume: 25 mL
Dilution Factor: 1

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	n-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	tert-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	sec-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	n-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	11	105 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	10	101 %	70 - 130 %
Toluene-d ₈	10	9.5	95 %	70 - 130 %
4-Bromofluorobenzene	10	9.9	99 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

EPA Method 8260B Volatile Organics by GC/MS

Field ID: MW 2
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-02
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Analyzed: 07-20-06 14:30
Analyst: KMC

Matrix: Aqueous
Container: 40 mL VOA Vial
Preservation: HCl/Cool
QC Batch ID: VM5-3396-W
Instrument ID: MS-5 HP 6890
Sample Volume: 25 mL
Dilution Factor: 1

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	trans-1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl tert-butyl Ether (MTBE)	5		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	cis-1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
106-38-3/106-42-1	meta-Xylene and para-Xylene	BRL		ug/L	0.5
95-47-6	ortho-Xylene	BRL		ug/L	0.5

EPA Method 8260B (Continued) Volatile Organics by GC/MS

Field ID: MW 2
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-02
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Analyzed: 07-20-06 14:30
Analyst: KMC

Matrix: Aqueous
Container: 40 mL VOA Vial
Preservation: HCl/Cool
QC Batch ID: VM5-3396-W
Instrument ID: MS-5 HP 6890
Sample Volume: 25 mL
Dilution Factor: 1

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	n-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	tert-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	sec-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	n-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	105 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	9.8	98 %	70 - 130 %
Toluene-d ₈	10	9.8	98 %	70 - 130 %
4-Bromofluorobenzene	10	10	104 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

EPA Method 8260B Volatile Organics by GC/MS

Field ID: MW 3
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-03
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Analyzed: 07-20-06 15:11
Analyst: KMC

Matrix: Aqueous
Container: 40 mL VOA Vial
Preservation: HCl/Cool
QC Batch ID: VM5-3396-W
Instrument ID: MS-5 HP 6890
Sample Volume: 25 mL
Dilution Factor: 1

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	trans-1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl tert-butyl Ether (MTBE)	4		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	cis-1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	10		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	2		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	meta-Xylene and para-Xylene	BRL		ug/L	0.5
95-47-6	ortho-Xylene	BRL		ug/L	0.5

EPA Method 8260B (Continued) Volatile Organics by GC/MS

Field ID: MW 3
Project: 120 Merrimac SU060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-03
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Analyzed: 07-20-06 15:11
Analyst: KMC

Matrix: Aqueous
Container: 40 mL VOA Vial
Preservation: HCl/Cool
QC Batch ID: VM5-3396-W
Instrument ID: MS-5 HP 6890
Sample Volume: 25 mL
Dilution Factor: 1

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromofom	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	n-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	tert-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	sec-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	19		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	n-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	104 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	9.7	97 %	70 - 130 %
Toluene-d ₈	10	9.8	98 %	70 - 130 %
4-Bromofluorobenzene	10	10	100 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

EPA Method 8260B Volatile Organics by GC/MS

Field ID: MW 4
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-04
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Analyzed: 07-20-06 15:51
Analyst: KMC

Matrix: Aqueous
Container: 40 mL VOA Vial
Preservation: HCl/Cool
QC Batch ID: VM5-3396-W
Instrument ID: MS-5 HP 6890
Sample Volume: 25 mL
Dilution Factor: 1

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	trans-1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl tert-butyl Ether (MTBE)	0.6		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	cis-1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	meta-Xylene and para-Xylene	BRL		ug/L	0.5
95-47-6	ortho-Xylene	BRL		ug/L	0.5

EPA Method 8260B (Continued) Volatile Organics by GC/MS

Field ID: MW 4
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-04
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Analyzed: 07-20-06 15:51
Analyst: KMC

Matrix: Aqueous
Container: 40 mL VOA Vial
Preservation: HCl/Cool
QC Batch ID: VM5-3396-W
Instrument ID: MS-5 HP 6890
Sample Volume: 25 mL
Dilution Factor: 1

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	n-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	tert-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	sec-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	n-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	1		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	103 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	10	102 %	70 - 130 %
Toluene-d ₈	10	9.7	97 %	70 - 130 %
4-Bromofluorobenzene	10	9.8	98 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: B2, 1'-3'
Project: 120 Merrimac St/60501
Client: Simmons Environmental Services, Inc.

Laboratory ID: 96856-05
Sampled: 07-13-06 00:00
Received: 07-14-06 19:15
Extracted: 07-18-06 09:00
Analyzed (AL): 07-19-06 23:49
Analyzed (AR): 07-20-06 00:33
Analyst: NS

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool

QC Batch ID: EP-2355-M
Instrument ID: GC-9 Agilent 6890
Sample Weight: 16 g
Final Volume: 1 mL
% Solids: 87
Aliphatic Dilution Factor: 1
Aromatic Dilution Factor: 1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		mg/Kg	33
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	BRL		mg/Kg	33
n-C11 to n-C22 Aromatic Hydrocarbons ^{†‡}	BRL		mg/Kg	33
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	BRL		mg/Kg	33

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		mg/Kg	0.55
91-57-6	2-Methylnaphthalene	BRL		mg/Kg	0.55
85-01-8	Phenanthrene	BRL		mg/Kg	0.55
83-32-9	Acenaphthene	BRL		mg/Kg	0.55
208-96-8	Acenaphthylene	BRL		mg/Kg	0.55
86-73-7	Fluorene	BRL		mg/Kg	0.55
120-12-7	Anthracene	BRL		mg/Kg	0.55
206-44-0	Fluoranthene	BRL		mg/Kg	0.55
129-00-0	Pyrene	BRL		mg/Kg	0.55
56-55-3	Benzo[a]anthracene	BRL		mg/Kg	0.55
218-01-9	Chrysene	BRL		mg/Kg	0.55
205-99-2	Benzo[b]fluoranthene	BRL		mg/Kg	0.55
207-08-9	Benzo[k]fluoranthene	BRL		mg/Kg	0.55
50-32-8	Benzo[a]pyrene	BRL		mg/Kg	0.55
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		mg/Kg	0.55
53-70-3	Dibenzo[a,h]anthracene	BRL		mg/Kg	0.55
191-24-2	Benzo[g,h,i]perylene	BRL		mg/Kg	0.55

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	2.9	2.7	91 %	40 - 140 %
2-Bromonaphthalene	2.9	2.7	91 %	40 - 140 %
Extraction: Chloro-octadecane	2.9	2.8	96 %	40 - 140 %
ortho-Terphenyl	2.9	2.5	85 %	40 - 140 %

QA/QC Certification

- Were all QA/QC procedures required by the method followed? Yes
- Were all performance/acceptance standards for the required QA/QC procedures achieved? Yes
- Were any significant modifications made to the method, as specified in Section 11.3.1.1? No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

[†] Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

[‡] n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: B3, 1'-3'
Project: 120 Merrimac St/60501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-06
Sampled: 07-13-06 00:00
Received: 07-14-06 19:15
Extracted: 07-18-06 09:00
Analyzed (AL): 07-19-06 20:54
Analyzed (AR): 07-19-06 21:37
Analyst: NS

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool
QC Batch ID: EP-2355-M
Instrument ID: GC-9 Agilent 6890
Sample Weight: 15 g
Final Volume: 1 mL
% Solids: 80
Aliphatic Dilution Factor: 1
Aromatic Dilution Factor: 1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		mg/Kg	36
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	220		mg/Kg	36
n-C11 to n-C22 Aromatic Hydrocarbons ^{†0}	160		mg/Kg	36
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	190		mg/Kg	36

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		mg/Kg	0.61
91-57-6	2-Methylnaphthalene	BRL		mg/Kg	0.61
85-01-8	Phenanthrene	0.93		mg/Kg	0.61
83-32-9	Acenaphthene	BRL		mg/Kg	0.61
208-96-8	Acenaphthylene	BRL		mg/Kg	0.61
86-73-7	Fluorene	BRL		mg/Kg	0.61
120-12-7	Anthracene	BRL		mg/Kg	0.61
206-44-0	Fluoranthene	3.1		mg/Kg	0.61
129-00-0	Pyrene	3.1		mg/Kg	0.61
56-55-3	Benzo[a]anthracene	2.5		mg/Kg	0.61
218-01-9	Chrysene	3.3		mg/Kg	0.61
205-99-2	Benzo[b]fluoranthene	4.0		mg/Kg	0.61
207-08-9	Benzo[k]fluoranthene	1.9		mg/Kg	0.61
50-32-8	Benzo[a]pyrene	3.0		mg/Kg	0.61
193-39-5	Indeno[1,2,3-c,d]pyrene	2.5		mg/Kg	0.61
53-70-3	Dibenzo[a,h]anthracene	0.71		mg/Kg	0.61
191-24-2	Benzo[g,h,i]perylene	2.6		mg/Kg	0.61

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	3.2	2.0	63 %	40 - 140 %
2-Bromonaphthalene	3.2	2.0	63 %	40 - 140 %
Extraction: Chloro-octadecane	3.2	1.9	58 %	40 - 140 %
ortho-Terphenyl	3.2	2.0	63 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No
Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.	

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
0 n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: B4, 1'-3'
Project: 120 Merrimac St/60501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-07
Sampled: 07-13-06 00:00
Received: 07-14-06 19:15
Extracted: 07-18-06 09:00
Analyzed (AL): 07-19-06 22:21
Analyzed (AR): 07-19-06 23:05
Analyst: NS

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool
QC Batch ID: EP-2355-M
Instrument ID: GC-9 Agilent 6890
Sample Weight: 15 g
Final Volume: 1 mL
% Solids: 89
Aliphatic Dilution Factor: 1
Aromatic Dilution Factor: 1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		mg/Kg	33
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	41		mg/Kg	33
n-C11 to n-C22 Aromatic Hydrocarbons ^{†,‡}	BRL		mg/Kg	33
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	35		mg/Kg	33

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		mg/Kg	0.56
91-57-6	2-Methylnaphthalene	BRL		mg/Kg	0.56
85-01-8	Phenanthrene	BRL		mg/Kg	0.56
83-32-9	Acenaphthene	BRL		mg/Kg	0.56
208-96-8	Acenaphthylene	BRL		mg/Kg	0.56
86-73-7	Fluorene	BRL		mg/Kg	0.56
120-12-7	Anthracene	BRL		mg/Kg	0.56
206-44-0	Fluoranthene	0.82		mg/Kg	0.56
129-00-0	Pyrene	0.69		mg/Kg	0.56
56-55-3	Benzo[a]anthracene	BRL		mg/Kg	0.56
218-01-9	Chrysene	0.60		mg/Kg	0.56
205-99-2	Benzo[b]fluoranthene	BRL		mg/Kg	0.56
207-08-9	Benzo[k]fluoranthene	BRL		mg/Kg	0.56
50-32-8	Benzo[a]pyrene	BRL		mg/Kg	0.56
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		mg/Kg	0.56
53-70-3	Dibenzo[a,h]anthracene	BRL		mg/Kg	0.56
191-24-2	Benzo[g,h,i]perylene	BRL		mg/Kg	0.56

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	3.0	2.4	82 %	40 - 140 %
2-Bromonaphthalene	3.0	2.5	83 %	40 - 140 %
Extraction: Chloro-octadecane	3.0	2.5	85 %	40 - 140 %
ortho-Terphenyl	3.0	2.2	74 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed? Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved? Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1? No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
‡ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: **B5, 1'-3'**
Project: **120 Merrimac St/60501**
Client: **Simmons Environmental Services, Inc.**
Laboratory ID: **96856-08**
Sampled: **07-13-06 00:00**
Received: **07-14-06 19:15**
Extracted: **07-18-06 09:00**
Analyzed (AL): **07-19-06 19:26**
Analyzed (AR): **07-19-06 20:09**
Analyst: **NS**

Matrix: **Soil**
Container: **500 mL Glass**
Preservation: **Cool**
QC Batch ID: **EP-2355-M**
Instrument ID: **GC-9 Agilent 6890**
Sample Weight: **16 g**
Final Volume: **1 mL**
% Solids: **95**
Aliphatic Dilution Factor: **1**
Aromatic Dilution Factor: **1**

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		mg/Kg	31
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	42		mg/Kg	31
n-C11 to n-C22 Aromatic Hydrocarbons ^{†0}	100		mg/Kg	31
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	130		mg/Kg	31

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		mg/Kg	0.51
91-57-6	2-Methylnaphthalene	BRL		mg/Kg	0.51
85-01-8	Phenanthrene	1.4		mg/Kg	0.51
83-32-9	Acenaphthene	BRL		mg/Kg	0.51
208-96-8	Acenaphthylene	BRL		mg/Kg	0.51
86-73-7	Fluorene	BRL		mg/Kg	0.51
120-12-7	Anthracene	0.53		mg/Kg	0.51
206-44-0	Fluoranthene	3.5		mg/Kg	0.51
129-00-0	Pyrene	3.4		mg/Kg	0.51
56-55-3	Benzo[a]anthracene	2.3		mg/Kg	0.51
218-01-9	Chrysene	2.4		mg/Kg	0.51
205-99-2	Benzo[b]fluoranthene	3.1		mg/Kg	0.51
207-08-9	Benzo[k]fluoranthene	1.6		mg/Kg	0.51
50-32-8	Benzo[a]pyrene	2.7		mg/Kg	0.51
193-39-5	Indeno[1,2,3-c,d]pyrene	2.0		mg/Kg	0.51
53-70-3	Dibenzo[a,h]anthracene	0.51		mg/Kg	0.51
191-24-2	Benzo[g,h,i]perylene	2.0		mg/Kg	0.51

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	2.7	2.3	84 %	40 - 140 %
2-Bromonaphthalene	2.7	2.3	83 %	40 - 140 %
Extraction: Chloro-octadecane	2.7	2.5	90 %	40 - 140 %
ortho -Terphenyl	2.7	2.3	83 %	40 - 140 %

QA/QC Certification	
1. Were all QA/QC procedures required by the method followed?	Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved?	Yes
3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?	No
Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.	

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique. Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

0 n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: MW 1
Project: 120 Merrimac St/60501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-12
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Extracted: 07-19-06 10:00
Analyzed (AL): 07-20-06 17:44
Analyzed (AR): 07-20-06 18:28
Analyst: NS

Matrix: Aqueous
Container: 1 L Amber Glass
Preservation: H2SO4/Cool
QC Batch ID: EP-1769-F
Instrument ID: GC-9 Agilent 6890
Sample Volume: 1000 mL
Final Volume: 1 mL
Aliphatic Dilution Factor: 1
Aromatic Dilution Factor: 1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		ug/L	500
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	BRL		ug/L	500
n-C11 to n-C22 Aromatic Hydrocarbons ^{†,‡}	BRL		ug/L	150
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	BRL		ug/L	150

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	5
91-57-6	2-Methylnaphthalene	BRL		ug/L	5
85-01-8	Phenanthrene	BRL		ug/L	5
83-32-9	Acenaphthene	BRL		ug/L	5
208-96-8	Acenaphthylene	BRL		ug/L	5
86-73-7	Fluorene	BRL		ug/L	5
120-12-7	Anthracene	BRL		ug/L	5
206-44-0	Fluoranthene	BRL		ug/L	5
129-00-0	Pyrene	BRL		ug/L	5
56-55-3	Benzo[a]anthracene	BRL		ug/L	5
218-01-9	Chrysene	BRL		ug/L	5
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	5
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	5
50-32-8	Benzo[a]pyrene	BRL		ug/L	5
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	5
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	5
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	40	37	93 %	40 - 140 %
2-Bromonaphthalene	40	29	73 %	40 - 140 %
Extraction: Chloro-octadecane	40	41	103 %	40 - 140 %
ortho-Terphenyl	40	33	82 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed? Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved? Yes
3. Were any significant modifications made to the method, as specified in Section 11.3? No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by separatory funnel technique.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
[†] Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
[‡] n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: MW 2
Project: 120 Merrimac St/60501
Client: Simmons Environmental Services, Inc.

Laboratory ID: 96856-13
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Extracted: 07-19-06 10:00
Analyzed (AL): 07-20-06 19:13
Analyzed (AR): 07-20-06 19:57
Analyst: NS

Matrix: Aqueous
Container: 1 L Amber Glass
Preservation: H2SO4/Cool

QC Batch ID: EP-1769-F
Instrument ID: GC-9 Agilent 6890
Sample Volume: 1000 mL
Final Volume: 1 mL
Aliphatic Dilution Factor: 1
Aromatic Dilution Factor: 1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons †	BRL		ug/L	500
n-C19 to n-C36 Aliphatic Hydrocarbons †	BRL		ug/L	500
n-C11 to n-C22 Aromatic Hydrocarbons †°	BRL		ug/L	150
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons †	BRL		ug/L	150

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	5
91-57-6	2-Methylnaphthalene	BRL		ug/L	5
85-01-8	Phenanthrene	BRL		ug/L	5
83-32-9	Acenaphthene	BRL		ug/L	5
208-96-8	Acenaphthylene	BRL		ug/L	5
86-73-7	Fluorene	BRL		ug/L	5
120-12-7	Anthracene	BRL		ug/L	5
206-44-0	Fluoranthene	BRL		ug/L	5
129-00-0	Pyrene	BRL		ug/L	5
56-55-3	Benzo[a]anthracene	BRL		ug/L	5
218-01-9	Chrysene	BRL		ug/L	5
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	5
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	5
50-32-8	Benzo[a]pyrene	BRL		ug/L	5
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	5
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	5
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	40	36	90 %	40 - 140 %
2-Bromonaphthalene	40	33	82 %	40 - 140 %
Extraction: Chloro-octadecane	40	40	99 %	40 - 140 %
ortho -Terphenyl	40	34	84 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed? Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved? Yes
3. Were any significant modifications made to the method, as specified in Section 11.3? No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by separatory funnel technique.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
° n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: MW 3
Project: 120 Merrimac St/60501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-14
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Extracted: 07-19-06 10:00
Analyzed (AL): 07-20-06 21:25
Analyzed (AR): 07-20-06 22:09
Analyst: NS

Matrix: Aqueous
Container: 1 L Amber Glass
Preservation: H2SO4/Cool
QC Batch ID: EP-1769-F
Instrument ID: GC-9 Agilent 6890
Sample Volume: 1000 mL
Final Volume: 1 mL
Aliphatic Dilution Factor: 1
Aromatic Dilution Factor: 1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		ug/L	500
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	BRL		ug/L	500
n-C11 to n-C22 Aromatic Hydrocarbons ^{†‡}	160		ug/L	150
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	170		ug/L	150

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	5
91-57-6	2-Methylnaphthalene	BRL		ug/L	5
85-01-8	Phenanthrene	BRL		ug/L	5
83-32-9	Acenaphthene	BRL		ug/L	5
208-96-8	Acenaphthylene	BRL		ug/L	5
86-73-7	Fluorene	BRL		ug/L	5
120-12-7	Anthracene	BRL		ug/L	5
206-44-0	Fluoranthene	BRL		ug/L	5
129-00-0	Pyrene	BRL		ug/L	5
56-55-3	Benzo[a]anthracene	BRL		ug/L	5
218-01-9	Chrysene	BRL		ug/L	5
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	5
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	5
50-32-8	Benzo[a]pyrene	BRL		ug/L	5
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	5
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	5
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	40	35	88 %	40 - 140 %
2-Bromonaphthalene	40	30	75 %	40 - 140 %
Extraction: Chloro-octadecane	40	40	99 %	40 - 140 %
ortho-Terphenyl	40	34	84 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed? Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved? Yes
3. Were any significant modifications made to the method, as specified in Section 11.3? No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by separatory funnel technique.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

[†] Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

[‡] n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: MW 4
Project: 120 Merrimac St/60501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-15
Sampled: 07-14-06 00:00
Received: 07-14-06 19:15
Extracted: 07-19-06 10:00
Analyzed (AL): 07-20-06 22:53
Analyzed (AR): 07-20-06 23:37
Analyst: NS

Matrix: Aqueous
Container: 1 L Amber Glass
Preservation: H2SO4/Cool
QC Batch ID: EP-1769-F
Instrument ID: GC-9 Agilent 6890
Sample Volume: 1000 mL
Final Volume: 1 mL
Aliphatic Dilution Factor: 1
Aromatic Dilution Factor: 1

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		ug/L	500
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	BRL		ug/L	500
n-C11 to n-C22 Aromatic Hydrocarbons ^{†0}	BRL		ug/L	150
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	BRL		ug/L	150

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	5
91-57-6	2-Methylnaphthalene	BRL		ug/L	5
85-01-8	Phenanthrene	BRL		ug/L	5
83-32-9	Acenaphthene	BRL		ug/L	5
208-96-8	Acenaphthylene	BRL		ug/L	5
86-73-7	Fluorene	BRL		ug/L	5
120-12-7	Anthracene	BRL		ug/L	5
206-44-0	Fluoranthene	BRL		ug/L	5
129-00-0	Pyrene	BRL		ug/L	5
56-55-3	Benzo[a]anthracene	BRL		ug/L	5
218-01-9	Chrysene	BRL		ug/L	5
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	5
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	5
50-32-8	Benzo[a]pyrene	BRL		ug/L	5
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	5
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	5
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	40	35	88 %	40 - 140 %
2-Bromonaphthalene	40	33	81 %	40 - 140 %
Extraction: Chloro-octadecane	40	40	101 %	40 - 140 %
ortho -Terphenyl	40	35	86 %	40 - 140 %

QA/QC Certification

1. Were all QA/QC procedures required by the method followed? Yes
2. Were all performance/acceptance standards for the required QA/QC procedures achieved? Yes
3. Were any significant modifications made to the method, as specified in Section 11.3? No

Method non-conformances indicated above are detailed below on this data report, or in the accompanying project narrative and project quality control report. Release of this data is authorized by the accompanying signed project cover letter. The accompanying cover letter, project narrative and quality control report are considered part of this data report.

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by separatory funnel technique.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
0 n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: B2, 1'-3'
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-05
Sampled: 07-13-06 00:00
Received: 07-14-06 19:15

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool
Percent Solids: 87

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0913-S	EPA 3050B	07-17-06 15:31	0.503 g	ICP-2 PE 3300	MWR
EPA 7471A ²	MP-1996-S	EPA 7471A	07-18-06 10:00	0.6 g	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	13		mg/Kg	3.4	1	07-17-06 18:56	EPA 6010B ¹
7440-43-9	Cadmium, Total	0.89		mg/Kg	0.57	1	07-17-06 18:56	EPA 6010B ¹
7440-47-3	Chromium, Total	22		mg/Kg	11	1	07-17-06 18:55	EPA 6010B ¹
7439-92-1	Lead, Total	170		mg/Kg	11	1	07-17-06 18:56	EPA 6010B ¹
7439-97-6	Mercury, Total	0.68		mg/Kg	0.038	1	07-18-06 13:01	EPA 7471A ²

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: B3, 1'-3'
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool
Percent Solids: 80

Laboratory ID: 96856-06
Sampled: 07-13-06 00:00
Received: 07-14-06 19:15

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0913-S	EPA 3050B	07-17-06 15:31	0.516 g	ICP-AE 3300	MWR
EPA 7471A ²	MP-1996-S	EPA 7471A	07-18-06 10:00	0.6 g	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	11		mg/Kg	3.6	1	07-17-06 18:58	EPA 6010B ¹
7440-43-9	Cadmium, Total	2.9		mg/Kg	0.6	1	07-17-06 18:58	EPA 6010B ¹
7440-47-3	Chromium, Total	35		mg/Kg	12	1	07-17-06 18:58	EPA 6010B ¹
7439-92-1	Lead, Total	940		mg/Kg	12	1	07-17-06 18:58	EPA 6010B ¹
7439-97-6	Mercury, Total	1.0		mg/Kg	0.042	1	07-18-06 13:04	EPA 7471A ²

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **B4, 1'-3'**
 Project: **120 Merrimac St/060501**
 Client: **Simmons Environmental Services, Inc.**
 Laboratory ID: **96856-07**
 Sampled: **07-13-06 00:00**
 Received: **07-14-06 19:15**

Matrix: **Soil**
 Container: **500 mL Glass**
 Preservation: **Cool**
 Percent Solids: **89**

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Weight</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-0913-S	EPA 3050B	07-17-06 15:31	0.495 g	ICP-2 PE J300	MWR
EPA 7471A ²	MP-1996-S	EPA 7471A	07-18-06 10:00	0.6 g	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	17		mg/Kg	3.4	1	07-17-06 19:01	EPA 6010B ¹
7440-43-9	Cadmium, Total	1.2		mg/Kg	0.57	1	07-17-06 19:01	EPA 6010B ¹
7440-47-3	Chromium, Total	19		mg/Kg	11	1	07-17-06 19:01	EPA 6010B ¹
7439-92-1	Lead, Total	1,100		mg/Kg	11	1	07-17-06 19:01	EPA 6010B ¹
7439-97-6	Mercury, Total	4.7		mg/Kg	0.075	2	07-18-06 14:12	EPA 7471A ²

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **B5, 1'-3'**
Project: **120 Merrimac St/060501**
Client: **Simmons Environmental Services, Inc.**

Matrix: **Soil**
Container: **500 mL Glass**
Preservation: **Cool**

Laboratory ID: **96856-08**
Sampled: **07-13-06 00:00**
Received: **07-14-06 19:15**

Percent Solids: **95**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0913-S	EPA 3050B	07-17-06 15:31	0.502 g	ICP-2 PE 3100	MWR
EPA 7471A ²	MP-1996-S	EPA 7471A	07-18-06 10:00	0.6 g	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	12		mg/Kg	3.2	1	07-17-06 19:05	EPA 6010B ¹
7440-43-9	Cadmium, Total	BRL		mg/Kg	0.53	1	07-17-06 19:05	EPA 6010B ¹
7440-47-3	Chromium, Total	21		mg/Kg	11	1	07-17-06 19:04	EPA 6010B ¹
7439-92-1	Lead, Total	19		mg/Kg	11	1	07-17-06 19:05	EPA 6010B ¹
7439-97-6	Mercury, Total	BRL		mg/Kg	0.035	1	07-18-06 13:11	EPA 7471A ²

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: SS 1
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.

Matrix: Soil
Container: 250 mL Glass
Preservation: Cool
Percent Solids: 84

Laboratory ID: 96856-09
Sampled: 07-13-06 00:00
Received: 07-14-06 19:15

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	M8-0913-S	EPA 3050B	07-17-06 15:31	0.512 g	ICP: PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	14		mg/Kg	3.5	1	07-17-06 19:13	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: SS 2
Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.
Laboratory ID: 96856-10
Sampled: 07-13-06 00:00
Received: 07-14-06 19:15

Matrix: Soil
Container: 250 mL Glass
Preservation: Cool
Percent Solids: 91

Analysis Method: QC Batch ID: Prep Method: Prepared: Sample Weight: Instrument ID: Analyst:
EPA 6010B¹ MB-0913-S EPA 3050B 07-17-06 15:31 0.501 g ICP-2 PE 3300 MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	9.6		mg/Kg	3.3	1	07-17-06 19:17	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: SS 3
 Project: 120 Merrimac St/060501
 Client: Simmons Environmental Services, Inc.
 Laboratory ID: 96856-11
 Sampled: 07-13-06 00:00
 Received: 07-14-06 19:15

Matrix: Soil
 Container: 250 mL Glass
 Preservation: Cool
 Percent Solids: 60

Analysis Method: QC Batch ID: Prep Method: Prepared: Sample Weight: Instrument ID: Analyst:
 EPA 6010B¹ MB-0913-S EPA 3050B 07-17-06 15:31 0.49 g ICP-2 PE 3300 MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic, Total	8.0		mg/Kg	5.1	1	07-17-06 19:20	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 DF Dilution Factor.

Project Narrative

Project: 120 Merrimac St/060501
Client: Simmons Environmental Services, Inc.

Lab ID: 96856
Received: 07-14-06 19:15

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. EPA 6010B Note: Samples 96856-05 through -11. Samples were analyzed for selected target analytes, as requested by client.

GROUNDWATER ANALYTICAL

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www.groundwateranalytical.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

No 210470

Project Name: <u>WELLSIDE ST</u> Address: <u>120 WELLSIDE ST</u> City/State/Zip: <u>SAUSBURY, MA 01956</u> Telephone: <u>978-463-6669</u>		TURNAROUND <input checked="" type="checkbox"/> STANDARD (30 Business Days) & OHS <input type="checkbox"/> PRIORITY (9 Business Days) <input type="checkbox"/> RUSH (24 HRS) (Rush requires Rush Authorization Number) <input checked="" type="checkbox"/> Please Email to: <u>info@groundwateranalytical.com</u> <input type="checkbox"/> Please FAX to: _____ BILLING <input checked="" type="checkbox"/> Purchase Order No.: <u>060501</u> <input type="checkbox"/> Third Party Billing <input type="checkbox"/> GWA Quote: _____	
Project Manager: <u>WILLIAM JIMMUS</u> Project Number: <u>060501</u> Sample Name: <u>STEPHAN LAMOLY</u>		ANALYSIS REQUEST Method: <input type="checkbox"/> NO BOD <input type="checkbox"/> BOD <input type="checkbox"/> TOC <input type="checkbox"/> TSS <input type="checkbox"/> NH3-N <input type="checkbox"/> NO2-N <input type="checkbox"/> NO3-N <input type="checkbox"/> NH4-N <input type="checkbox"/> PO4-P <input type="checkbox"/> CO3-CALC <input type="checkbox"/> HCO3-CALC <input type="checkbox"/> F <input type="checkbox"/> CL <input type="checkbox"/> BR <input type="checkbox"/> SI <input type="checkbox"/> AL <input type="checkbox"/> MN <input type="checkbox"/> Zn <input type="checkbox"/> Cu <input type="checkbox"/> Pb <input type="checkbox"/> Cd <input type="checkbox"/> Cr <input type="checkbox"/> Ni <input type="checkbox"/> V <input type="checkbox"/> Fe <input type="checkbox"/> Mn <input type="checkbox"/> Zn <input type="checkbox"/> Cu <input type="checkbox"/> Pb <input type="checkbox"/> 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Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

Quality Control Report Laboratory Control Samples

Category: MA DEP EPH Method
QC Batch ID: EP-1769-F
Matrix: Aqueous
Units: ug/L

LCS
Instrument ID: GC-9 Agilent 6890
Extracted: 07-19-06 10:00
Analyzed (AL): 07-20-06 14:48
Analyzed (AR): 07-20-06 15:32
Analyst: NS

LCSD
Instrument ID: GC-9 Agilent 6890
Extracted: 07-19-06 10:00
Analyzed (AL): 07-20-06 16:16
Analyzed (AR): 07-20-06 17:00
Analyst: NS

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
111-84-2	n-Nonane (C ₉)	50	24	47 %	50	25	50 %	5 %	30 - 140 %	25%
124-18-5	n-Decane (C ₁₀)	50	27	53 %	50	28	56 %	5 %	40 - 140 %	25%
112-40-3	n-Dodecane (C ₁₂)	50	27	54 %	50	28	57 %	6 %	40 - 140 %	25%
629-59-4	n-Tetradecane (C ₁₄)	50	33	65 %	50	34	68 %	4 %	40 - 140 %	25%
544-76-3	n-Hexadecane (C ₁₆)	50	37	73 %	50	39	77 %	5 %	40 - 140 %	25%
593-45-3	n-Octadecane (C ₁₈)	50	41	83 %	50	44	88 %	6 %	40 - 140 %	25%
n/a	n-C9 to n-C18 Group	300	190	63 %	300	200	66 %	5 %	40 - 140 %	25%
629-92-5	n-Nonadecane (C ₁₉)	50	41	82 %	50	43	86 %	5 %	40 - 140 %	25%
112-95-8	n-Eicosane (C ₂₀)	50	41	81 %	50	43	86 %	6 %	40 - 140 %	25%
629-97-0	n-Docosane (C ₂₂)	50	40	81 %	50	43	86 %	6 %	40 - 140 %	25%
646-31-1	n-Tetracosane (C ₂₄)	50	37	75 %	50	40	80 %	7 %	40 - 140 %	25%
630-01-3	n-Hexacosane (C ₂₆)	50	38	77 %	50	41	83 %	7 %	40 - 140 %	25%
630-02-4	n-Octacosane (C ₂₈)	50	38	76 %	50	41	82 %	8 %	40 - 140 %	25%
638-68-6	n-Triacontane (C ₃₀)	50	38	76 %	50	41	82 %	7 %	40 - 140 %	25%
630-06-8	n-Hexatriacontane (C ₃₆)	50	35	71 %	50	38	75 %	6 %	40 - 140 %	25%
n/a	n-C19 to n-C36 Group	400	310	77 %	400	330	82 %	7 %	40 - 140 %	25%
91-20-3	Naphthalene	50	27	54 %	50	28	57 %	4 %	40 - 140 %	25%
91-57-6	2-Methylnaphthalene	50	28	56 %	50	31	61 %	9 %	40 - 140 %	25%
208-96-8	Acenaphthylene	50	29	58 %	50	32	64 %	11 %	40 - 140 %	25%
83-32-9	Acenaphthene	50	31	62 %	50	34	68 %	11 %	40 - 140 %	25%
86-73-7	Fluorene	50	31	61 %	50	35	70 %	13 %	40 - 140 %	25%
85-01-8	Phenanthrene	50	30	61 %	50	36	72 %	17 %	40 - 140 %	25%
120-12-7	Anthracene	50	38	77 %	50	45	90 %	15 %	40 - 140 %	25%
206-44-0	Fluoranthene	50	36	73 %	50	43	87 %	18 %	40 - 140 %	25%
129-00-0	Pyrene	50	36	73 %	50	43	87 %	17 %	40 - 140 %	25%
56-55-3	Benzo[a]anthracene	50	35	70 %	50	41	82 %	16 %	40 - 140 %	25%
218-01-9	Chrysene	50	40	80 %	50	46	93 %	15 %	40 - 140 %	25%
205-99-2	Benzo[b]fluoranthene	50	34	67 %	50	41	81 %	19 %	40 - 140 %	25%
207-08-9	Benzo[k]fluoranthene	50	40	80 %	50	47	93 %	16 %	40 - 140 %	25%
50-32-8	Benzo[a]pyrene	50	37	73 %	50	44	88 %	18 %	40 - 140 %	25%
193-39-5	Indeno[1,2,3-c,d]pyrene	50	32	64 %	50	40	80 %	23 %	40 - 140 %	25%
53-70-3	Dibenzo[a,h]anthracene	50	37	74 %	50	45	90 %	20 %	40 - 140 %	25%
191-24-2	Benzo[g,h,i]perylene	50	31	63 %	50	40	80 %	24 %	40 - 140 %	25%
n/a	PAH Group	850	570	67 %	850	670	79 %	16 %	40 - 140 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	40	32	79 %	40	34	84 %	40 - 140 %
2-Bromonaphthalene	40	27	68 %	40	31	77 %	40 - 140 %
Extraction: Chloro-octadecane	40	35	88 %	40	38	95 %	40 - 140 %
ortho-Terphenyl	40	28	70 %	40	33	82 %	40 - 140 %

Fractionation Breakthrough Evaluation						QC Limits
91-20-3	Naphthalene	LCS	0 %	LCSD	0 %	5%
91-57-6	2-Methylnaphthalene	LCS	0 %	LCSD	1 %	5%

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by separatory funnel technique.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.
The LCS and LCSD are prepared from separate source standards than those used for calibration.

Quality Control Report Method Blank

Category: MA DEP EPH
QC Batch ID: EP-1769-F
Matrix: Aqueous

Instrument ID: GC-9 Agilent 6890
Extracted: 07-19-06 10:00
Analyzed (AL): 07-20-06 13:20
Analyzed (AR): 07-20-06 14:04
Analyst: NS

EPH Ranges	Concentration	Notes	Units	Reporting Limit	
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		ug/L	500	
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	BRL		ug/L	500	
n-C11 to n-C22 Aromatic Hydrocarbons ^{†,o}	BRL		ug/L	150	
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	BRL		ug/L	150	
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	5
91-57-6	2-Methylnaphthalene	BRL		ug/L	5
85-01-8	Phenanthrene	BRL		ug/L	5
83-32-9	Acenaphthene	BRL		ug/L	5
208-96-8	Acenaphthylene	BRL		ug/L	5
86-73-7	Fluorene	BRL		ug/L	5
120-12-7	Anthracene	BRL		ug/L	5
206-44-0	Fluoranthene	BRL		ug/L	5
129-00-0	Pyrene	BRL		ug/L	5
56-55-3	Benzo[a]anthracene	BRL		ug/L	5
218-01-9	Chrysene	BRL		ug/L	5
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	5
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	5
50-32-8	Benzo[a]pyrene	BRL		ug/L	5
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	5
53-70-3	Dibenzo[a,h]anthracene	BRL		ug/L	5
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	5
QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
Fractionation:	2-Fluorobiphenyl	40	35	87 %	40 - 140 %
	2-Bromonaphthalene	40	23	59 %	40 - 140 %
Extraction:	Chloro-octadecane	40	41	104 %	40 - 140 %
	ortho-Terphenyl	40	30	76 %	40 - 140 %

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004)
Sample extraction performed by separatory funnel technique.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
† Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.
◊ n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Quality Control Report Laboratory Control Samples

Category: MA DEP EPH Method
QC Batch ID: EP-2355-M
Matrix: Soil
Units: mg/Kg

LCS
Instrument ID: GC-9 Agilent 6890
Extracted: 07-18-06 09:00
Analyzed (AL): 07-18-06 20:24
Analyzed (AR): 07-18-06 21:08
Analyst: NS

LCSD
Instrument ID: GC-9 Agilent 6890
Extracted: 07-18-06 09:00
Analyzed (AL): 07-18-06 21:52
Analyzed (AR): 07-18-06 22:36
Analyst: NS

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
111-84-2	n-Nonane (C ₉)	3.3	2.0	60 %	3.3	1.7	51 %	16 %	30 - 140 %	25%
124-18-5	n-Decane (C ₁₀)	3.3	2.2	67 %	3.3	1.9	58 %	15 %	40 - 140 %	25%
112-40-3	n-Dodecane (C ₁₂)	3.3	2.2	67 %	3.3	1.9	58 %	15 %	40 - 140 %	25%
629-59-4	n-Tetradecane (C ₁₄)	3.3	2.6	77 %	3.3	2.2	68 %	13 %	40 - 140 %	25%
544-76-3	n-Hexadecane (C ₁₆)	3.3	2.8	85 %	3.3	2.5	76 %	11 %	40 - 140 %	25%
593-45-3	n-Octadecane (C ₁₈)	3.3	2.8	85 %	3.3	2.6	78 %	9 %	40 - 140 %	25%
n/a	n-C9 to n-C18 Group	20	15	74 %	20	13	65 %	13 %	40 - 140 %	25%
629-92-5	n-Nonadecane (C ₁₉)	3.3	2.7	81 %	3.3	2.5	75 %	8 %	40 - 140 %	25%
112-95-8	n-Eicosane (C ₂₀)	3.3	2.7	82 %	3.3	2.4	73 %	12 %	40 - 140 %	25%
629-97-0	n-Docosane (C ₂₂)	3.3	2.7	81 %	3.3	2.4	73 %	11 %	40 - 140 %	25%
646-31-1	n-Tetracosane (C ₂₄)	3.3	2.6	78 %	3.3	2.4	71 %	9 %	40 - 140 %	25%
630-01-3	n-Hexacosane (C ₂₆)	3.3	2.7	81 %	3.3	2.4	73 %	9 %	40 - 140 %	25%
630-02-4	n-Octacosane (C ₂₈)	3.3	2.6	78 %	3.3	2.4	72 %	9 %	40 - 140 %	25%
638-68-6	n-Triacontane (C ₃₀)	3.3	2.5	76 %	3.3	2.3	70 %	9 %	40 - 140 %	25%
630-06-8	n-Hexatriacontane (C ₃₆)	3.3	2.2	67 %	3.3	2.3	70 %	4 %	40 - 140 %	25%
n/a	n-C19 to n-C36 Group	26	21	78 %	26	19	72 %	8 %	40 - 140 %	25%
91-20-3	Naphthalene	3.3	2.5	77 %	3.3	2.4	74 %	4 %	40 - 140 %	25%
91-57-6	2-Methylnaphthalene	3.3	2.7	82 %	3.3	2.6	78 %	6 %	40 - 140 %	25%
208-96-8	Acenaphthylene	3.3	2.7	81 %	3.3	2.6	78 %	5 %	40 - 140 %	25%
83-32-9	Acenaphthene	3.3	2.8	85 %	3.3	2.8	85 %	0 %	40 - 140 %	25%
86-73-7	Fluorene	3.3	2.8	84 %	3.3	2.6	80 %	5 %	40 - 140 %	25%
85-01-8	Phenanthrene	3.3	2.8	85 %	3.3	2.7	80 %	5 %	40 - 140 %	25%
120-12-7	Anthracene	3.3	3.3	101 %	3.3	3.2	97 %	5 %	40 - 140 %	25%
206-44-0	Fluoranthene	3.3	3.0	90 %	3.3	2.8	86 %	5 %	40 - 140 %	25%
129-00-0	Pyrene	3.3	2.9	89 %	3.3	2.8	85 %	5 %	40 - 140 %	25%
56-55-3	Benzo[a]anthracene	3.3	2.7	81 %	3.3	2.5	77 %	6 %	40 - 140 %	25%
218-01-9	Chrysene	3.3	2.9	89 %	3.3	2.8	85 %	5 %	40 - 140 %	25%
205-99-2	Benzo[b]fluoranthene	3.3	2.5	75 %	3.3	2.3	71 %	6 %	40 - 140 %	25%
207-08-9	Benzo[k]fluoranthene	3.3	3.0	90 %	3.3	2.8	85 %	6 %	40 - 140 %	25%
50-32-8	Benzo[a]pyrene	3.3	2.8	83 %	3.3	2.6	78 %	6 %	40 - 140 %	25%
193-39-5	Indeno[1,2,3-c,d]pyrene	3.3	2.8	84 %	3.3	2.6	78 %	7 %	40 - 140 %	25%
53-70-3	Dibenzo[a,h]anthracene	3.3	3.0	92 %	3.3	2.9	88 %	4 %	40 - 140 %	25%
191-24-2	Benzo[g,h,i]perylene	3.3	2.9	87 %	3.3	2.7	83 %	5 %	40 - 140 %	25%
n/a	PAH Group	56	48	86 %	56	46	82 %	5 %	40 - 140 %	25%

QC Surrogate Compound		Spiked	Measured	Recovery	Spiked	Measured	Recovery	QC Limits	
Fractionation:	2-Fluorobiphenyl	2.7	2.6	96 %	2.7	2.5	93 %	40 - 140 %	
	2-Bromonaphthalene	2.7	2.4	89 %	2.7	2.4	89 %	40 - 140 %	
Extraction:	Chloro-octadecane	2.7	2.3	85 %	2.7	2.1	78 %	40 - 140 %	
	ortho-Terphenyl	2.7	2.4	89 %	2.7	2.3	85 %	40 - 140 %	

Fractionation Breakthrough Evaluation							QC Limits	
91-20-3	Naphthalene	LCS	0 %	LCSD	0 %		5 %	
91-57-6	2-Methylnaphthalene	LCS	0 %	LCSD	0 %		5 %	

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Method modified by use of microwave accelerated solvent extraction technique.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,
or alternatively based upon the historical average recovery plus or minus three standard deviation units.
The LCS and LCSD are prepared from separate source standards than those used for calibration.

Quality Control Report Method Blank

Category: MA DEP EPH
QC Batch ID: EP-2355-M
Matrix: Soil

Instrument ID: GC-9 Agilent 6890
Extracted: 07-18-06 09:00
Analyzed (AL): 07-18-06 18:56
Analyzed (AR): 07-18-06 19:40
Analyst: NS

EPH Ranges	Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 Aliphatic Hydrocarbons [†]	BRL		mg/Kg	30
n-C19 to n-C36 Aliphatic Hydrocarbons [†]	BRL		mg/Kg	30
n-C11 to n-C22 Aromatic Hydrocarbons [†] [◊]	BRL		mg/Kg	30
Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†]	BRL		mg/Kg	30

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		mg/Kg	0.50
91-57-6	2-Methylnaphthalene	BRL		mg/Kg	0.50
85-01-8	Phenanthrene	BRL		mg/Kg	0.50
83-32-9	Acenaphthene	BRL		mg/Kg	0.50
208-96-8	Acenaphthylene	BRL		mg/Kg	0.50
86-73-7	Fluorene	BRL		mg/Kg	0.50
120-12-7	Anthracene	BRL		mg/Kg	0.50
206-44-0	Fluoranthene	BRL		mg/Kg	0.50
129-00-0	Pyrene	BRL		mg/Kg	0.50
56-55-3	Benzo[a]anthracene	BRL		mg/Kg	0.50
218-01-9	Chrysene	BRL		mg/Kg	0.50
205-99-2	Benzo[b]fluoranthene	BRL		mg/Kg	0.50
207-08-9	Benzo[k]fluoranthene	BRL		mg/Kg	0.50
50-32-8	Benzo[a]pyrene	BRL		mg/Kg	0.50
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		mg/Kg	0.50
53-70-3	Dibenzo[a,h]anthracene	BRL		mg/Kg	0.50
191-24-2	Benzo[g,h,i]perylene	BRL		mg/Kg	0.50

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Fractionation: 2-Fluorobiphenyl	2.7	2.5	94 %	40 - 140 %
2-Bromonaphthalene	2.7	2.4	88 %	40 - 140 %
Extraction: Chloro-octadecane	2.7	2.5	93 %	40 - 140 %
ortho-Terphenyl	2.7	2.3	85 %	40 - 140 %

Method Reference: Method for the Determination of Extractable Petroleum Hydrocarbons, MA DEP (Revision 1.1, 2004).
Sample extraction performed by microwave accelerated solvent extraction technique.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

[†] Hydrocarbon range data excludes concentrations of any surrogate(s) and/or internal standards eluting in that range.

[◊] n-C11 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

Quality Control Report Laboratory Control Samples

Category: Metals
Matrix: Soil
Units: mg/Kg

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-0913-SL	EPA 3050B	07-17-06 15:31	07-17-06 18:41	ICP-2 PE 3300	MFP
LCS	EPA 7471A	MP-1996-SL	EPA 7471A	07-18-06 10:00	07-18-06 12:25	CVAA-1 PE FIMS	MFP
LCSD	EPA 6010B	MB-0913-SL	EPA 3050B	07-17-06 15:31	07-17-06 18:44	ICP-2 PE 3300	MFP
LCSD	EPA 7471A	MP-1996-SL	EPA 7471A	07-18-06 10:00	07-18-06 12:28	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-38-2	Arsenic	140	140	100%	140	140	98%	1 %	80-120 %	30 %	EPA 6010B
7440-43-9	Cadmium	65	60	94%	65	60	94%	0 %	82-118 %	30 %	EPA 6010B
7440-47-3	Chromium	87	83	96%	87	85	98%	1 %	78-121 %	30 %	EPA 6010B
7439-92-1	Lead	94	87	93%	94	84	90%	2 %	81-120 %	30 %	EPA 6010B
7439-97-6	Mercury	2.8	2.8	100%	2.8	2.7	96%	2 %	68-132 %	30 %	EPA 7471A

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

Quality Control Report Method Blank

Category: Metals
Matrix: Soil

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 6010B	MB-0913-SB	EPA 3050B	07-17-06 15:31	0.5 g	ICP-2 PE 3300	MFP
EPA 7471A	MP-1996-SB	EPA 7471A	07-18-06 10:00	0.6 g	CVAA-1 PE FIMS	MFP

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic	BRL		mg/Kg	3.0	1	07-17-06 18:38	EPA 6010B
7440-43-9	Cadmium	BRL		mg/Kg	0.5	1	07-17-06 18:38	EPA 6010B
7440-47-3	Chromium	BRL		mg/Kg	10	1	07-17-06 18:38	EPA 6010B
7439-92-1	Lead	BRL		mg/Kg	10	1	07-17-06 18:38	EPA 6010B
7439-97-6	Mercury	BRL		mg/Kg	0.033	1	07-18-06 12:25	EPA 7471A

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Quality Control Report Laboratory Control Samples

Category: EPA Method 8260B
QC Batch ID: VM5-3396-WL
Matrix: Aqueous
Units: ug/L

LCS
Instrument ID: MS-5 HP 6890
Analyzed: 07-20-06 10:27
Analyst: kmc

LCSD
Instrument ID: MS-5 HP 6890
Analyzed: 07-20-06 11:08
Analyst: kmc

Page: 1 of 2

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
75-71-8	Dichlorodifluoromethane	10	8	80 %	10	8.9	89 %	11 %	70 - 130 %	25%
74-87-3	Chloromethane	10	8.3	83 %	10	9.1	91 %	10 %	70 - 130 %	25%
75-01-4	Vinyl Chloride	10	8.6	86 %	10	9.2	92 %	7 %	70 - 130 %	25%
74-83-9	Bromomethane	10	8.8	88 %	10	9.6	96 %	9 %	70 - 130 %	25%
75-00-3	Chloroethane	10	8.9	89 %	10	9.4	94 %	6 %	70 - 130 %	25%
75-69-4	Trichlorofluoromethane	10	7.5	75 %	10	7.9	79 %	5 %	70 - 130 %	25%
60-29-7	Diethyl Ether	20	17	85 %	20	18	88 %	4 %	70 - 130 %	25%
75-35-4	1,1-Dichloroethene	10	8.1	81 %	10	7.8	78 %	4 %	70 - 130 %	25%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	18	90 %	20	18	92 %	2 %	70 - 130 %	25%
67-64-1	Acetone	20	17	83 %	20	16	82 %	2 %	70 - 130 %	25%
75-15-0	Carbon Disulfide	20	17	85 %	20	18	88 %	3 %	70 - 130 %	25%
75-09-2	Methylene Chloride	10	7.1	71 %	10	7	70 %	0 %	70 - 130 %	25%
156-60-5	trans-1,2-Dichloroethene	10	8.1	81 %	10	8.1	81 %	1 %	70 - 130 %	25%
1634-04-4	Methyl tert-butyl Ether (MTBE)	10	9.6	96 %	10	9.5	95 %	2 %	70 - 130 %	25%
75-34-3	1,1-Dichloroethane	10	8.3	83 %	10	8.5	85 %	2 %	70 - 130 %	25%
594-20-7	2,2-Dichloropropane	10	8.9	89 %	10	8.8	88 %	1 %	70 - 130 %	25%
156-59-2	cis-1,2-Dichloroethene	10	8.7	87 %	10	8.8	88 %	2 %	70 - 130 %	25%
78-93-3	2-Butanone (MEK)	20	18	91 %	20	19	93 %	2 %	70 - 130 %	25%
74-97-5	Bromochloromethane	10	10	100 %	10	10	100 %	0 %	70 - 130 %	25%
109-99-9	Tetrahydrofuran (THF)	20	19	96 %	20	18	89 %	8 %	70 - 130 %	25%
67-66-3	Chloroform	10	8.9	89 %	10	8.8	88 %	0 %	70 - 130 %	25%
71-55-6	1,1,1-Trichloroethane	10	8.2	82 %	10	8	80 %	3 %	70 - 130 %	25%
56-23-5	Carbon Tetrachloride	10	8.4	84 %	10	8.4	84 %	1 %	70 - 130 %	25%
563-58-6	1,1-Dichloropropene	10	8.7	87 %	10	8.8	88 %	1 %	70 - 130 %	25%
71-43-2	Benzene	10	8.5	85 %	10	8.6	86 %	1 %	70 - 130 %	25%
107-06-2	1,2-Dichloroethane	10	9.1	91 %	10	9.6	96 %	5 %	70 - 130 %	25%
79-01-6	Trichloroethene	10	8.8	88 %	10	8.7	87 %	1 %	70 - 130 %	25%
78-87-5	1,2-Dichloropropane	10	9	90 %	10	9.2	92 %	3 %	70 - 130 %	25%
74-95-3	Dibromomethane	10	9	90 %	10	9	90 %	1 %	70 - 130 %	25%
75-27-4	Bromodichloromethane	10	8.9	89 %	10	9.2	92 %	3 %	70 - 130 %	25%
123-91-1	1,4-Dioxane	200	140	71 %	200	170	87 %	20 %	70 - 130 %	25%
10061-01-5	cis-1,3-Dichloropropene	10	9	90 %	10	9	90 %	0 %	70 - 130 %	25%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	19	95 %	20	19	93 %	2 %	70 - 130 %	25%
108-88-3	Toluene	10	8.8	88 %	10	8.8	88 %	0 %	70 - 130 %	25%
10061-02-6	trans-1,3-Dichloropropene	10	9.2	92 %	10	8.8	88 %	5 %	70 - 130 %	25%
79-00-5	1,1,2-Trichloroethane	10	11	109 %	10	11	110 %	1 %	70 - 130 %	25%
127-18-4	Tetrachloroethene	10	9.3	93 %	10	9.1	91 %	2 %	70 - 130 %	25%
142-28-9	1,3-Dichloropropane	10	9.9	99 %	10	9.3	93 %	5 %	70 - 130 %	25%
591-78-6	2-Hexanone	20	21	104 %	20	19	97 %	7 %	70 - 130 %	25%
124-48-1	Dibromochloromethane	10	9	90 %	10	8.9	89 %	1 %	70 - 130 %	25%
106-93-4	1,2-Dibromoethane (EDB)	10	9.8	98 %	10	9.6	96 %	2 %	70 - 130 %	25%
108-90-7	Chlorobenzene	10	9.3	93 %	10	9.1	91 %	2 %	70 - 130 %	25%
630-20-6	1,1,1,2-Tetrachloroethane	10	9.4	94 %	10	9.2	92 %	2 %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	9.2	92 %	10	9.3	93 %	1 %	70 - 130 %	25%
108-38-3/106-42-3	meta-Xylene and para-Xylene	20	19	94 %	20	19	94 %	0 %	70 - 130 %	25%
95-47-6	ortho-Xylene	10	9.6	96 %	10	9.3	93 %	3 %	70 - 130 %	25%
100-42-5	Styrene	10	9.5	95 %	10	9.3	93 %	2 %	70 - 130 %	25%
75-25-2	Bromoform	10	10	104 %	10	10	102 %	1 %	70 - 130 %	25%
98-82-8	Isopropylbenzene	10	8.8	88 %	10	8.7	87 %	1 %	70 - 130 %	25%

Quality Control Report Laboratory Control Samples

Category: EPA Method 8260B
QC Batch ID: VMS-3396-WL
Matrix: Aqueous
Units: ug/L

LCS
Instrument ID: MS-5 HP 6890
Analyzed: 07-20-06 10:27
Analyst: kmc

LCSD
Instrument ID: MS-5 HP 6890
Analyzed: 07-20-06 11:08
Analyst: kmc

Page: 2 of 2

CAS Number	Analyte	LCS			LCS Duplicate			RPD	QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery		Spike	RPD
108-86-1	Bromobenzene	10	9.3	93 %	10	9.2	92 %	0 %	70 - 130 %	25 %
79-34-5	1,1,2,2-Tetrachloroethane	10	9	90 %	10	9.1	91 %	1 %	70 - 130 %	25 %
96-18-4	1,2,3-Trichloropropane	10	11	108 %	10	10	104 %	4 %	70 - 130 %	25 %
103-65-1	n-Propylbenzene	10	9	90 %	10	9.2	92 %	3 %	70 - 130 %	25 %
95-49-8	2-Chlorotoluene	10	9.4	94 %	10	9	90 %	4 %	70 - 130 %	25 %
108-67-8	1,3,5-Trimethylbenzene	10	9.2	92 %	10	9.4	94 %	2 %	70 - 130 %	25 %
106-43-4	4-Chlorotoluene	10	9.3	93 %	10	9.6	96 %	3 %	70 - 130 %	25 %
98-06-6	tert-Butylbenzene	10	9.1	91 %	10	9.2	92 %	2 %	70 - 130 %	25 %
95-63-6	1,2,4-Trimethylbenzene	10	9.4	94 %	10	9.3	93 %	1 %	70 - 130 %	25 %
135-98-8	sec-Butylbenzene	10	9.1	91 %	10	9.2	92 %	1 %	70 - 130 %	25 %
541-73-1	1,3-Dichlorobenzene	10	9.3	93 %	10	9.3	93 %	0 %	70 - 130 %	25 %
99-87-6	4-Isopropyltoluene	10	9.1	91 %	10	9.2	92 %	1 %	70 - 130 %	25 %
106-46-7	1,4-Dichlorobenzene	10	9.4	94 %	10	9.5	95 %	0 %	70 - 130 %	25 %
95-50-1	1,2-Dichlorobenzene	10	9.1	91 %	10	9.2	92 %	2 %	70 - 130 %	25 %
104-51-8	n-Butylbenzene	10	9.3	93 %	10	9.4	94 %	1 %	70 - 130 %	25 %
96-12-8	1,2-Dibromo-3-chloropropane	10	11	106 %	10	9.1	91 %	15 %	70 - 130 %	25 %
120-82-1	1,2,4-Trichlorobenzene	10	10	101 %	10	10	100 %	1 %	70 - 130 %	25 %
87-68-3	Hexachlorobutadiene	10	9.8	98 %	10	9.6	96 %	2 %	70 - 130 %	25 %
91-20-3	Naphthalene	10	8.8	88 %	10	8.6	86 %	1 %	70 - 130 %	25 %
87-61-6	1,2,3-Trichlorobenzene	10	10	102 %	10	10	100 %	2 %	70 - 130 %	25 %
75-65-0	tert-Butyl Alcohol (TBA)	200	160	79 %	200	180	88 %	10 %	70 - 130 %	25 %
108-20-3	Di-isopropyl Ether (DIPE)	10	8.6	86 %	10	8.7	87 %	1 %	70 - 130 %	25 %
637-92-3	Ethyl tert-butyl Ether (ETBE)	10	9.1	91 %	10	8.9	89 %	2 %	70 - 130 %	25 %
994-05-8	tert-Amyl Methyl Ether (TAME)	10	8.9	89 %	10	9.1	91 %	2 %	70 - 130 %	25 %

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	9.5	95 %	10	9.4	94 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	9.3	93 %	10	8.8	88 %	70 - 130 %
Toluene-d ₈	10	9.3	93 %	10	9.6	96 %	70 - 130 %
4-Bromofluorobenzene	10	9.7	97 %	10	9.6	96 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: EPA Method 8260B
QC Batch ID: VM5-3396-WB
Matrix: Aqueous

Instrument ID: MS-5 HP 6890
Analyzed: 07-20-06 11:48
Analyst: kmc

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	trans-1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl tert-butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	cis-1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	cis-1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	trans-1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	meta-Xylene and para-Xylene	BRL		ug/L	0.5
95-47-6	ortho-Xylene	BRL		ug/L	0.5
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5

Quality Control Report Method Blank

Category: EPA Method 8260B
QC Batch ID: VM5-3396-WB
Matrix: Aqueous

Instrument ID: MS-5 HP 6890
Analyzed: 07-20-06 11:48
Analyst: kmc

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	n-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	tert-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	sec-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	n-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	105 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	9.5	95 %	70 - 130 %
Toluene-d ₈	10	9.5	95 %	70 - 130 %
4-Bromofluorobenzene	10	9.8	98 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states.
Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

CONNECTICUT, Department of Health Services, PH-0586

Categories: Potable Water, Wastewater, Solid Waste and Soil
http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA
<http://www.floridadep.org/labs/qa/dohforms.htm>

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater
<http://www.state.me.us/dhs/eng/water/Compliance.htm>

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water
<http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf>

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater
<http://www.des.state.nh.us/asp/NHELAP/labsview.asp>

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste
<http://www.wadsworth.org/labcert/elap/comm.html>

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)
<http://www.dep.state.pa.us/Labs/Registered/>

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage
http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water
<http://www.vermontdrinkingwater.org/wsops/labtable.PDF>

GROUNDWATER ANALYTICAL

Groundwater Analytical, Inc.
P.O. Box 1200
228 Main Street
Buzzards Bay, MA 02532

Telephone (508) 759-4441
FAX (508) 759-4475
www.groundwateranalytical.com

June 28, 2007

Mr. William Simmons
Simmons Environmental Services, Inc.
213 Elm Street
Salisbury, MA 01952

LABORATORY REPORT

Project: Tuxbury/060501A
Lab ID: 108219
Received: 06-20-07

Dear Bill:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority turnaround.

This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

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.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Jonathan R. Sanford
President

JRS/jll
Enclosures

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CONNECTICUT, Department of Health Services, PH-0586

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http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA
<http://www.floridadep.org/labs/qa/dohforms.htm>

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater
<http://www.state.me.us/dhs/eng/water/Compliance.htm>

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water
<http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf>

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater
<http://www.des.state.nh.us/asp/NHELAP/labsview.asp>

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste
<http://www.wadsworth.org/labcert/elap/comm.html>

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)
<http://www.dep.state.pa.us/Labs/Registered/>

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage
http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water
<http://www.vermontdrinkingwater.org/wsops/labtable.PDF>

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June 28, 2007

Mr. William Simmons
Simmons Environmental Services, Inc.
213 Elm Street
Salisbury, MA 01952

LABORATORY REPORT

Project: Tuxbury/060501A
Lab ID: 108219
Received: 06-20-07

Dear Bill:

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This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

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Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Jonathan R. Sanford
President

JRS/jll
Enclosures

Sample Receipt Report

Project: Tuxbury/060501A
Client: Simmons Environmental Services, Inc.
Lab ID: 108219

Delivery: GWA Courier
Airbill: n/a
Lab Receipt: 06-20-07

Temperature: 4.7°C
Chain of Custody: Present
Custody Seal(s): n/a


Lab ID	Field ID		Matrix	Sampled	Method				Notes
108219-1	SHB6AA		Soil	6/15/07 0:00	EPA 6010B Cd Cr Pb				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C924171	250 mL Glass	Proline	8X26173	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
108219-2	SHB8A		Soil	6/15/07 0:00	EPA 6010B Cd Cr Pb				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C987623	250 mL Amber Glass	Proline	BX26694	None	n/a	n/a	n/a		

Data Certification

Project: Tuxbury/060501A
Client: Simmons Environmental Services, Inc.

Lab ID: 108219
Received: 06-20-07 18:00

MA DEP Compendium of Analytical Methods					
Project Location: n/a		MA DEP RTN: n/a			
This Form provides certifications for the following data set:					
EPA 6010B: 108219-1,-2					
Sample Matrices:		Groundwater ()	Soil/Sediment (X)	Drinking Water ()	Other ()
MCP SW-846	8260B ()	8151A ()	8330 ()	6010B (X)	7470A/1A ()
Methods Used	8270C ()	8081A ()	VPH ()	6020A ()	9012A ² ()
As specified in MA DEP Compendium of Analytical Methods.	8082 ()	8021B ()	EPH ()	7000 S ³ ()	Other ()
(check all that apply)					
1. List Release Tracking Number (RTN), if known.					
2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method					
3. S - SW-846 Methods 7000 Series. List individual method and analyte.					
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.					
A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?				Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, <i>Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data</i> ?				Yes
D.	<u>VPH and EPH methods only:</u> Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?				Yes
A response to questions E and F below is required for "Presumptive Certainty" status.					
E.	Were all QC performance standards and recommendations for the specified methods achieved?				Yes
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?				No
All No answers are addressed in the attached Project Narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature:			Position:	President	
Printed Name:	Jonathan R. Sanford		Date:	06-28-07	

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: SHB6AA
Project: Tuxbury/060501A
Client: Simmons Environmental Services, Inc.
Laboratory ID: 108219-1
Sampled: 06-15-07 00:00
Received: 06-20-07 18:00

Matrix: Soil
Container: 250 mL Glass
Preservation: Cool
Percent Solids: 74

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Weight</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-01213-5	EPA 3050B	06-21-07 11:16	0.508 g	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.66	1	06-22-07 11:58	EPA 6010B ¹
7440-47-3	Chromium, Total	25		mg/Kg	13	1	06-22-07 11:57	EPA 6010B ¹
7439-92-1	Lead, Total	1,600		mg/Kg	13	1	06-22-07 11:57	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Trace Metals

Field ID: SH88A
Project: Tuxbury/060501A
Client: Simmons Environmental Services, Inc.
Laboratory ID: 108219-2
Sampled: 06-15-07 00:00
Received: 06-20-07 18:00

Matrix: Soil
Container: 250 mL Amber Glass
Preservation: Cool
Percent Solids: 74

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Weight</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-01213-S	EPA 3050B	06-21-07 11:16	0.503 g	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.67	1	06-22-07 12:01	EPA 6010B ¹
7440-47-3	Chromium, Total	30		mg/Kg	13	1	06-22-07 12:01	EPA 6010B ¹
7439-92-1	Lead, Total	1,700		mg/Kg	13	1	06-22-07 12:01	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Project Narrative

Project: Tuxbury/060501A
Client: Simmons Environmental Services, Inc.

Lab ID: 108219
Received: 06-20-07 18:00

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. EPA 6010B Note: Samples 108219-01 and -02. Samples were analyzed for selected target analytes, as requested by client.

GROUNDWATER ANALYTICAL

228 Main Street, P.O. Box 1200
Buzards Bay, MA 01832
Telephone (508) 753-4441 • FAX (508) 753-4475
www.groundwateranalytical.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

Project Name: **TUXBURY**
 Project Number: **060501A**
 Sample Name: **WHA Simmons**
 Project Manager: **WHA Simmons**

File: **Simmons Env. Serv Inc.**
 Address: **213 Elm St**
 City/State/Zip: **Salem MA**
 Telephone: **781-366-9999**

TURNAROUND
 STANDARD (10 Business Days) **3 DAYS**
 PRIORITY (5 Business Days)
 RUSH (2 Business Days)
 (Rush requires Rush Authorization Number)
 Please Email to: **info@simmonsinc.com**
 Please FAX to: **781-366-9999**

BILLING
 Purchase Order No.: **060501A**
 Third Party Billing
 GWA Quote:

ANALYSIS REQUEST

Parameter	Unit	Method	Frequency	Notes
Ammonia Nitrogen	mg/L	NH3-N	1	
Ammonium Nitrogen	mg/L	NH4-N	1	
Barium	mg/L	Barium	1	
Beryllium	mg/L	Beryllium	1	
Bismuth	mg/L	Bismuth	1	
Boron	mg/L	Boron	1	
Bromine	mg/L	Bromine	1	
Bromide	mg/L	Bromide	1	
Calcium	mg/L	Calcium	1	
Chloride	mg/L	Chloride	1	
Chromium	mg/L	Chromium	1	
Copper	mg/L	Copper	1	
Cyanide	mg/L	Cyanide	1	
Fluoride	mg/L	Fluoride	1	
Iron	mg/L	Iron	1	
Lead	mg/L	Lead	1	
Manganese	mg/L	Manganese	1	
Mercury	mg/L	Mercury	1	
Molybdenum	mg/L	Molybdenum	1	
Nickel	mg/L	Nickel	1	
Nitrate	mg/L	Nitrate	1	
Nitrite	mg/L	Nitrite	1	
Phosphorus	mg/L	Phosphorus	1	
Phosphate	mg/L	Phosphate	1	
Potassium	mg/L	Potassium	1	
Selenium	mg/L	Selenium	1	
Silver	mg/L	Silver	1	
Sulfate	mg/L	Sulfate	1	
Sulfide	mg/L	Sulfide	1	
Sulfur	mg/L	Sulfur	1	
Titanium	mg/L	Titanium	1	
Tungsten	mg/L	Tungsten	1	
Vanadium	mg/L	Vanadium	1	
Zinc	mg/L	Zinc	1	

LABORATORY NUMBER (Lab Use Only)

REMARKS / SPECIAL INSTRUCTIONS

MA DEP MCP Data Enhancement Affirmation
 YES ☐ NO ☐ MCP Data Certification required
 YES ☐ NO ☐ MCP Drinking Water Sample included
 (Require collection of contaminant duplicate sample)
 The blanks are also required (VOA sample collected)
 Signature: **[Signature]**
 Date: **7/2/01** IF PB > 100 mg/kg
 Run Minimum of 15 TOTAL
 IS > 30

DATA QUALITY OBJECTIVES

Project Specific QC
 Many regulatory programs and EPA methods require project specific QC. Project specific QC includes Sample Duplicates, Matrix Spikes, and/or Matrix Spike Duplicates. Laboratory QC is not project specific unless prearranged. Project specific QC samples are charged on a per sample basis. Each MS, MSD and Sample Duplicate requires an additional sample aliquot.

Regulatory Program
 State Standard Derivatives
 CT ☐ CT ☐ GW-US-1 ☐ PWS Form
 ME ☐ MCP GW-US-2 ☐ MNR
 MA ☐ NY STARS ☐
 NH ☐ Drinking Water
 NY ☐ Wastewater
 RI ☐ Waste Disposal
 VT ☐ Drudge Material
☐ ☐

CHAIN-OF-CUSTODY RECORD

NOTE: All samples submitted subject to Standard Terms and Conditions on reverse hereof.

Received by	Time	Day	Time	Received by	Time	Day	Time
[Signature]				[Signature]			
[Signature]				[Signature]			
[Signature]				[Signature]			

Receipt Temperature: **4.7**
 Container Count: **2**
 Shipping/Analysis Number:
 Custody Seal Number:

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

Quality Control Report Laboratory Control Samples

Category: Metals
Matrix: Soil
Units: mg/Kg

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-1213-SL	EPA 3050B	06-21-07 11:16	06-22-07 11:19	ICP-1 PE 3000	MWR
LCSD	EPA 6010B	MB-1213-SL	EPA 3050B	06-21-07 11:16	06-22-07 11:21	ICP-1 PE 3000	MWR

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-43-9	Cadmium	67	63	95%	67	68	102%	4 %	82-118 %	30 %	EPA 6010B
7440-47-3	Chromium	73	70	96%	73	72	98%	1 %	79-121 %	30 %	EPA 6010B
7439-92-1	Lead	130	130	97%	130	130	97%	0 %	82-118 %	30 %	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

Quality Control Report Method Blank

Category: Metals
Matrix: Soil

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B	MB-1213-SB	EPA 3050B	06-21-07 11:16	0.5 g	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium		BRL	mg/Kg	0.5	1	06-22-07 11:16	EPA 6010B
7440-47-3	Chromium		BRL	mg/Kg	10	1	06-22-07 11:16	EPA 6010B
7439-92-1	Lead		BRL	mg/Kg	10	1	06-22-07 11:16	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

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CONNECTICUT

Department of Health Services, PH-0586

http://www.dph.state.ct.us/BRS/Environmental_Lab/out_state.pdf

Potable Water, Wastewater, Solid Waste and Soil

FLORIDA

Department of Health, Bureau of Laboratories, E87643

<http://www.floridadep.org/labs/qa/dohforms.htm>

SDWA, CWA, RCRA/CERCLA

MAINE

Department of Health and Human Services, MA0103

<http://www.maine.gov/dhhs/eng/water/Templates/LabCertification/LabCertification.htm>

Drinking Water and Wastewater

Department of Environmental Protection, LB-0072

Asbestos Analytical Laboratory (Bulk)

MASSACHUSETTS

Department of Environmental Protection, M-MA-103

<http://public.dep.state.ma.us/labcert/labcert.aspx>

Potable Water and Non-Potable Water

Department of Labor,

Division of Occupational Safety, AA000195

http://www.mass.gov/dos/forms/la-rpt_list_aa.pdf

Asbestos Analytical Services, Class A

NEW HAMPSHIRE

Department of Environmental Services, 2027

<http://www.des.state.nh.us/asp/NHELAP/labsview.asp>

Drinking Water and Wastewater

NIST NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP)

NVLAP Lab Code 200751-1

<http://ts.nist.gov/Standards/scopes/plmtm.htm>

Bulk Asbestos Fiber Analysis (PLM)

NEW YORK

Department of Health, 11754

<http://www.wadsworth.org/labcert/elap/comm.html>

Potable Water, Non-Potable Water and Solid Waste

RHODE ISLAND

Department of Health,

Division of Laboratories, LAO00054

<http://www.health.ri.gov/labs/outofstatelabs.pdf>

Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry

Department of Health,

Office of Occupational and Radiological Health, AAL-110B3

<http://www.health.ri.gov/environment/occupational/asbestos/licensees/AsbestosAnalyticalLabs.pdf>

Asbestos Analytical Service, Polarized Light Microscopy (PLM)

U.S. DEPARTMENT OF AGRICULTURE

USDA, Soil Permit, S-53921

Foreign soil import permit

VERMONT

Department of Health, VT87643

http://healthvermont.gov/enviro/ph_lab/documents/certified_labs.pdf

Drinking Water Microbiological, Inorganic and Organic Analyses

GROUNDWATER ANALYTICAL

Groundwater Analytical, Inc.
P.O. Box 1200
228 Main Street
Buzzards Bay, MA 02532

Telephone (508) 759-4441
FAX (508) 759-4475
www.groundwateranalytical.com

October 18, 2006

Mr. William Simmons
Simmons Environmental Services, Inc.
213 Elm Street
Salisbury, MA 01952

LABORATORY REPORT

Project: 120 Merrimack Street/060501A
Lab ID: 99804
Received: 10-10-06

Dear Bill:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority turnaround.

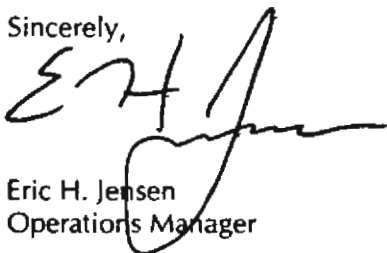
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

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.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Eric H. Jensen
Operations Manager

EHJ/ajh
Enclosures

Sample Receipt Report

Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.
Lab ID: 99804

Delivery: GWA Courier
Airbill: n/a
Lab Receipt: 10-10-06

Temperature: 2°C
Chain of Custody: Present
Custody Seal(s): n/a

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-1	B6, 0'-3'		Soil	10/6/06 0:00	EPA 6010B Pb Cd Cr Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828403	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID	Matrix	Sampled	Method				Notes
99804-2	B6, 5'-7"	Soil	10/6/06 0:00	EPA 6010B Cr Cd Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C828404	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a	

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-3	B7, 0'-3'		Soil	10/6/06 0:00	EPA 6010B Cd Cr Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828400	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method			Notes
99804-4	B7, 5'-7'		Soil	10/6/06 0:00	EPA 6010B Cr Cd Pb Total			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C828392	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a	

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-5	B8, 0'-3'		Soil	10/6/06 0:00	EPA 6010B Cd Cr Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828396	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method			Notes
99804-6	BB, 5'-7'		Soil	10/6/06 0:00	EPA 6010B Cr Cd Pb Total			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	
C828405	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a	

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-7	B9, 0'-3'		Soil	10/6/06 0:00	EPA 6010B Cd Cr Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828399	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-8	B9, 5'-7'		Soil	10/6/06 0:00	EPA 6010B Cr Cd Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828401	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-9	B10, 0'-3'		Soil	10/6/06 0:00	EPA 6010B Cr Cd Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828397	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-10	B10, 5'-7'		Soil	10/6/06 0:00	EPA 6010B Cr Cd Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828402	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Sample Receipt Report (Continued)

Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.
Lab ID: 99804

Delivery: GWA Courier
Airbill: n/a
Lab Receipt: 10-10-06

Temperature: 2°C
Chain of Custody: Present
Custody Seal(s): n/a

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-11	B6A, 0'-3' (dup)		Soil	10/6/06 0:00	EPA 6010B Cd Cr Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C886182	250 mL Glass	Greenwood	BX23243	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-12	Railroad Embankment #1, 0'-1'		Soil	10/6/06 0:00	EPA 6010B Cd Cr Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828398	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

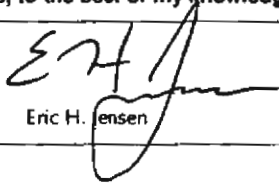
Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-13	Railroad Embankment #2, 0'-1'		Soil	10/6/06 0:00	EPA 6010B Cd Cr Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C828394	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
99804-14	Railroad Embankment #3, 0'-1'		Soil	10/6/06 0:00	EPA 6010B Cd Cr Pb Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C886186	250 mL Glass	Greenwood	BX23243	None	n/a	n/a	n/a		

Data Certification

Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.

Lab ID: 99804
Received: 10-10-06 18:40

MA DEP Compendium of Analytical Methods					
Project Location:		n/a		MA DEP RTN: n/a	
This Form provides certifications for the following data set:					
EPA 6010B:		99804-01,-02,-03,-04,-05,-06,-07,-08,-09,-10,-11,-12,-13,-14			
Sample Matrices:		Groundwater () Soil/Sediment (X) Drinking Water () Other ()			
MCP SW-846 Methods Used	8260B ()	8151A ()	8330 ()	6010B (X)	7470A/1A ()
	8270C ()	8081A ()	VPH ()	6020 ()	9012A ² ()
	8082 ()	8021B ()	EPH ()	7000 S ³ ()	Other ()
As specified in MA DEP Compendium of Analytical Methods.		1. List Release Tracking Number (RTN), if known. 2. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method 3. S - SW-846 Methods 7000 Series. List individual method and analyte.			
(check all that apply)					
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.					
A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?				Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, <i>Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data</i> ?				Yes
D.	<u>VPH and EPH methods only:</u> Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?				n/a
A response to questions E and F below is required for "Presumptive Certainty" status.					
E.	Were all QC performance standards and recommendations for the specified methods achieved?				Yes
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?				No
All No answers are addressed in the attached Project Narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature:					
Printed Name:		Eric H. Jensen		Position:	Operations Manager
				Date:	10-18-06

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: B6, 0'-3'
Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.
Laboratory ID: 99804-01
Sampled: 10-06-06 00:00
Received: 10-10-06 18:40

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool
Percent Solids: 87

Analysis Method: QC Batch ID: Prep Method: Prepared: Sample Weight: Instrument ID: Analyst:
EPA 6010B¹ MB-0983-S EPA 3050B 10-11-06 09:46 0.503 g ICP-2 PE 3300 MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.57	1	10-12-06 14:20	EPA 6010B ¹
7440-47-3	Chromium, Total	24		mg/Kg	11	1	10-12-06 14:20	EPA 6010B ¹
7439-92-1	Lead, Total	900		mg/Kg	11	1	10-12-06 14:20	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **B6, 5'-7'**
 Project: **120 Merrimack Street/060501A**
 Client: **Simmons Environmental Services, Inc.**
 Laboratory ID: **99804-02**
 Sampled: **10-06-06 00:00**
 Received: **10-10-06 18:40**

Matrix: **Soil**
 Container: **500 mL Glass**
 Preservation: **Cool**
 Percent Solids: **80**

Analysis Method: **QC Batch ID: EPA 6010B¹**
 QC Batch ID: **M8-0983-S**
 Prep Method: **EPA 3050B**
 Prepared: **10-11-06 09:46**
 Sample Weight: **0.511 g**
 Instrument ID: **ICP-2 PE 3300**
 Analyst: **MWR**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.61	1	10-12-06 14:23	EPA 6010B ¹
7440-47-3	Chromium, Total	23		mg/Kg	12	1	10-12-06 14:23	EPA 6010B ¹
7439-92-1	Lead, Total	76		mg/Kg	12	1	10-12-06 14:23	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: B7, 0'-3'
Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.
Laboratory ID: 99804-03
Sampled: 10-06-06 00:00
Received: 10-10-06 18:40

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool
Percent Solids: 84

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Weight</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-0983-S	EPA 3050B	10-11-06 09:46	0.486 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.61	1	10-12-06 14:27	EPA 6010B ¹
7440-47-3	Chromium, Total	23		mg/Kg	12	1	10-12-06 14:27	EPA 6010B ¹
7439-92-1	Lead, Total	990		mg/Kg	12	1	10-12-06 14:27	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: B7, 5'-7'
Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool

Laboratory ID: 99804-04
Sampled: 10-06-06 00:00
Received: 10-10-06 18:40

Percent Solids: 75

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0983-S	EPA 3050B	10-11-06 09:46	0.512 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.65	1	10-12-06 14:30	EPA 6010B ¹
7440-47-3	Chromium, Total	17		mg/Kg	13	1	10-12-06 14:30	EPA 6010B ¹
7439-92-1	Lead, Total	330		mg/Kg	13	1	10-12-06 14:30	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **B8, 0'-3'**
 Project: **120 Merrimack Street/060501A**
 Client: **Simmons Environmental Services, Inc.**
 Laboratory ID: **99804-05**
 Sampled: **10-06-06 00:00**
 Received: **10-10-06 18:40**

Matrix: **Soil**
 Container: **500 mL Glass**
 Preservation: **Cool**
 Percent Solids: **81**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0983-S	EPA 3050B	10-11-06 09:46	0.492 g	KCP-2 PE 1300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	1.3		mg/Kg	0.63	1	10-12-06 14:34	EPA 6010B ¹
7440-47-3	Chromium, Total	34		mg/Kg	13	1	10-12-06 14:34	EPA 6010B ¹
7439-92-1	Lead, Total	2,100		mg/Kg	13	1	10-12-06 14:34	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 DF Dilution Factor.

Trace Metals

Field ID: **B8, 5'-7'**
Project: **120 Merrimack Street/060501A**
Client: **Simmons Environmental Services, Inc.**

Matrix: **Soil**
Container: **500 mL Glass**
Preservation: **Cool**

Laboratory ID: **99804-06**
Sampled: **10-06-06 00:00**
Received: **10-10-06 18:40**

Percent Solids: **69**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0983-S	EPA 3050B	10-11-06 09:46	0.507 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.71	1	10-12-06 14:44	EPA 6010B ¹
7440-47-3	Chromium, Total	16		mg/Kg	14	1	10-12-06 14:44	EPA 6010B ¹
7439-92-1	Lead, Total	460		mg/Kg	14	1	10-12-06 14:44	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **B9, 0'-3'**
Project: **120 Merrimack Street/060501A**
Client: **Simmons Environmental Services, Inc.**

Matrix: **Soil**
Container: **500 mL Glass**
Preservation: **Cool**
Percent Solids: **90**

Laboratory ID: **99804-07**
Sampled: **10-06-06 00:00**
Received: **10-10-06 18:40**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0983-S	EPA 3050B	10-11-06 09:46	0.512 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	0.63		mg/Kg	0.54	1	10-12-06 14:48	EPA 6010B ¹
7440-47-3	Chromium, Total	95		mg/Kg	11	1	10-12-06 14:48	EPA 6010B ¹
7439-92-1	Lead, Total	770		mg/Kg	11	1	10-12-06 14:48	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Trace Metals

Field ID: B9, 5'-7'
Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.
Laboratory ID: 99804-08
Sampled: 10-06-06 00:00
Received: 10-10-06 18:40

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool
Percent Solids: 78

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst		
EPA 6010B ¹	MB-0983-S	EPA 3050B	10-11-06 09:46	0.481 g	ICP-2 PE 3300	MWR		
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.66	1	10-12-06 14:51	EPA 6010B ¹
7440-47-3	Chromium, Total		BRL	mg/Kg	13	1	10-12-06 14:51	EPA 6010B ¹
7439-92-1	Lead, Total		BRL	mg/Kg	13	1	10-12-06 14:51	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **B10, 0'-3'**
Project: **120 Merrimack Street/060501A**
Client: **Simmons Environmental Services, Inc.**

Matrix: **Soil**
Container: **500 mL Glass**
Preservation: **Cool**

Laboratory ID: **99804-09**
Sampled: **10-06-06 00:00**
Received: **10-10-06 18:40**

Percent Solids: **87**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0983-S	EPA 3050B	10-11-06 09:46	0.497 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.58	1	10-12-06 14:55	EPA 6010B ¹
7440-47-3	Chromium, Total	16		mg/Kg	12	1	10-12-06 14:55	EPA 6010B ¹
7439-92-1	Lead, Total	200		mg/Kg	12	1	10-12-06 14:55	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **B10, 5'-7'**
Project: **120 Merrimack Street/060501A**
Client: **Simmons Environmental Services, Inc.**
Laboratory ID: **99804-10**
Sampled: **10-06-06 00:00**
Received: **10-10-06 18:40**

Matrix: **Soil**
Container: **500 ml Glass**
Preservation: **Cool**
Percent Solids: **76**

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Weight</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-0983-5	EPA 3050B	10-11-06 09:46	0.487 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BRL		mg/Kg	0.67	1	10-12-06 14:58	EPA 6010B ¹
7440-47-3	Chromium, Total	19		mg/Kg	13	1	10-12-06 14:58	EPA 6010B ¹
7439-92-1	Lead, Total	58		mg/Kg	13	1	10-12-06 14:58	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: B6A, 0'-3' (dup)
Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.

Matrix: Soil
Container: 250 mL Glass
Preservation: Cool

Laboratory ID: 99804-11
Sampled: 10-06-06 00:00
Received: 10-10-06 18:40

Percent Solids: 82

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0984-S	EPA 3050B	10-11-06 11:05	0.502 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.61	1	10-12-06 19:17	EPA 6010B ¹
7440-47-3	Chromium, Total	25		mg/Kg	12	1	10-12-06 19:17	EPA 6010B ¹
7439-92-1	Lead, Total	1,800		mg/Kg	12	1	10-12-06 19:17	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Trace Metals

Field ID: Railroad Embankment #1, 0'-1'
Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.

Matrix: Soil
Container: 500 mL Glass
Preservation: Cool

Laboratory ID: 99804-12
Sampled: 10-06-06 00:00
Received: 10-10-06 18:40

Percent Solids: 90

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Weight	Instrument ID	Analyst
EPA 6010B ¹	MB-0984-5	EPA 3050B	10-11-06 11:05	0.49 g	ICP-2 PE 1300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.57	1	10-12-06 19:21	EPA 6010B ¹
7440-47-3	Chromium, Total	16		mg/Kg	11	1	10-12-06 19:21	EPA 6010B ¹
7439-92-1	Lead, Total	240		mg/Kg	11	1	10-12-06 19:21	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **Railroad Embankment #2, 0'-1'**
Project: **120 Merrimack Street/060501A**
Client: **Simmons Environmental Services, Inc.**

Matrix: **Soil**
Container: **500 mL Glass**
Preservation: **Cool**

Laboratory ID: **99804-13**
Sampled: **10-06-06 00:00**
Received: **10-10-06 18:40**

Percent Solids: **89**

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Weight</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-0984-S	EPA 3050B	10-11-06 11:05	0.508 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total		BRL	mg/Kg	0.55	1	10-12-06 19:24	EPA 6010B ¹
7440-47-3	Chromium, Total	23		mg/Kg	11	1	10-12-06 19:24	EPA 6010B ¹
7439-92-1	Lead, Total	430		mg/Kg	11	1	10-12-06 19:24	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: Railroad Embankment #3, 0'-1'
Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.

Matrix: Soil
Container: 250 mL Glass
Preservation: Cool

Laboratory ID: 99804-14
Sampled: 10-06-06 00:00
Received: 10-10-06 18:40

Percent Solids: 76

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Weight</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-0984-S	EPA 3050B	10-11-06 11:05	0.487 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BRL		mg/Kg	0.67	1	10-12-06 19:28	EPA 6010B ¹
7440-47-3	Chromium, Total	25		mg/Kg	13	1	10-12-06 19:28	EPA 6010B ¹
7439-92-1	Lead, Total	930		mg/Kg	13	1	10-12-06 19:28	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Project Narrative

Project: 120 Merrimack Street/060501A
Client: Simmons Environmental Services, Inc.

Lab ID: 99804
Received: 10-10-06 18:40

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. EPA 6010B Note: Samples 99804-01 through -14. Samples were analyzed for selected target analytes, as requested by client.

**GROUNDWATER
ANALYTICAL**

228 Main Street, P.O. Box 1200,
Buzards Bay, MA 02532
Telephone (508) 759-4441 •
www.uroundwateranalysis.com

CHAIN-OF-CUSTODY RECORD AND WORK ORDER

No 210484

Project Name:		Firm:		TURNAROUND		ANALYSIS REQUEST		Chain-of-Custody Record	
120 Mam Mack Street		Simmons & Co.		STANDARD (48 Business Days) 6 DAYS		<input type="checkbox"/> STANDARD (48 Business Days) <input type="checkbox"/> PRIORITY (15 Business Days) <input type="checkbox"/> RUSH (7 Business Days) <input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		NOTE: All samples submitted subject to Standard Terms and Conditions on reverse hereof. Requisitioned by: <u>State of New York</u> Date: <u>10/16/01</u> Received by: <u>W.H. Sullivan</u> Date: <u>10/16/01</u> Requisitioned by: <u>W.H. Sullivan</u> Date: <u>10/16/01</u> Received by: <u>W.H. Sullivan</u> Date: <u>10/16/01</u>	
Address:		City / State / Zip:		Billing		<input checked="" type="checkbox"/> Purchase Order No.: <u>060501A</u> <input type="checkbox"/> Third Party Billing: <input type="checkbox"/> GWA Quote:		Receipt Temperature: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
060501A		213 Elm Street		SA-158URY, RA 01152		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
City / State / Zip:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-463-6669		<input type="checkbox"/> Please Email to: info@simmons.com or 1-800-333-3333 <input type="checkbox"/> Please FAX to:		Shipping Address: (1) Yes (2) No (3) Not Applicable 2-55 Requisitioned Container Court:	
Project Manager:		Telephone:		978-4					

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

Quality Control Report Laboratory Control Samples

Category: Metals
Matrix: Soil
Units: mg/Kg

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-0983-SL	EPA 3050B	10-11-06 09:46	10-11-06 15:47	ICP-2 PE 3300	MWR
LCSD	EPA 6010B	MB-0983-SL	EPA 3050B	10-11-06 09:46	10-11-06 15:50	ICP-2 PE 3300	MWR

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-43-9	Cadmium	120	120	99%	120	110	98%	1 %	82-119 %	30 %	EPA 6010B
7440-47-3	Chromium	73	74	102%	73	72	99%	1 %	79-121 %	30 %	EPA 6010B
7439-92-1	Lead	170	160	98%	170	160	96%	1 %	81-119 %	30 %	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

Quality Control Report Method Blank

Category: Metals
Matrix: Soil

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B	MB-0983-SB	EPA 3050B	10-11-06 09:46	0.5 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium	BRL		mg/Kg	0.5	1	10-11-06 15:33	EPA 6010B
7440-47-3	Chromium	BRL		mg/Kg	10	1	10-11-06 15:33	EPA 6010B
7439-92-1	Lead	BRL		mg/Kg	10	1	10-11-06 15:33	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Quality Control Report Laboratory Control Samples

Category: Metals
Matrix: Soil
Units: mg/Kg

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-0984-SL	EPA 3050B	10-11-06 11:05	10-12-06 18:39	ICP-2 PE 3300	MWR
LCSD	EPA 6010B	MB-0984-SL	EPA 3050B	10-11-06 11:05	10-12-06 18:43	ICP-2 PE 3300	MWR

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7440-43-9	Cadmium	120	120	99%	120	100	89%	5 %	82-119 %	30 %	EPA 6010B
7440-47-3	Chromium	73	71	97%	73	65	89%	4 %	79-121 %	30 %	EPA 6010B
7439-92-1	Lead	170	170	99%	170	150	92%	4 %	81-119 %	30 %	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

**Quality Control Report
Method Blank**

Category: Metals
Matrix: Soil

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B	MB-0984-SB	EPA 3050B	10-11-06 11:05	0.5 g	ICP-2 PE 3300	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium		BRL	mg/Kg	0.5	1	10-12-06 18:36	EPA 6010B
7440-47-3	Chromium		BRL	mg/Kg	10	1	10-12-06 18:36	EPA 6010B
7439-92-1	Lead		BRL	mg/Kg	10	1	10-12-06 18:36	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states.

Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

CONNECTICUT, Department of Health Services, PH-0586

Categories: Potable Water, Wastewater, Solid Waste and Soil

http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA

<http://www.floridadep.org/labs/qa/dohforms.htm>

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater

<http://www.state.me.us/dhs/eng/water/Compliance.htm>

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water

<http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf>

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater

<http://www.des.state.nh.us/asp/NHELAP/labsview.asp>

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste

<http://www.wadsworth.org/labcert/elap/comm.html>

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)

<http://www.dep.state.pa.us/Labs/Registered/>

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage

http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water

<http://www.vermontdrinkingwater.org/wsops/labtable.PDF>

July 24, 2007

Mr. William Simmons
Simmons Environmental Services, Inc.
213 Elm Street
Salisbury, MA 01952

LABORATORY REPORT

Project: **Tuxbury/060501A**
Lab ID: **108943**
Received: **06-15-07**

Dear Bill:

Enclosed are the analytical results for the above referenced project. The project was processed for Priority turnaround.

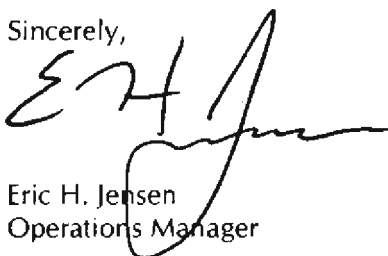
This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

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.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Eric H. Jensen
Operations Manager

EHJ/ajh
Enclosures

Sample Receipt Report

Project: **Tuxbury/060501A**
Client: **Simmons Environmental Services, Inc.**
Lab ID: **108943**

Delivery: **GWA Courier**
Airbill: **n/a**
Lab Receipt: **06-15-07**

Temperature: **4.7°C**
Chain of Custody: **Present**
Custody Seal(s): **n/a**

Lab ID	Field ID		Matrix	Sampled	Method				Notes
108943-1	SHB6AA		Soil	6/15/07 0:00	EPA 6010B TCLP Pb				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C964895	250 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

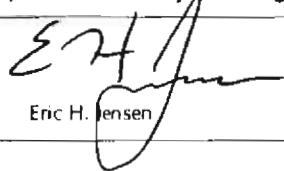
Lab ID	Field ID		Matrix	Sampled	Method				Notes
108943-2	SHB8A		Soil	6/15/07 0:00	EPA 6010B TCLP Pb				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C964896	250 mL Amber Glass	n/a	n/a	n/a	n/a	n/a	n/a		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
108943-3	SHB8A		Soil	6/15/07 0:00	EPA 7196A Hexavalent Chromium				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C964897	250 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

Data Certification

Project: **Tuxbury/060501A**
Client: **Simmons Environmental Services, Inc.**

Lab ID: **108943**
Received: **06-15-07 18:00**

MA DEP Compendium of Analytical Methods					
Project Location: n/a		MA DEP RTN: n/a			
This Form provides certifications for the following data set:					
EPA 7196A: 108943-3					
Sample Matrices:	Groundwater ()	Soil/Sediment (X)	Drinking Water ()	Other ()	
MCP SW-846	8260B ()	8151A ()	8330 ()	6010B ()	7470A/1A ()
Methods Used	8270C ()	8081A ()	VPH ()	6020A ()	9012A ¹ ()
As specified in MA DEP Compendium of Analytical Methods:	8082 ()	8021B ()	EPH ()	7000 S ³ (X)	Other ()
(check all that apply) <ol style="list-style-type: none"> List Release Tracking Number (RTN), if known. SW-846 Method 9012A (Equivalent to 9014) or MA DEP Physiologically Available Cyanide (PAC) Method S - SW-846 Methods 7000 Series. List individual method and analyte. 					
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status.					
A.	Were all samples received by the laboratory in a condition consistent with that described on the Chain-of-Custody documentation for the data set?				Yes
B.	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				Yes
C.	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty," as described in Section 2.0 of the MA DEP document CAM VII A, <i>Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data</i> ?				Yes
D.	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?				Yes
A response to questions E and F below is required for "Presumptive Certainty" status.					
E.	Were all QC performance standards and recommendations for the specified methods achieved?				Yes
F.	Were results for all analyte-list compounds/elements for the specified method(s) reported?				Yes
All No answers are addressed in the attached Project Narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature: 		Position: Operations Manager			
Printed Name: Eric H. Jensen		Date: 07-24-07			

Toxicity Characteristic Leaching Procedure (TCLP) Trace Metals

Field ID: SHB6AA
Project: Tuxbury/060501A
Client: Simmons Environmental Services, Inc.

Matrix: TCLP Leachate
Container: 250 mL Amber Glass
Preservation: Cool

Laboratory ID: 108943-1
Sampled: 06-15-07 00:00
Received: 06-15-07 18:00

Date Leached: 07-20-07 16:00
TCLP Fluid: 1

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-2802-W	EPA 3010A	07-21-07 07:52	50 mL	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	RCRA Limit	Reporting Limit	DF	Analyzed	Method
7439-92-1	Lead		BRL	mg/L	5.0	0.3	10	07-23-07 10:40	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample leached in accordance with EPA Method 1311 prior to determinative analysis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
RCRA Limit indicates maximum concentration of contaminant under the TCLP Rule, as specified at 40 C.F.R. 261.24, Table 1.
DF Dilution Factor.

**TCLP Matrix Spike
Trace Metals**

Field ID:	SHB6AA	Parent Sample	Matrix Spike
Project:	Tuxbury/060501A	Laboratory ID:	108943-1
Client:	Simmons Environmental Services, Inc.	Sampled:	06-15-07 00:00
Matrix:	TCLP Leachate	Received:	06-15-07 18:00
Container:	250 mL Amber Glass	Leached:	07-20-07 16:00
Preservation:	Cool	TCLP Fluid:	1

<u>Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Volume</u>	<u>DF</u>	<u>Analyzed</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B	MB-2802-W	EPA 3010A	07-21-07 07:52	50 mL	10	07-23-07 10:46	ICP-1 PE 3000	MWR

CAS Number	Analyte	Unspiked Sample (mg/L)	MS Spiked (mg/L)	MS Measured (mg/L)	MS Recovery	QC Limits	Method
7439-92-1	Lead	BRL	5.0	5.6	109 %	75-125%	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample leached in accordance with EPA Method 1311 prior to determinative analysis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

**Toxicity Characteristic Leaching Procedure (TCLP)
Trace Metals**

Field ID: **SH88A**
Project: **Tuxbury/060501A**
Client: **Simmons Environmental Services, Inc.**

Matrix: **TCLP Leachate**
Container: **250 mL Amber Glass**
Preservation: **Cool**

Laboratory ID: **108943-2**
Sampled: **06-15-07 00:00**
Received: **06-15-07 18:00**

Date Leached: **07-20-07 16:00**
TCLP Fluid: **1**

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B ¹	MB-2802-W	EPA 3010A	07-21-07 07:52	50 mL	ICP-1 PE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	RCRA Limit	Reporting Limit	DF	Analyzed	Method
7439-92-1	Lead	0.8		mg/L	5.0	0.3	10	07-23-07 10:49	EPA 6010B ¹

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample leached in accordance with EPA Method 1311 prior to determinative analysis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
RCRA Limit indicates maximum concentration of contaminant under the TCLP Rule, as specified at 40 C.F.R. 261.24, Table 1.
DF Dilution Factor.

Inorganic Chemistry

Field ID: SHB8A

Project: Tuxbury/060501A

Client: Simmons Environmental Services, Inc.

Matrix: Soil

Received: 06-15-07 18:00

Lab ID: 108943-03 Sampled: 06-15-07 00:00 % Solids: 74 Container: 250 mL Amber Glass Preservation: Cool

Analyte	Result	Units	RL	DF	Weight	Analyzed	QC Batch	Method	Inst	Analyst
Chromium, Hexavalent	BRL	mg/Kg	10	1	2.5 g	07-23-07 00:00	HC-0273-S	EPA 7196A	1	JK

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Results are reported on a dry weight basis.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
RL Reporting Limit.
DF Dilution Factor.

Project Narrative

Project: **Tuxbury/060501A**
Client: **Simmons Environmental Services, Inc.**

Lab ID: **108943**
Received: **06-15-07 18:00**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

- 1 . Project 108943 was processed for a priority turnaround due 07-24-07 per Bill Simmons on 07-16-07.
- 2 . Sample 108219-01 was reassigned laboratory number 108943-01 for TCLP Lead Analysis per Bill Simmons on 07-16-07.
- 3 . Sample 108219-02 was reassigned laboratory number 108943-02 for TCLP Lead and Hexavalent Chromium Analysis per Bill Simmons on 07-16-07.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

- 1 . No method modifications, non-conformances or analytical issues were noted.

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

Laboratory Control Samples

Category: **Inorganics**

Matrix: **Soil**

Units: **mg/Kg**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 7196A	HC-0273-S	EPA 1060A	7/23/2007 0:00	7/23/2007 0:00	Milton Roy Spectronic 401	JK
LCS-D	EPA 7196A	HC-0273-S	EPA 3060A	7/23/2007 0:00	7/23/2007 0:00	Milton Roy Spectronic 401	JK

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Chromium, Hexavalent	75	65	86%	75	71	94%	4 %	42-158%	30 %	EPA 7196A

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and
Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111,
(1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology,
or alternatively based upon the historical average recovery plus or minus three standard deviation units.

**Quality Control Report
Method Blank**Category: **Inorganic Chemistry**Matrix: **Soil**

Analyte	Result	Units	RL	Analyzed	QC Batch	Method	Inst	Analyst
Chromium, Hexavalent	BRL	mg/Kg	10	07-23-07 00:00	HC-0273-S	EPA 7196A	?	IK

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

RL Reporting Limit

1 Instrument ID: Milton Roy Spectronic 401

Quality Control Report Laboratory Control Samples

Category: **Metals**
Matrix: **Aqueous**
Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	EPA 6010B	MB-2802-WL	EPA 3010A	07-21-07 07:52	07-23-07 10:34	ICP-1 PE 3000	MWR
LCSD	EPA 6010B	MB-2802-WL	EPA 3010A	07-21-07 07:52	07-23-07 10:37	ICP-1 PE 3000	MWR

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits		Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
7439-92-1	Lead	5.0	5.2	103%	5.0	5.2	104%	0 %	80-120 %	20 %	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

**Quality Control Report
Method Blank**

Category: **Metals**
Matrix: **Aqueous**

<u>Analysis Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Sample Volume</u>	<u>Instrument ID</u>	<u>Analyst</u>
EPA 6010B	MB-2802-WB	EPA 3010A	07-21-07 07:52	50 mL	ICP-AE 3000	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7439-92-1	Lead	BRL		mg/L	0.3	1	07-23-07 10:31	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
DF Dilution Factor.

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states.
Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

CONNECTICUT

Department of Health Services, PH-0586

http://www.dph.state.ct.us/BRS/Environmental_Lab/out_state.pdf

Potable Water, Wastewater, Solid Waste and Soil

FLORIDA

Department of Health, Bureau of Laboratories, E87643

<http://www.floridadep.org/labs/qa/dohforms.htm>

SDWA, CWA, RCRA/CERCLA

MAINE

Department of Health and Human Services, MA0103

<http://www.maine.gov/dhhs/eng/water/Templates/LabCertification/LabCertification.htm>

Drinking Water and Wastewater

Department of Environmental Protection, LB-0072

Asbestos Analytical Laboratory (Bulk)

MASSACHUSETTS

Department of Environmental Protection, M-MA-103

<http://public.dep.state.ma.us/labcert/labcert.aspx>

Potable Water and Non-Potable Water

Department of Labor,

Division of Occupational Safety, AA000195

http://www.mass.gov/dos/forms/la-rpt_list_aa.pdf

Asbestos Analytical Services, Class A

NEW HAMPSHIRE

Department of Environmental Services, 2027

<http://www.des.state.nh.us/asp/NHELAP/labsview.asp>

Drinking Water and Wastewater

NIST NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP)

NVLAP Lab Code 200751-1

<http://ts.nist.gov/Standards/scopes/plmtm.htm>

Bulk Asbestos Fiber Analysis (PLM)

NEW YORK

Department of Health, 11754

<http://www.wadsworth.org/labcert/elap/comm.html>

Potable Water, Non-Potable Water and Solid Waste

RHODE ISLAND

Department of Health,

Division of Laboratories, LAO00054

<http://www.health.ri.gov/labs/outofstatelabs.pdf>

Potable and Non-Potable Water Microbiology, Organic and Inorganic Chemistry

Department of Health,

Office of Occupational and Radiological Health, AAL-110B3

<http://www.health.ri.gov/environment/occupational/asbestos/licensees/AsbestosAnalyticalLabs.pdf>

Asbestos Analytical Service, Polarized Light Microscopy (PLM)

U.S. DEPARTMENT OF AGRICULTURE

USDA, Soil Permit, S-53921

Foreign soil import permit

VERMONT

Department of Health, VT87643

http://healthvermont.gov/enviro/ph_lab/documents/certified_labs.pdf

Drinking Water Microbiological, Inorganic and Organic Analyses

July 2, 2013

Amy Roth
Wilcox & Barton
1115 Route 100B, Suite 200
Moretown, VT 05660

Project Location: Newburyport, MA
Client Job Number:
Project Number: CHART0001
Laboratory Work Order Number: 13F0934

Enclosed are results of analyses for samples received by the laboratory on June 26, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager

Wilcox & Barton
1115 Route 100B, Suite 200
Moretown, VT 05660
ATTN: Amy Roth

REPORT DATE: 7/2/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: CHART0001

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13F0934

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

PROJECT LOCATION: Newburyport, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-2	13F0934-01	Ground Water		EPA 420.1 SM18-20 2540D SM18-20 4500 CL B SM18-20 4500 CL G SM18-20 4500 CN E SW-846 6010C SW-846 6020A SW-846 7196A SW-846 7470A SW-846 8082A SW-846 8100 Modified SW-846 8270D	

CASE NARRATIVE SUMMARY

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

SM18-20 2540D**Qualifications:**

Duplicate relative percent difference (RPD) is a less useful indicator of sample precision for sample results that are <5 times the reporting limit (RL).

Analyte & Samples(s) Qualified:**Total Suspended Solids**

13F0934-01[MW-2], B075734-DUP2

SM18-20 4500 CL G**Qualifications:**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:**Chlorine, Residual**

13F0934-01[MW-2], B075764-MS1

SW-846 7196A**Qualifications:**

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:**Hexavalent Chromium**

13F0934-01[MW-2], B075768-MS1, B075768-MSD1

SW-846 8270D**Qualifications:**

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:**3/4-Methylphenol**

B075654-BS1, B075654-BSD1

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:**2-Methylphenol, 3,3-Dichlorobenzidine, 3/4-Methylphenol, Di-n-octylphthalate, Pyrene**

B075654-BS1, B075654-BSD1

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

13F0934-01[MW-2], B075654-BLK1, B075654-BS1, B075654-BSD1

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**2-Methylphenol, 3,3-Dichlorobenzidine, 3/4-Methylphenol, Di-n-octylphthalate, Pyrene**

13F0934-01[MW-2], B075654-BLK1

SW-846 8100 Modified

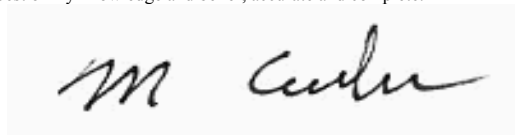
TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

SW-846 8270D

Laboratory control sample recoveries for required MCP Data Enhancement 8270 compounds were all within control limits specified by the method, 40-140% for base/neutrals and 30-130% for acids except for "difficult analytes" listed below and/or otherwise listed in this narrative. Difficult analytes limits are 15 and 140%: 2,4-dinitrophenol, 4-chloroaniline, 4-nitrophenol, and phenol.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those 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.

A handwritten signature in black ink, appearing to read "M. Erickson", is displayed on a light gray rectangular background.

Michael A. Erickson
Laboratory Director

Project Location: Newburyport, MA

Sample Description:

Work Order: 13F0934

Date Received: 6/26/2013

Field Sample #: MW-2

Sampled: 6/26/2013 16:15

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.4	2.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Acenaphthylene	ND	5.4	2.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Acetophenone	ND	11	3.7	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Aniline	ND	5.4	2.5	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Anthracene	ND	5.4	2.6	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Benzo(a)anthracene	ND	5.4	2.5	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Benzo(a)pyrene	ND	5.4	3.1	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Benzo(b)fluoranthene	ND	5.4	2.3	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Benzo(g,h,i)perylene	ND	5.4	5.4	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Benzo(k)fluoranthene	ND	5.4	3.4	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Bis(2-chloroethoxy)methane	ND	11	3.4	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Bis(2-chloroethyl)ether	ND	11	4.8	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Bis(2-chloroisopropyl)ether	ND	11	4.4	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Bis(2-Ethylhexyl)phthalate	ND	11	7.7	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
4-Bromophenylphenylether	ND	11	4.1	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Butylbenzylphthalate	ND	11	2.8	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
4-Chloroaniline	ND	11	3.1	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2-Chloronaphthalene	ND	11	4.4	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2-Chlorophenol	ND	11	3.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Chrysene	ND	5.4	2.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Dibenz(a,h)anthracene	ND	5.4	5.4	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Dibenzofuran	ND	5.4	3.1	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Di-n-butylphthalate	ND	11	2.4	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
1,2-Dichlorobenzene	ND	5.4	3.8	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
1,3-Dichlorobenzene	ND	5.4	4.2	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
1,4-Dichlorobenzene	ND	5.4	4.1	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
3,3-Dichlorobenzidine	ND	11	6.0	µg/L	1	V-20, U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2,4-Dichlorophenol	ND	11	3.7	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Diethylphthalate	ND	11	3.1	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2,4-Dimethylphenol	ND	11	7.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Dimethylphthalate	ND	11	2.8	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2,4-Dinitrophenol	ND	11	3.5	µg/L	1	V-19, U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2,4-Dinitrotoluene	ND	11	3.3	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2,6-Dinitrotoluene	ND	11	2.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Di-n-octylphthalate	ND	11	7.4	µg/L	1	V-20, U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	11	5.2	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Fluoranthene	ND	5.4	2.2	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Fluorene	ND	5.4	2.6	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Hexachlorobenzene	ND	11	3.8	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Hexachlorobutadiene	ND	11	6.0	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Hexachloroethane	ND	5.4	4.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Indeno(1,2,3-cd)pyrene	ND	5.4	4.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Isophorone	ND	11	3.4	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2-Methylnaphthalene	ND	5.4	3.8	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR

Project Location: Newburyport, MA

Sample Description:

Work Order: 13F0934

Date Received: 6/26/2013

Field Sample #: MW-2

Sampled: 6/26/2013 16:15

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	11	3.4	µg/L	1	V-20, U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
3/4-Methylphenol	ND	11	3.4	µg/L	1	V-20, U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Naphthalene	ND	5.4	3.2	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Nitrobenzene	ND	11	3.8	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2-Nitrophenol	ND	11	3.6	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
4-Nitrophenol	ND	11	4.2	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Pentachlorophenol	ND	11	4.0	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Phenanthrene	ND	5.4	2.8	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Phenol	ND	11	1.6	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Pyrene	ND	5.4	2.8	µg/L	1	V-20, U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
1,2,4-Trichlorobenzene	ND	5.4	5.2	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2,4,5-Trichlorophenol	ND	11	3.0	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2,4,6-Trichlorophenol	ND	11	3.9	µg/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Surrogates	% Recovery		Recovery Limits		Flag					
2-Fluorophenol	55.8		15-110				6/27/13 12:44			
Phenol-d6	44.4		15-110				6/27/13 12:44			
Nitrobenzene-d5	77.3		30-130				6/27/13 12:44			
2-Fluorobiphenyl	79.5		30-130				6/27/13 12:44			
2,4,6-Tribromophenol	85.5		15-110				6/27/13 12:44			
p-Terphenyl-d14	87.3		30-130				6/27/13 12:44			

Project Location: Newburyport, MA

Sample Description:

Work Order: 13F0934

Date Received: 6/26/2013

Field Sample #: MW-2

Sampled: 6/26/2013 16:15

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.097	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Aroclor-1221 [1]	ND	0.20	0.16	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Aroclor-1232 [1]	ND	0.20	0.099	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Aroclor-1242 [1]	ND	0.20	0.068	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Aroclor-1248 [1]	ND	0.20	0.091	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Aroclor-1254 [1]	ND	0.20	0.11	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Aroclor-1260 [1]	ND	0.20	0.077	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Aroclor-1262 [1]	ND	0.20	0.12	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Aroclor-1268 [1]	ND	0.20	0.080	µg/L	1	U	SW-846 8082A	6/26/13	6/27/13 13:35	MJC
Surrogates	% Recovery		Recovery Limits		Flag					
Decachlorobiphenyl [1]	66.2		30-150				6/27/13 13:35			
Decachlorobiphenyl [2]	70.4		30-150				6/27/13 13:35			
Tetrachloro-m-xylene [1]	65.1		30-150				6/27/13 13:35			
Tetrachloro-m-xylene [2]	72.6		30-150				6/27/13 13:35			

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Project Location: Newburyport, MA

Sample Description:

Work Order: 13F0934

Date Received: 6/26/2013

Field Sample #: MW-2

Sampled: 6/26/2013 16:15

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	0.12	0.21	0.074	mg/L	1	J	SW-846 8100 Modified	6/26/13	6/27/13 10:21	SCS
Surrogates	% Recovery		Recovery Limits		Flag					
o-Terphenyl	81.5		40-140				6/27/13 10:21			

Project Location: Newburyport, MA

Sample Description:

Work Order: 13F0934

Date Received: 6/26/2013

Field Sample #: MW-2

Sampled: 6/26/2013 16:15

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	5.0	0.75	µg/L	5	U	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Arsenic	19	2.0	1.8	µg/L	5		SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Beryllium	ND	2.0	0.36	µg/L	5	U	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Cadmium	ND	2.5	0.15	µg/L	5	U	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Chromium	ND	5.0	3.3	µg/L	5	U	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Copper	2.5	25	0.40	µg/L	5	J	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Iron	9.8	0.050		mg/L	1		SW-846 6010C	6/26/13	6/27/13 9:30	OP
Lead	0.72	5.0	0.30	µg/L	5	J	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Mercury	ND	0.00010	0.000048	mg/L	1	U	SW-846 7470A	6/28/13	7/1/13 11:00	SAJ
Nickel	3.2	25	0.32	µg/L	5	J	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Selenium	ND	25	3.7	µg/L	5	U	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Silver	ND	2.5	0.31	µg/L	5	U	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Thallium	ND	1.0	0.18	µg/L	5	U	SW-846 6020A	6/26/13	6/27/13 13:05	KSH
Zinc	ND	50	9.6	µg/L	5	U	SW-846 6020A	6/26/13	6/27/13 13:05	KSH

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Project Location: Newburyport, MA

Sample Description:

Work Order: 13F0934

Date Received: 6/26/2013

Field Sample #: MW-2

Sampled: 6/26/2013 16:15

Sample ID: 13F0934-01

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	200	5.0	3.5	mg/L	5		SM18-20 4500 CL B	7/2/13	7/2/13 14:05	DJM
Chlorine, Residual	0.040	0.020	0.016	mg/L	1	MS-07	SM18-20 4500 CL G	6/27/13	6/27/13 11:55	VLA
Cyanide	ND	0.010	0.0080	mg/L	1	U	SM18-20 4500 CN E	7/2/13	7/2/13 14:30	VLA
Hexavalent Chromium	ND	0.0040	0.0039	mg/L	1	MS-07A, U	SW-846 7196A	6/27/13	6/27/13 14:15	CM
Phenol	ND	0.050	0.039	mg/L	1	U	EPA 420.1	6/27/13	6/27/13 13:00	LL
Total Suspended Solids	13	5.0	3.5	mg/L	1	R-04	SM18-20 2540D	6/27/13	6/27/13 10:30	LL

Sample Extraction Data**EPA 420.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075545	50.0	50.0	06/27/13

SM18-20 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075734	100		06/27/13

SM18-20 4500 CL B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B076068	100	100	07/02/13

SM18-20 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075764	100	100	06/27/13

SM18-20 4500 CN E

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075945	50.0	50.0	07/02/13

Prep Method: SW-846 3005A-SW-846 6010C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075715	50.0	50.0	06/26/13

Prep Method: SW-846 3005A-SW-846 6020A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075716	50.0	50.0	06/26/13

SW-846 7196A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075768	50.0	50.0	06/27/13

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075903	6.00	6.00	06/28/13

Sample Extraction Data

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075712	920	9.00	06/26/13

Prep Method: SW-846 3510C-SW-846 8100 Modified

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075653	950	1.00	06/26/13

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13F0934-01 [MW-2]	B075654	920	1.00	06/26/13

QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B075654 - SW-846 3510C										
Blank (B075654-BLK1)				Prepared: 06/26/13 Analyzed: 06/27/13						
Acenaphthene	ND	5.0	µg/L							U
Acenaphthylene	ND	5.0	µg/L							U
Acetophenone	ND	10	µg/L							U
Aniline	ND	5.0	µg/L							U
Anthracene	ND	5.0	µg/L							U
Benzo(a)anthracene	ND	5.0	µg/L							U
Benzo(a)pyrene	ND	5.0	µg/L							U
Benzo(b)fluoranthene	ND	5.0	µg/L							U
Benzo(g,h,i)perylene	ND	5.0	µg/L							U
Benzo(k)fluoranthene	ND	5.0	µg/L							U
Bis(2-chloroethoxy)methane	ND	10	µg/L							U
Bis(2-chloroethyl)ether	ND	10	µg/L							U
Bis(2-chloroisopropyl)ether	ND	10	µg/L							U
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							U
4-Bromophenylphenylether	ND	10	µg/L							U
Butylbenzylphthalate	ND	10	µg/L							U
4-Chloroaniline	ND	10	µg/L							U
2-Chloronaphthalene	ND	10	µg/L							U
2-Chlorophenol	ND	10	µg/L							U
Chrysene	ND	5.0	µg/L							U
Dibenz(a,h)anthracene	ND	5.0	µg/L							U
Dibenzofuran	ND	5.0	µg/L							U
Di-n-butylphthalate	ND	10	µg/L							U
1,2-Dichlorobenzene	ND	5.0	µg/L							U
1,3-Dichlorobenzene	ND	5.0	µg/L							U
1,4-Dichlorobenzene	ND	5.0	µg/L							U
3,3-Dichlorobenzidine	ND	10	µg/L							V-20, U
2,4-Dichlorophenol	ND	10	µg/L							U
Diethylphthalate	ND	10	µg/L							U
2,4-Dimethylphenol	ND	10	µg/L							U
Dimethylphthalate	ND	10	µg/L							U
2,4-Dinitrophenol	ND	10	µg/L							V-19, U
2,4-Dinitrotoluene	ND	10	µg/L							U
2,6-Dinitrotoluene	ND	10	µg/L							U
Di-n-octylphthalate	ND	10	µg/L							V-20, U
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							U
Fluoranthene	ND	5.0	µg/L							U
Fluorene	ND	5.0	µg/L							U
Hexachlorobenzene	ND	10	µg/L							U
Hexachlorobutadiene	ND	10	µg/L							U
Hexachloroethane	ND	5.0	µg/L							U
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							U
Isophorone	ND	10	µg/L							U
2-Methylnaphthalene	ND	5.0	µg/L							U
2-Methylphenol	ND	10	µg/L							V-20, U
3/4-Methylphenol	ND	10	µg/L							V-20, U
Naphthalene	ND	5.0	µg/L							U
Nitrobenzene	ND	10	µg/L							U
2-Nitrophenol	ND	10	µg/L							U
4-Nitrophenol	ND	10	µg/L							U
Pentachlorophenol	ND	10	µg/L							U
Phenanthrene	ND	5.0	µg/L							U

QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B075654 - SW-846 3510C
Blank (B075654-BLK1)

Prepared: 06/26/13 Analyzed: 06/27/13

Phenol	ND	10	µg/L							U
Pyrene	ND	5.0	µg/L							V-20, U
1,2,4-Trichlorobenzene	ND	5.0	µg/L							U
2,4,5-Trichlorophenol	ND	10	µg/L							U
2,4,6-Trichlorophenol	ND	10	µg/L							U
Surrogate: 2-Fluorophenol	95.1		µg/L	200		47.5	15-110			
Surrogate: Phenol-d6	77.1		µg/L	200		38.5	15-110			
Surrogate: Nitrobenzene-d5	59.3		µg/L	100		59.3	30-130			
Surrogate: 2-Fluorobiphenyl	57.6		µg/L	100		57.6	30-130			
Surrogate: 2,4,6-Tribromophenol	128		µg/L	200		64.0	15-110			
Surrogate: p-Terphenyl-d14	79.0		µg/L	100		79.0	30-130			

LCS (B075654-BS1)

Prepared: 06/26/13 Analyzed: 06/27/13

Acenaphthene	41.3	5.0	µg/L	50.0		82.6	40-140			
Acenaphthylene	41.3	5.0	µg/L	50.0		82.6	40-140			
Acetophenone	44.3	10	µg/L	50.0		88.7	40-140			
Aniline	43.9	5.0	µg/L	50.0		87.8	40-140			
Anthracene	44.3	5.0	µg/L	50.0		88.6	40-140			
Benzo(a)anthracene	44.4	5.0	µg/L	50.0		88.7	40-140			
Benzo(a)pyrene	46.3	5.0	µg/L	50.0		92.6	40-140			
Benzo(b)fluoranthene	47.6	5.0	µg/L	50.0		95.2	40-140			
Benzo(g,h,i)perylene	38.3	5.0	µg/L	50.0		76.6	40-140			
Benzo(k)fluoranthene	44.5	5.0	µg/L	50.0		89.0	40-140			
Bis(2-chloroethoxy)methane	45.6	10	µg/L	50.0		91.2	40-140			
Bis(2-chloroethyl)ether	44.4	10	µg/L	50.0		88.8	40-140			
Bis(2-chloroisopropyl)ether	43.7	10	µg/L	50.0		87.4	40-140			
Bis(2-Ethylhexyl)phthalate	46.4	10	µg/L	50.0		92.8	40-140			
4-Bromophenylphenylether	46.2	10	µg/L	50.0		92.4	40-140			
Butylbenzylphthalate	46.4	10	µg/L	50.0		92.9	40-140			
4-Chloroaniline	50.5	10	µg/L	50.0		101	15-140			†
2-Chloronaphthalene	36.1	10	µg/L	50.0		72.3	40-140			
2-Chlorophenol	41.3	10	µg/L	50.0		82.7	30-130			
Chrysene	41.4	5.0	µg/L	50.0		82.8	40-140			
Dibenz(a,h)anthracene	39.8	5.0	µg/L	50.0		79.7	40-140			
Dibenzofuran	40.9	5.0	µg/L	50.0		81.8	40-140			
Di-n-butylphthalate	45.1	10	µg/L	50.0		90.2	40-140			
1,2-Dichlorobenzene	35.0	5.0	µg/L	50.0		70.1	40-140			
1,3-Dichlorobenzene	34.3	5.0	µg/L	50.0		68.6	40-140			
1,4-Dichlorobenzene	34.9	5.0	µg/L	50.0		69.9	40-140			
3,3-Dichlorobenzidine	66.2	10	µg/L	70.0		94.6	40-140			V-06
2,4-Dichlorophenol	43.3	10	µg/L	50.0		86.6	30-130			
Diethylphthalate	44.5	10	µg/L	50.0		89.0	40-140			
2,4-Dimethylphenol	47.0	10	µg/L	50.0		93.9	30-130			
Dimethylphthalate	45.3	10	µg/L	50.0		90.7	40-140			
2,4-Dinitrophenol	36.5	10	µg/L	50.0		73.0	15-140			V-19 †
2,4-Dinitrotoluene	41.3	10	µg/L	50.0		82.6	40-140			
2,6-Dinitrotoluene	46.3	10	µg/L	50.0		92.5	40-140			
Di-n-octylphthalate	49.0	10	µg/L	50.0		98.1	40-140			V-06
1,2-Diphenylhydrazine (as Azobenzene)	51.0	10	µg/L	50.0		102	40-140			
Fluoranthene	40.6	5.0	µg/L	50.0		81.1	40-140			
Fluorene	41.5	5.0	µg/L	50.0		83.1	40-140			
Hexachlorobenzene	44.3	10	µg/L	50.0		88.5	40-140			

QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B075654 - SW-846 3510C
LCS (B075654-BS1)

Prepared: 06/26/13 Analyzed: 06/27/13

Hexachlorobutadiene	33.7	10	µg/L	50.0		67.4	40-140			
Hexachloroethane	34.7	5.0	µg/L	50.0		69.5	40-140			
Indeno(1,2,3-cd)pyrene	41.8	5.0	µg/L	50.0		83.6	40-140			
Isophorone	45.0	10	µg/L	50.0		90.1	40-140			
2-Methylnaphthalene	37.8	5.0	µg/L	50.0		75.6	40-140			
2-Methylphenol	46.0	10	µg/L	50.0		92.0	30-130			V-06
3/4-Methylphenol	120	10	µg/L	50.0		240 *	30-130			L-02, V-06
Naphthalene	38.6	5.0	µg/L	50.0		77.1	40-140			
Nitrobenzene	38.4	10	µg/L	50.0		76.8	40-140			
2-Nitrophenol	42.1	10	µg/L	50.0		84.3	30-130			
4-Nitrophenol	20.8	10	µg/L	50.0		41.7	15-140			†
Pentachlorophenol	33.8	10	µg/L	50.0		67.7	30-130			
Phenanthrene	44.2	5.0	µg/L	50.0		88.4	40-140			
Phenol	22.8	10	µg/L	50.0		45.6	15-140			†
Pyrene	47.5	5.0	µg/L	50.0		95.0	40-140			V-06
1,2,4-Trichlorobenzene	35.4	5.0	µg/L	50.0		70.9	40-140			
2,4,5-Trichlorophenol	41.0	10	µg/L	50.0		81.9	30-130			
2,4,6-Trichlorophenol	42.5	10	µg/L	50.0		85.0	30-130			
Surrogate: 2-Fluorophenol	114		µg/L	200		57.2	15-110			
Surrogate: Phenol-d6	92.7		µg/L	200		46.4	15-110			
Surrogate: Nitrobenzene-d5	76.6		µg/L	100		76.6	30-130			
Surrogate: 2-Fluorobiphenyl	76.5		µg/L	100		76.5	30-130			
Surrogate: 2,4,6-Tribromophenol	162		µg/L	200		80.8	15-110			
Surrogate: p-Terphenyl-d14	96.0		µg/L	100		96.0	30-130			

LCS Dup (B075654-BS1)

Prepared: 06/26/13 Analyzed: 06/27/13

Acenaphthene	40.4	5.0	µg/L	50.0		80.7	40-140	2.28	20	
Acenaphthylene	40.9	5.0	µg/L	50.0		81.8	40-140	0.973	20	
Acetophenone	40.0	10	µg/L	50.0		80.1	40-140	10.2	20	
Aniline	39.8	5.0	µg/L	50.0		79.6	40-140	9.84	20	
Anthracene	43.2	5.0	µg/L	50.0		86.5	40-140	2.42	20	
Benzo(a)anthracene	43.5	5.0	µg/L	50.0		87.1	40-140	1.89	20	
Benzo(a)pyrene	45.6	5.0	µg/L	50.0		91.1	40-140	1.59	20	
Benzo(b)fluoranthene	49.0	5.0	µg/L	50.0		98.1	40-140	2.92	20	
Benzo(g,h,i)perylene	38.5	5.0	µg/L	50.0		77.0	40-140	0.469	20	
Benzo(k)fluoranthene	45.7	5.0	µg/L	50.0		91.5	40-140	2.77	20	
Bis(2-chloroethoxy)methane	44.1	10	µg/L	50.0		88.1	40-140	3.41	20	
Bis(2-chloroethyl)ether	42.2	10	µg/L	50.0		84.3	40-140	5.11	20	
Bis(2-chloroisopropyl)ether	40.9	10	µg/L	50.0		81.8	40-140	6.57	20	
Bis(2-Ethylhexyl)phthalate	44.0	10	µg/L	50.0		87.9	40-140	5.36	20	
4-Bromophenylphenylether	40.8	10	µg/L	50.0		81.7	40-140	12.2	20	
Butylbenzylphthalate	42.8	10	µg/L	50.0		85.5	40-140	8.25	20	
4-Chloroaniline	46.1	10	µg/L	50.0		92.3	15-140	9.06	20	†
2-Chloronaphthalene	34.0	10	µg/L	50.0		68.0	40-140	6.10	20	
2-Chlorophenol	38.5	10	µg/L	50.0		77.0	30-130	7.06	20	
Chrysene	40.5	5.0	µg/L	50.0		81.0	40-140	2.12	20	
Dibenz(a,h)anthracene	40.9	5.0	µg/L	50.0		81.8	40-140	2.60	20	
Dibenzofuran	39.6	5.0	µg/L	50.0		79.2	40-140	3.26	20	
Di-n-butylphthalate	48.1	10	µg/L	50.0		96.1	40-140	6.35	20	
1,2-Dichlorobenzene	35.2	5.0	µg/L	50.0		70.5	40-140	0.569	20	
1,3-Dichlorobenzene	34.7	5.0	µg/L	50.0		69.4	40-140	1.16	20	
1,4-Dichlorobenzene	35.8	5.0	µg/L	50.0		71.6	40-140	2.40	20	

QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B075654 - SW-846 3510C										
LCS Dup (B075654-BSD1)					Prepared: 06/26/13 Analyzed: 06/27/13					
3,3-Dichlorobenzidine	64.0	10	µg/L	70.0		91.4	40-140	3.36	20	V-06
2,4-Dichlorophenol	40.1	10	µg/L	50.0		80.1	30-130	7.75	20	
Diethylphthalate	42.6	10	µg/L	50.0		85.3	40-140	4.25	20	
2,4-Dimethylphenol	42.2	10	µg/L	50.0		84.4	30-130	10.7	20	
Dimethylphthalate	43.6	10	µg/L	50.0		87.1	40-140	3.98	20	
2,4-Dinitrophenol	38.0	10	µg/L	50.0		76.0	15-140	4.05	20	V-19 †
2,4-Dinitrotoluene	41.5	10	µg/L	50.0		83.0	40-140	0.459	20	
2,6-Dinitrotoluene	43.6	10	µg/L	50.0		87.2	40-140	5.92	20	
Di-n-octylphthalate	59.8	10	µg/L	50.0		120	40-140	19.7	20	V-06
1,2-Diphenylhydrazine (as Azobenzene)	45.8	10	µg/L	50.0		91.5	40-140	10.8	20	
Fluoranthene	47.3	5.0	µg/L	50.0		94.6	40-140	15.3	20	
Fluorene	40.9	5.0	µg/L	50.0		81.8	40-140	1.53	20	
Hexachlorobenzene	40.8	10	µg/L	50.0		81.6	40-140	8.18	20	
Hexachlorobutadiene	34.0	10	µg/L	50.0		68.0	40-140	0.827	20	
Hexachloroethane	34.7	5.0	µg/L	50.0		69.4	40-140	0.0864	20	
Indeno(1,2,3-cd)pyrene	42.3	5.0	µg/L	50.0		84.7	40-140	1.26	20	
Isophorone	41.0	10	µg/L	50.0		81.9	40-140	9.51	20	
2-Methylnaphthalene	35.4	5.0	µg/L	50.0		70.8	40-140	6.55	20	
2-Methylphenol	40.7	10	µg/L	50.0		81.3	30-130	12.3	20	V-06
3/4-Methylphenol	109	10	µg/L	50.0		218 *	30-130	9.87	20	L-02, V-06
Naphthalene	37.4	5.0	µg/L	50.0		74.8	40-140	3.00	20	
Nitrobenzene	36.9	10	µg/L	50.0		73.8	40-140	3.93	20	
2-Nitrophenol	40.2	10	µg/L	50.0		80.5	30-130	4.64	20	
4-Nitrophenol	23.1	10	µg/L	50.0		46.1	15-140	10.2	20	†
Pentachlorophenol	35.5	10	µg/L	50.0		71.0	30-130	4.79	20	
Phenanthrene	43.1	5.0	µg/L	50.0		86.2	40-140	2.57	20	
Phenol	20.4	10	µg/L	50.0		40.7	15-140	11.3	20	†
Pyrene	39.8	5.0	µg/L	50.0		79.5	40-140	17.8	20	V-06
1,2,4-Trichlorobenzene	35.6	5.0	µg/L	50.0		71.2	40-140	0.450	20	
2,4,5-Trichlorophenol	39.8	10	µg/L	50.0		79.5	30-130	2.95	20	
2,4,6-Trichlorophenol	40.6	10	µg/L	50.0		81.2	30-130	4.52	20	
Surrogate: 2-Fluorophenol	115		µg/L	200		57.7	15-110			
Surrogate: Phenol-d6	82.8		µg/L	200		41.4	15-110			
Surrogate: Nitrobenzene-d5	76.2		µg/L	100		76.2	30-130			
Surrogate: 2-Fluorobiphenyl	77.4		µg/L	100		77.4	30-130			
Surrogate: 2,4,6-Tribromophenol	169		µg/L	200		84.6	15-110			
Surrogate: p-Terphenyl-d14	84.9		µg/L	100		84.9	30-130			

QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B075712 - SW-846 3510C
Blank (B075712-BLK1)

Prepared: 06/26/13 Analyzed: 06/27/13

Aroclor-1016	ND	0.040	µg/L							U
Aroclor-1016 [2C]	ND	0.040	µg/L							U
Aroclor-1221	ND	0.040	µg/L							U
Aroclor-1221 [2C]	ND	0.040	µg/L							U
Aroclor-1232	ND	0.040	µg/L							U
Aroclor-1232 [2C]	ND	0.040	µg/L							U
Aroclor-1242	ND	0.040	µg/L							U
Aroclor-1242 [2C]	ND	0.040	µg/L							U
Aroclor-1248	ND	0.040	µg/L							U
Aroclor-1248 [2C]	ND	0.040	µg/L							U
Aroclor-1254	ND	0.040	µg/L							U
Aroclor-1254 [2C]	ND	0.040	µg/L							U
Aroclor-1260	ND	0.040	µg/L							U
Aroclor-1260 [2C]	ND	0.040	µg/L							U
Aroclor-1262	ND	0.040	µg/L							U
Aroclor-1262 [2C]	ND	0.040	µg/L							U
Aroclor-1268	ND	0.040	µg/L							U
Aroclor-1268 [2C]	ND	0.040	µg/L							U
Surrogate: Decachlorobiphenyl	1.04		µg/L	2.00		52.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.32		µg/L	2.00		65.8	30-150			
Surrogate: Tetrachloro-m-xylene	1.09		µg/L	2.00		54.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.19		µg/L	2.00		59.4	30-150			

LCS (B075712-BS1)

Prepared: 06/26/13 Analyzed: 06/27/13

Aroclor-1016	0.51	0.20	µg/L	0.500		102	40-140			
Aroclor-1016 [2C]	0.48	0.20	µg/L	0.500		95.8	40-140			
Aroclor-1260	0.47	0.20	µg/L	0.500		93.6	40-140			
Aroclor-1260 [2C]	0.47	0.20	µg/L	0.500		95.0	40-140			
Surrogate: Decachlorobiphenyl	1.45		µg/L	2.00		72.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.54		µg/L	2.00		77.2	30-150			
Surrogate: Tetrachloro-m-xylene	1.55		µg/L	2.00		77.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.72		µg/L	2.00		85.9	30-150			

LCS Dup (B075712-BSD1)

Prepared: 06/26/13 Analyzed: 06/27/13

Aroclor-1016	0.47	0.20	µg/L	0.500		94.3	40-140	7.65	20	
Aroclor-1016 [2C]	0.44	0.20	µg/L	0.500		87.9	40-140	8.56	20	
Aroclor-1260	0.44	0.20	µg/L	0.500		87.2	40-140	7.11	20	
Aroclor-1260 [2C]	0.44	0.20	µg/L	0.500		89.0	40-140	6.53	20	
Surrogate: Decachlorobiphenyl	1.44		µg/L	2.00		72.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.54		µg/L	2.00		77.2	30-150			
Surrogate: Tetrachloro-m-xylene	1.35		µg/L	2.00		67.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.50		µg/L	2.00		75.0	30-150			

QUALITY CONTROL
Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B075653 - SW-846 3510C										
Blank (B075653-BLK1)				Prepared: 06/26/13 Analyzed: 06/27/13						
TPH (C9-C36)	0.081	0.20	mg/L							J
Surrogate: o-Terphenyl	0.0689		mg/L	0.100		68.9	40-140			
LCS (B075653-BS1)				Prepared: 06/26/13 Analyzed: 06/27/13						
TPH (C9-C36)	0.741	0.20	mg/L	1.00		74.1	40-140			
Surrogate: o-Terphenyl	0.0844		mg/L	0.100		84.4	40-140			
LCS Dup (B075653-BSD1)				Prepared: 06/26/13 Analyzed: 06/27/13						
TPH (C9-C36)	0.835	0.20	mg/L	1.00		83.5	40-140	11.9	30	
Surrogate: o-Terphenyl	0.0914		mg/L	0.100		91.4	40-140			

QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B075715 - SW-846 3005A										
Blank (B075715-BLK1)				Prepared: 06/26/13 Analyzed: 06/27/13						
Iron	ND	0.050	mg/L							
LCS (B075715-BS1)				Prepared: 06/26/13 Analyzed: 06/27/13						
Iron	0.483	0.050	mg/L	0.500		96.7	80-120			
LCS Dup (B075715-BSD1)				Prepared: 06/26/13 Analyzed: 06/27/13						
Iron	0.504	0.050	mg/L	0.500		101	80-120	4.17	20	
Batch B075716 - SW-846 3005A										
Blank (B075716-BLK1)				Prepared: 06/26/13 Analyzed: 06/27/13						
Antimony	ND	5.0	µg/L							U
Arsenic	ND	2.0	µg/L							U
Beryllium	ND	2.0	µg/L							U
Cadmium	ND	2.5	µg/L							U
Chromium	ND	5.0	µg/L							U
Copper	ND	25	µg/L							U
Lead	ND	5.0	µg/L							U
Nickel	ND	25	µg/L							U
Selenium	ND	25	µg/L							U
Silver	ND	2.5	µg/L							U
Thallium	0.39	1.0	µg/L							J
Zinc	ND	50	µg/L							U
LCS (B075716-BS1)				Prepared: 06/26/13 Analyzed: 06/27/13						
Antimony	495	10	µg/L	500		98.9	80-120			
Arsenic	483	4.0	µg/L	500		96.5	80-120			
Beryllium	468	4.0	µg/L	500		93.6	80-120			
Cadmium	485	5.0	µg/L	500		96.9	80-120			
Chromium	481	10	µg/L	500		96.2	80-120			
Copper	485	50	µg/L	500		97.0	80-120			
Lead	494	10	µg/L	500		98.8	80-120			
Nickel	476	50	µg/L	500		95.3	80-120			
Selenium	475	50	µg/L	500		95.0	80-120			
Silver	497	5.0	µg/L	500		99.5	80-120			
Thallium	491	2.0	µg/L	500		98.3	80-120			
Zinc	491	100	µg/L	500		98.1	80-120			
LCS Dup (B075716-BSD1)				Prepared: 06/26/13 Analyzed: 06/27/13						
Antimony	533	10	µg/L	500		107	80-120	7.43	20	
Arsenic	515	4.0	µg/L	500		103	80-120	6.55	20	
Beryllium	499	4.0	µg/L	500		99.9	80-120	6.46	20	
Cadmium	521	5.0	µg/L	500		104	80-120	7.32	20	
Chromium	519	10	µg/L	500		104	80-120	7.47	20	
Copper	518	50	µg/L	500		104	80-120	6.64	20	
Lead	529	10	µg/L	500		106	80-120	6.80	20	
Nickel	506	50	µg/L	500		101	80-120	6.08	20	
Selenium	507	50	µg/L	500		101	80-120	6.42	20	
Silver	536	5.0	µg/L	500		107	80-120	7.51	20	
Thallium	524	2.0	µg/L	500		105	80-120	6.40	20	
Zinc	523	100	µg/L	500		105	80-120	6.39	20	

QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B075903 - SW-846 7470A Prep
Blank (B075903-BLK1)

Prepared: 06/28/13 Analyzed: 07/01/13

Mercury	ND	0.00010	mg/L							U
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LCS (B075903-BS1)

Prepared: 06/28/13 Analyzed: 07/01/13

Mercury	0.00198	0.00010	mg/L	0.00200		99.2	80-120			
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LCS Dup (B075903-BSD1)

Prepared: 06/28/13 Analyzed: 07/01/13

Mercury	0.00195	0.00010	mg/L	0.00200		97.3	80-120	1.86	20	
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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B075545 - EPA 420.1										
Blank (B075545-BLK1)				Prepared: 06/25/13 Analyzed: 06/27/13						
Phenol	ND	0.050	mg/L							U
LCS (B075545-BS1)				Prepared: 06/25/13 Analyzed: 06/27/13						
Phenol	0.48	0.050	mg/L	0.500		95.1	80.2-133			
LCS Dup (B075545-BSD1)				Prepared: 06/25/13 Analyzed: 06/27/13						
Phenol	0.52	0.050	mg/L	0.500		104	80.2-133	9.00	20.7	
Batch B075734 - SM18-20 2540D										
Blank (B075734-BLK1)				Prepared & Analyzed: 06/27/13						
Total Suspended Solids	ND	2.5	mg/L							U
LCS (B075734-BS1)				Prepared & Analyzed: 06/27/13						
Total Suspended Solids	212	10	mg/L	200		106	78.1-112			
Duplicate (B075734-DUP2)				Prepared & Analyzed: 06/27/13						
Total Suspended Solids	11	5.0	mg/L		13			16.7 *	5	R-04
Batch B075764 - SM18-20 4500 CL G										
Blank (B075764-BLK1)				Prepared & Analyzed: 06/27/13						
Chlorine, Residual	ND	0.020	mg/L							U
LCS (B075764-BS1)				Prepared & Analyzed: 06/27/13						
Chlorine, Residual	1.3	0.020	mg/L	1.14		111	79.3-125			
LCS Dup (B075764-BSD1)				Prepared & Analyzed: 06/27/13						
Chlorine, Residual	1.2	0.020	mg/L	1.14		106	79.3-125	4.53	15.3	
Duplicate (B075764-DUP1)				Prepared & Analyzed: 06/27/13						
Chlorine, Residual	0.027	0.020	mg/L		0.040			38.2	47.5	
Matrix Spike (B075764-MS1)				Prepared & Analyzed: 06/27/13						
Chlorine, Residual	ND	0.020	mg/L	1.00	0.040	-4.01 *	0-165			MS-07, U
Batch B075768 - SW-846 7196A										
Blank (B075768-BLK1)				Prepared & Analyzed: 06/27/13						
Hexavalent Chromium	ND	0.0040	mg/L							U

QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B075768 - SW-846 7196A										
LCS (B075768-BS1)				Prepared & Analyzed: 06/27/13						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		99.9	80-120			
LCS Dup (B075768-BSD1)				Prepared & Analyzed: 06/27/13						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		105	80-120	4.78	20	
Duplicate (B075768-DUP1)				Source: 13F0934-01		Prepared & Analyzed: 06/27/13				
Hexavalent Chromium	ND	0.0040	mg/L		ND			NC	20	U
Matrix Spike (B075768-MS1)				Source: 13F0934-01		Prepared & Analyzed: 06/27/13				
Hexavalent Chromium	ND	0.0040	mg/L	0.100	ND	*	75-125			MS-07A, U
Matrix Spike Dup (B075768-MSD1)				Source: 13F0934-01		Prepared & Analyzed: 06/27/13				
Hexavalent Chromium	ND	0.0040	mg/L	0.100	ND	*	75-125		20	MS-07A, U
Batch B075945 - SM18-20 4500 CN E										
Blank (B075945-BLK1)				Prepared & Analyzed: 07/02/13						
Cyanide	ND	0.010	mg/L							U
LCS (B075945-BS1)				Prepared & Analyzed: 07/02/13						
Cyanide	0.65	0.010	mg/L	0.744		86.8	69.9-121			
LCS Dup (B075945-BSD1)				Prepared & Analyzed: 07/02/13						
Cyanide	0.66	0.010	mg/L	0.744		88.5	69.9-121	1.95	17	
Duplicate (B075945-DUP1)				Source: 13F0934-01		Prepared & Analyzed: 07/02/13				
Cyanide	ND	0.010	mg/L		ND			NC	20	U
Matrix Spike (B075945-MS1)				Source: 13F0934-01		Prepared & Analyzed: 07/02/13				
Cyanide	0.35	0.010	mg/L	0.364	ND	94.9	29.1-155			
Batch B076068 - SM18-20 4500 CL B										
Blank (B076068-BLK1)				Prepared & Analyzed: 07/02/13						
Chloride	ND	1.0	mg/L							U
LCS (B076068-BS1)				Prepared & Analyzed: 07/02/13						
Chloride	32	1.0	mg/L	32.4		98.2	84.4-115			
LCS Dup (B076068-BSD1)				Prepared & Analyzed: 07/02/13						
Chloride	32	1.0	mg/L	32.4		99.7	84.4-115	1.47	8.29	

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-07A	Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
R-04	Duplicate relative percent difference (RPD) is a less useful indicator of sample precision for sample results that are <5 times the reporting limit (RL).
U	Analyte included in the analysis, but not detected
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 420.1 in Water</i>	
Phenol	CT,MA,NH,NY,RI,NC,ME,VA
<i>SM18-20 2540D in Water</i>	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
<i>SM18-20 4500 CL B in Water</i>	
Chloride	NH,CT,MA,NY,RI,NC,ME,VA
<i>SM18-20 4500 CL G in Water</i>	
Chlorine, Residual	CT,MA,RI,ME
<i>SM18-20 4500 CN E in Water</i>	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA
<i>SW-846 6010C in Water</i>	
Iron	CT,NH,NY,ME,NC,VA
<i>SW-846 6020A in Water</i>	
Antimony	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,NC,ME,VA
Beryllium	CT,NH,NY,NC,ME,VA
Cadmium	CT,NH,NY,RI,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Copper	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NH,NY,NC,ME,VA
Thallium	CT,NH,NY,NC,ME,VA
Zinc	CT,NH,NY,NC,ME,VA
<i>SW-846 7196A in Water</i>	
Hexavalent Chromium	CT,NH,NY,NC,ME,VA
<i>SW-846 7470A in Water</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8082A in Water</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NC

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1262 [2C]	NC
Aroclor-1268	NC
Aroclor-1268 [2C]	NC
SW-846 8270D in Water	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

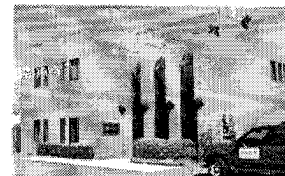
Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012



Page 28 of 29

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



Sample Receipt Checklist

CLIENT NAME: Wilcox & Barton RECEIVED BY: RLF DATE: 6/26/13

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

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

If not, explain:

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

If not, explain:

4) How were the samples received:

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

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

Temperature °C by Temp blank _____ Temperature °C by Temp gun 4.7°C

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

Who was notified _____ Date _____ Time _____

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

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: ☒ Yes No N/A

9) Do all samples have the proper Base pH: ☒ Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No ☒ N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	6	8 oz amber/clear jar	
500 mL Amber	9	4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic	1	Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic	2	Plastic Bag / Ziploc	
40 mL Vial - type listed below		PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____
Bisulfate _____ # DI Water _____
Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Doc# 277

Rev. 3 May 2012

July 10, 2013

Amy Roth
Wilcox & Barton
1115 Route 100B, Suite 200
Moretown, VT 05660

Project Location: Newburyport, MA
Client Job Number:
Project Number: CHART0001
Laboratory Work Order Number: 13G0085

Enclosed are results of analyses for samples received by the laboratory on July 2, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "James Georgantas". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James M. Georgantas
Project Manager

Wilcox & Barton
1115 Route 100B, Suite 200
Moretown, VT 05660
ATTN: Amy Roth

REPORT DATE: 7/10/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: CHART0001

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13G0085

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

PROJECT LOCATION: Newburyport, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-2	13G0085-01	Ground Water		SW-846 8260C	
MW-1	13G0085-02	Ground Water		SW-846 8260C	
MW-5	13G0085-03	Ground Water		SW-846 8260C	

CASE NARRATIVE SUMMARY

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

SW-846 8260C**Qualifications:**

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:**1,2,3-Trichlorobenzene, Naphthalene**B076295-BS1, B076295-BSD1

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Chloromethane, Dichlorodifluoromethane (Freon 12), Vinyl Chloride**13G0085-01[MW-2], 13G0085-02[MW-1], 13G0085-03[MW-5], B076295-BLK1, B076295-BS1, B076295-BSD1

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**1,2-Dibromo-3-chloropropane (DBCP)**B076295-BSD1

Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.

Analyte & Samples(s) Qualified:**2-Butanone (MEK), Bromomethane**B076295-BSD1, B076295-BS1

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**1,4-Dioxane, Chloroethane**13G0085-01[MW-2], 13G0085-02[MW-1], 13G0085-03[MW-5], B076295-BLK1, B076295-BS1, B076295-BSD1

Elevated reporting limit based on lowest point in calibration.
MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:**Carbon Disulfide, Methylene Chloride**13G0085-01[MW-2], 13G0085-02[MW-1], 13G0085-03[MW-5]

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Chloromethane**13G0085-01[MW-2], 13G0085-02[MW-1], 13G0085-03[MW-5], B076295-BLK1, B076295-BS1, B076295-BSD1

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**1,4-Dioxane**13G0085-01[MW-2], 13G0085-02[MW-1], 13G0085-03[MW-5], B076295-BLK1, B076295-BS1, B076295-BSD1

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

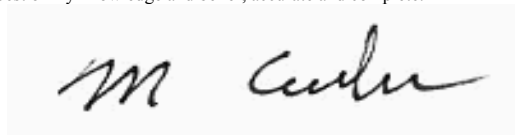
Analyte & Samples(s) Qualified:**1,2,3-Trichlorobenzene, 2-Butanone (MEK), Naphthalene**B076295-BS1, B076295-BSD1

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those 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.



Michael A. Erickson
Laboratory Director

Project Location: Newburyport, MA

Sample Description:

Work Order: 13G0085

Date Received: 7/2/2013

Field Sample #: MW-2

Sampled: 6/26/2013 16:30

Sample ID: 13G0085-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	4.7	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Benzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Bromobenzene	ND	1.0	0.044	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Bromochloromethane	ND	1.0	0.22	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Bromodichloromethane	ND	1.0	0.088	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Bromoform	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Bromomethane	ND	2.0	0.94	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
2-Butanone (MEK)	ND	10	2.4	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
n-Butylbenzene	ND	1.0	0.054	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
sec-Butylbenzene	ND	1.0	0.084	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
tert-Butylbenzene	ND	1.0	0.096	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.075	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Carbon Disulfide	ND	5.0	1.0	µg/L	1	RL-07, U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Carbon Tetrachloride	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Chlorodibromomethane	ND	0.50	0.054	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Chloroethane	ND	2.0	0.16	µg/L	1	R-05, U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Chloroform	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Chloromethane	ND	2.0	0.32	µg/L	1	L-04, V-05, U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
2-Chlorotoluene	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
4-Chlorotoluene	ND	1.0	0.074	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	0.34	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.089	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Dibromomethane	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2-Dichlorobenzene	ND	1.0	0.076	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,3-Dichlorobenzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,4-Dichlorobenzene	ND	1.0	0.046	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.12	µg/L	1	L-04, U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2-Dichloroethane	ND	1.0	0.19	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,1-Dichloroethylene	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2-Dichloropropane	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,3-Dichloropropane	ND	0.50	0.099	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
2,2-Dichloropropane	ND	1.0	0.072	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,1-Dichloropropene	ND	0.50	0.13	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
cis-1,3-Dichloropropene	ND	0.40	0.062	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
trans-1,3-Dichloropropene	ND	0.40	0.056	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Diethyl Ether	ND	2.0	0.22	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Diisopropyl Ether (DIPE)	ND	0.50	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,4-Dioxane	ND	50	26	µg/L	1	R-05, V-16, U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Ethylbenzene	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH

Project Location: Newburyport, MA

Sample Description:

Work Order: 13G0085

Date Received: 7/2/2013

Field Sample #: MW-2

Sampled: 6/26/2013 16:30

Sample ID: 13G0085-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	0.17	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1	RL-07, U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Naphthalene	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
n-Propylbenzene	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Styrene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Tetrachloroethylene	ND	1.0	0.080	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Tetrahydrofuran	ND	2.0	1.1	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Toluene	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2,3-Trichlorobenzene	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,1,1-Trichloroethane	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,1,2-Trichloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Trichloroethylene	ND	1.0	0.077	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2,3-Trichloropropane	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1	L-04, U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
m+p Xylene	ND	2.0	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
o-Xylene	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	107	70-130	7/8/13 17:24
Toluene-d8	98.7	70-130	7/8/13 17:24
4-Bromofluorobenzene	96.3	70-130	7/8/13 17:24

Project Location: Newburyport, MA

Sample Description:

Work Order: 13G0085

Date Received: 7/2/2013

Field Sample #: MW-1

Sampled: 6/26/2013 17:30

Sample ID: 13G0085-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	4.7	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Benzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Bromobenzene	ND	1.0	0.044	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Bromochloromethane	ND	1.0	0.22	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Bromodichloromethane	ND	1.0	0.088	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Bromoform	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Bromomethane	ND	2.0	0.94	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
2-Butanone (MEK)	ND	10	2.4	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
n-Butylbenzene	ND	1.0	0.054	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
sec-Butylbenzene	ND	1.0	0.084	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
tert-Butylbenzene	ND	1.0	0.096	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.075	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Carbon Disulfide	ND	5.0	1.0	µg/L	1	RL-07, U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Carbon Tetrachloride	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Chlorodibromomethane	ND	0.50	0.054	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Chloroethane	ND	2.0	0.16	µg/L	1	R-05, U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Chloroform	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Chloromethane	ND	2.0	0.32	µg/L	1	L-04, V-05, U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
2-Chlorotoluene	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
4-Chlorotoluene	ND	1.0	0.074	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	0.34	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.089	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Dibromomethane	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2-Dichlorobenzene	ND	1.0	0.076	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,3-Dichlorobenzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,4-Dichlorobenzene	ND	1.0	0.046	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.12	µg/L	1	L-04, U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2-Dichloroethane	ND	1.0	0.19	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,1-Dichloroethylene	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
cis-1,2-Dichloroethylene	0.40	1.0	0.15	µg/L	1	J	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
trans-1,2-Dichloroethylene	0.73	1.0	0.15	µg/L	1	J	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2-Dichloropropane	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,3-Dichloropropane	ND	0.50	0.099	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
2,2-Dichloropropane	ND	1.0	0.072	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,1-Dichloropropene	ND	0.50	0.13	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
cis-1,3-Dichloropropene	ND	0.40	0.062	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
trans-1,3-Dichloropropene	ND	0.40	0.056	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Diethyl Ether	ND	2.0	0.22	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Diisopropyl Ether (DIPE)	ND	0.50	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,4-Dioxane	ND	50	26	µg/L	1	R-05, V-16, U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Ethylbenzene	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH

Project Location: Newburyport, MA

Sample Description:

Work Order: 13G0085

Date Received: 7/2/2013

Field Sample #: MW-1

Sampled: 6/26/2013 17:30

Sample ID: 13G0085-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	0.17	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1	RL-07, U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Naphthalene	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
n-Propylbenzene	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Styrene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Tetrachloroethylene	ND	1.0	0.080	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Tetrahydrofuran	ND	2.0	1.1	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Toluene	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2,3-Trichlorobenzene	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,1,1-Trichloroethane	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,1,2-Trichloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Trichloroethylene	ND	1.0	0.077	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2,3-Trichloropropane	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
Vinyl Chloride	0.29	2.0	0.13	µg/L	1	L-04, J	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
m+p Xylene	ND	2.0	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH
o-Xylene	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	104	70-130	7/8/13 18:03
Toluene-d8	100	70-130	7/8/13 18:03
4-Bromofluorobenzene	97.7	70-130	7/8/13 18:03

Project Location: Newburyport, MA

Sample Description:

Work Order: 13G0085

Date Received: 7/2/2013

Field Sample #: MW-5

Sampled: 6/26/2013 18:00

Sample ID: 13G0085-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	4.7	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Benzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Bromobenzene	ND	1.0	0.044	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Bromochloromethane	ND	1.0	0.22	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Bromodichloromethane	ND	1.0	0.088	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Bromoform	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Bromomethane	ND	2.0	0.94	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
2-Butanone (MEK)	ND	10	2.4	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
n-Butylbenzene	ND	1.0	0.054	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
sec-Butylbenzene	ND	1.0	0.084	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
tert-Butylbenzene	ND	1.0	0.096	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.075	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Carbon Disulfide	ND	5.0	1.0	µg/L	1	RL-07, U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Carbon Tetrachloride	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Chlorodibromomethane	ND	0.50	0.054	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Chloroethane	ND	2.0	0.16	µg/L	1	R-05, U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Chloroform	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Chloromethane	ND	2.0	0.32	µg/L	1	L-04, V-05, U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
2-Chlorotoluene	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
4-Chlorotoluene	ND	1.0	0.074	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	0.34	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.089	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Dibromomethane	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2-Dichlorobenzene	ND	1.0	0.076	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,3-Dichlorobenzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,4-Dichlorobenzene	ND	1.0	0.046	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.12	µg/L	1	L-04, U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2-Dichloroethane	ND	1.0	0.19	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,1-Dichloroethylene	ND	1.0	0.21	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2-Dichloropropane	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,3-Dichloropropane	ND	0.50	0.099	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
2,2-Dichloropropane	ND	1.0	0.072	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,1-Dichloropropene	ND	0.50	0.13	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
cis-1,3-Dichloropropene	ND	0.40	0.062	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
trans-1,3-Dichloropropene	ND	0.40	0.056	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Diethyl Ether	ND	2.0	0.22	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Diisopropyl Ether (DIPE)	ND	0.50	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,4-Dioxane	ND	50	26	µg/L	1	R-05, V-16, U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Ethylbenzene	ND	1.0	0.092	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH

Project Location: Newburyport, MA

Sample Description:

Work Order: 13G0085

Date Received: 7/2/2013

Field Sample #: MW-5

Sampled: 6/26/2013 18:00

Sample ID: 13G0085-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.50	0.17	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1	RL-07, U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Naphthalene	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
n-Propylbenzene	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Styrene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Tetrachloroethylene	ND	1.0	0.080	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Tetrahydrofuran	ND	2.0	1.1	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Toluene	ND	1.0	0.090	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2,3-Trichlorobenzene	ND	2.0	0.14	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,1,1-Trichloroethane	ND	1.0	0.094	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,1,2-Trichloroethane	ND	1.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Trichloroethylene	ND	1.0	0.077	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2,3-Trichloropropane	ND	2.0	0.12	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1	L-04, U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
m+p Xylene	ND	2.0	0.18	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH
o-Xylene	ND	1.0	0.11	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	105	70-130	7/8/13 18:40
Toluene-d8	100	70-130	7/8/13 18:40
4-Bromofluorobenzene	101	70-130	7/8/13 18:40

Sample Extraction Data

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
13G0085-01 [MW-2]	B076295	5	5.00	07/08/13
13G0085-02 [MW-1]	B076295	5	5.00	07/08/13
13G0085-03 [MW-5]	B076295	5	5.00	07/08/13

QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B076295 - SW-846 5030B										
Blank (B076295-BLK1)				Prepared & Analyzed: 07/08/13						
Acetone	ND	10	µg/L							U
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							U
Benzene	ND	1.0	µg/L							U
Bromobenzene	ND	1.0	µg/L							U
Bromochloromethane	ND	1.0	µg/L							U
Bromodichloromethane	ND	1.0	µg/L							U
Bromoform	ND	1.0	µg/L							U
Bromomethane	ND	2.0	µg/L							U
2-Butanone (MEK)	ND	10	µg/L							U
n-Butylbenzene	ND	1.0	µg/L							U
sec-Butylbenzene	ND	1.0	µg/L							U
tert-Butylbenzene	ND	1.0	µg/L							U
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							U
Carbon Disulfide	ND	5.0	µg/L							U
Carbon Tetrachloride	ND	1.0	µg/L							U
Chlorobenzene	ND	1.0	µg/L							U
Chlorodibromomethane	ND	0.50	µg/L							U
Chloroethane	ND	2.0	µg/L							R-05, U
Chloroform	ND	2.0	µg/L							U
Chloromethane	ND	2.0	µg/L							L-04, V-05, U
2-Chlorotoluene	ND	1.0	µg/L							U
4-Chlorotoluene	ND	1.0	µg/L							U
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L							U
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							U
Dibromomethane	ND	1.0	µg/L							U
1,2-Dichlorobenzene	ND	1.0	µg/L							U
1,3-Dichlorobenzene	ND	1.0	µg/L							U
1,4-Dichlorobenzene	ND	1.0	µg/L							U
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							L-04, U
1,1-Dichloroethane	ND	1.0	µg/L							U
1,2-Dichloroethane	ND	1.0	µg/L							U
1,1-Dichloroethylene	ND	1.0	µg/L							U
cis-1,2-Dichloroethylene	ND	1.0	µg/L							U
trans-1,2-Dichloroethylene	ND	1.0	µg/L							U
1,2-Dichloropropane	ND	1.0	µg/L							U
1,3-Dichloropropane	ND	0.50	µg/L							U
2,2-Dichloropropane	ND	1.0	µg/L							U
1,1-Dichloropropene	ND	0.50	µg/L							U
cis-1,3-Dichloropropene	ND	0.40	µg/L							U
trans-1,3-Dichloropropene	ND	0.40	µg/L							U
Diethyl Ether	ND	2.0	µg/L							U
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							U
1,4-Dioxane	ND	50	µg/L							R-05, V-16, U
Ethylbenzene	ND	1.0	µg/L							U
Hexachlorobutadiene	ND	0.50	µg/L							U
2-Hexanone (MBK)	ND	10	µg/L							U
Isopropylbenzene (Cumene)	ND	1.0	µg/L							U
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							U
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							U
Methylene Chloride	ND	5.0	µg/L							U
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							U
Naphthalene	ND	2.0	µg/L							U

QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B076295 - SW-846 5030B										
Blank (B076295-BLK1)				Prepared & Analyzed: 07/08/13						
n-Propylbenzene	ND	1.0	µg/L							U
Styrene	ND	1.0	µg/L							U
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							U
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							U
Tetrachloroethylene	ND	1.0	µg/L							U
Tetrahydrofuran	ND	2.0	µg/L							U
Toluene	ND	1.0	µg/L							U
1,2,3-Trichlorobenzene	ND	2.0	µg/L							U
1,2,4-Trichlorobenzene	ND	1.0	µg/L							U
1,1,1-Trichloroethane	ND	1.0	µg/L							U
1,1,2-Trichloroethane	ND	1.0	µg/L							U
Trichloroethylene	ND	1.0	µg/L							U
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							U
1,2,3-Trichloropropane	ND	2.0	µg/L							U
1,2,4-Trimethylbenzene	ND	1.0	µg/L							U
1,3,5-Trimethylbenzene	ND	1.0	µg/L							U
Vinyl Chloride	ND	2.0	µg/L							L-04, U
m+p Xylene	ND	2.0	µg/L							U
o-Xylene	ND	1.0	µg/L							U
Surrogate: 1,2-Dichloroethane-d4	27.2		µg/L	25.0		109	70-130			
Surrogate: Toluene-d8	25.0		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		µg/L	25.0		98.2	70-130			
LCS (B076295-BS1)				Prepared & Analyzed: 07/08/13						
Acetone	100	10	µg/L	100		100	40-160			†
tert-Amyl Methyl Ether (TAME)	11.8	0.50	µg/L	10.0		118	70-130			
Benzene	10.3	1.0	µg/L	10.0		103	70-130			
Bromobenzene	10.2	1.0	µg/L	10.0		102	70-130			
Bromochloromethane	11.9	1.0	µg/L	10.0		119	70-130			
Bromodichloromethane	10.4	1.0	µg/L	10.0		104	70-130			
Bromoform	9.76	1.0	µg/L	10.0		97.6	70-130			
Bromomethane	4.07	2.0	µg/L	10.0		40.7	40-160		L-14	†
2-Butanone (MEK)	122	10	µg/L	100		122	40-160		V-20	†
n-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130			
sec-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130			
tert-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130			
tert-Butyl Ethyl Ether (TBEE)	12.5	0.50	µg/L	10.0		125	70-130			
Carbon Disulfide	10.6	5.0	µg/L	10.0		106	70-130			
Carbon Tetrachloride	10.3	1.0	µg/L	10.0		103	70-130			
Chlorobenzene	10.6	1.0	µg/L	10.0		106	70-130			
Chlorodibromomethane	10.2	0.50	µg/L	10.0		102	70-130			
Chloroethane	10.2	2.0	µg/L	10.0		102	70-130			R-05
Chloroform	11.0	2.0	µg/L	10.0		110	70-130			
Chloromethane	1.64	2.0	µg/L	10.0		16.4 *	40-160			L-04, V-05, J †
2-Chlorotoluene	10.4	1.0	µg/L	10.0		104	70-130			
4-Chlorotoluene	10.7	1.0	µg/L	10.0		107	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	12.5	2.0	µg/L	10.0		125	70-130			
1,2-Dibromoethane (EDB)	10.8	0.50	µg/L	10.0		108	70-130			
Dibromomethane	10.6	1.0	µg/L	10.0		106	70-130			
1,2-Dichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130			
1,3-Dichlorobenzene	11.1	1.0	µg/L	10.0		111	70-130			
1,4-Dichlorobenzene	9.85	1.0	µg/L	10.0		98.5	70-130			

QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B076295 - SW-846 5030B										
LCS (B076295-BS1)				Prepared & Analyzed: 07/08/13						
Dichlorodifluoromethane (Freon 12)	3.72	2.0	µg/L	10.0		37.2	* 40-160			L-04 †
1,1-Dichloroethane	10.9	1.0	µg/L	10.0		109	70-130			
1,2-Dichloroethane	9.40	1.0	µg/L	10.0		94.0	70-130			
1,1-Dichloroethylene	9.11	1.0	µg/L	10.0		91.1	70-130			
cis-1,2-Dichloroethylene	10.6	1.0	µg/L	10.0		106	70-130			
trans-1,2-Dichloroethylene	11.0	1.0	µg/L	10.0		110	70-130			
1,2-Dichloropropane	10.1	1.0	µg/L	10.0		101	70-130			
1,3-Dichloropropane	10.6	0.50	µg/L	10.0		106	70-130			
2,2-Dichloropropane	11.1	1.0	µg/L	10.0		111	70-130			
1,1-Dichloropropene	10.8	0.50	µg/L	10.0		108	70-130			
cis-1,3-Dichloropropene	10.4	0.40	µg/L	10.0		104	70-130			
trans-1,3-Dichloropropene	11.3	0.40	µg/L	10.0		113	70-130			
Diethyl Ether	9.25	2.0	µg/L	10.0		92.5	70-130			
Diisopropyl Ether (DIPE)	12.8	0.50	µg/L	10.0		128	70-130			
1,4-Dioxane	86.6	50	µg/L	100		86.6	40-160			R-05, V-16 †
Ethylbenzene	9.88	1.0	µg/L	10.0		98.8	70-130			
Hexachlorobutadiene	9.88	0.50	µg/L	10.0		98.8	70-130			
2-Hexanone (MBK)	119	10	µg/L	100		119	40-160			†
Isopropylbenzene (Cumene)	10.0	1.0	µg/L	10.0		100	70-130			
p-Isopropyltoluene (p-Cymene)	11.1	1.0	µg/L	10.0		111	70-130			
Methyl tert-Butyl Ether (MTBE)	12.8	1.0	µg/L	10.0		128	70-130			
Methylene Chloride	10.8	5.0	µg/L	10.0		108	70-130			
4-Methyl-2-pentanone (MIBK)	118	10	µg/L	100		118	40-160			†
Naphthalene	14.9	2.0	µg/L	10.0		149	* 70-130			L-02, V-20
n-Propylbenzene	10.9	1.0	µg/L	10.0		109	70-130			
Styrene	9.89	1.0	µg/L	10.0		98.9	70-130			
1,1,1,2-Tetrachloroethane	9.75	1.0	µg/L	10.0		97.5	70-130			
1,1,1,2,2-Tetrachloroethane	10.5	0.50	µg/L	10.0		105	70-130			
Tetrachloroethylene	9.97	1.0	µg/L	10.0		99.7	70-130			
Tetrahydrofuran	12.2	2.0	µg/L	10.0		122	70-130			
Toluene	10.2	1.0	µg/L	10.0		102	70-130			
1,2,3-Trichlorobenzene	15.4	2.0	µg/L	10.0		154	* 70-130			L-02, V-20
1,2,4-Trichlorobenzene	11.3	1.0	µg/L	10.0		113	70-130			
1,1,1-Trichloroethane	10.1	1.0	µg/L	10.0		101	70-130			
1,1,2-Trichloroethane	10.3	1.0	µg/L	10.0		103	70-130			
Trichloroethylene	9.26	1.0	µg/L	10.0		92.6	70-130			
Trichlorofluoromethane (Freon 11)	8.73	2.0	µg/L	10.0		87.3	70-130			
1,2,3-Trichloropropane	11.1	2.0	µg/L	10.0		111	70-130			
1,2,4-Trimethylbenzene	10.3	1.0	µg/L	10.0		103	70-130			
1,3,5-Trimethylbenzene	9.22	1.0	µg/L	10.0		92.2	70-130			
Vinyl Chloride	6.42	2.0	µg/L	10.0		64.2	* 70-130			L-04
m+p Xylene	20.0	2.0	µg/L	20.0		100	70-130			
o-Xylene	10.5	1.0	µg/L	10.0		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	27.1		µg/L	25.0		108	70-130			
Surrogate: Toluene-d8	25.3		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	23.7		µg/L	25.0		94.8	70-130			

QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B076295 - SW-846 5030B										
LCS Dup (B076295-BSD1)				Prepared & Analyzed: 07/08/13						
Acetone	106	10	µg/L	100		106	40-160	5.82	20	†
tert-Amyl Methyl Ether (TAME)	12.3	0.50	µg/L	10.0		123	70-130	3.40	20	
Benzene	10.3	1.0	µg/L	10.0		103	70-130	0.194	20	
Bromobenzene	10.1	1.0	µg/L	10.0		101	70-130	0.789	20	
Bromochloromethane	11.7	1.0	µg/L	10.0		117	70-130	1.53	20	
Bromodichloromethane	10.0	1.0	µg/L	10.0		100	70-130	3.04	20	
Bromoform	10.5	1.0	µg/L	10.0		105	70-130	6.92	20	
Bromomethane	4.21	2.0	µg/L	10.0		42.1	40-160	3.38	20	L-14 †
2-Butanone (MEK)	131	10	µg/L	100		131	40-160	6.77	20	L-14, V-20 †
n-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130	1.11	20	
sec-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130	2.44	20	
tert-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130	0.380	20	
tert-Butyl Ethyl Ether (TBEE)	12.6	0.50	µg/L	10.0		126	70-130	0.399	20	
Carbon Disulfide	9.92	5.0	µg/L	10.0		99.2	70-130	6.72	20	
Carbon Tetrachloride	9.73	1.0	µg/L	10.0		97.3	70-130	5.98	20	
Chlorobenzene	10.6	1.0	µg/L	10.0		106	70-130	0.0939	20	
Chlorodibromomethane	10.4	0.50	µg/L	10.0		104	70-130	1.55	20	
Chloroethane	7.03	2.0	µg/L	10.0		70.3	70-130	36.5 *	20	R-05
Chloroform	10.7	2.0	µg/L	10.0		107	70-130	3.04	20	
Chloromethane	1.69	2.0	µg/L	10.0		16.9 *	40-160	3.00	20	L-04, V-05, J †
2-Chlorotoluene	10.5	1.0	µg/L	10.0		105	70-130	1.15	20	
4-Chlorotoluene	10.7	1.0	µg/L	10.0		107	70-130	0.467	20	
1,2-Dibromo-3-chloropropane (DBCP)	14.2	2.0	µg/L	10.0		142 *	70-130	12.9	20	L-07
1,2-Dibromoethane (EDB)	10.8	0.50	µg/L	10.0		108	70-130	0.0924	20	
Dibromomethane	10.6	1.0	µg/L	10.0		106	70-130	0.189	20	
1,2-Dichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130	1.61	20	
1,3-Dichlorobenzene	10.8	1.0	µg/L	10.0		108	70-130	2.47	20	
1,4-Dichlorobenzene	9.65	1.0	µg/L	10.0		96.5	70-130	2.05	20	
Dichlorodifluoromethane (Freon 12)	3.75	2.0	µg/L	10.0		37.5 *	40-160	0.803	20	L-04 †
1,1-Dichloroethane	10.7	1.0	µg/L	10.0		107	70-130	1.20	20	
1,2-Dichloroethane	8.94	1.0	µg/L	10.0		89.4	70-130	5.02	20	
1,1-Dichloroethylene	8.71	1.0	µg/L	10.0		87.1	70-130	4.49	20	
cis-1,2-Dichloroethylene	10.1	1.0	µg/L	10.0		101	70-130	4.06	20	
trans-1,2-Dichloroethylene	11.1	1.0	µg/L	10.0		111	70-130	0.181	20	
1,2-Dichloropropane	9.70	1.0	µg/L	10.0		97.0	70-130	3.74	20	
1,3-Dichloropropane	10.6	0.50	µg/L	10.0		106	70-130	0.0939	20	
2,2-Dichloropropane	10.8	1.0	µg/L	10.0		108	70-130	2.38	20	
1,1-Dichloropropene	10.7	0.50	µg/L	10.0		107	70-130	0.746	20	
cis-1,3-Dichloropropene	10.2	0.40	µg/L	10.0		102	70-130	2.04	20	
trans-1,3-Dichloropropene	11.5	0.40	µg/L	10.0		115	70-130	1.58	20	
Diethyl Ether	9.72	2.0	µg/L	10.0		97.2	70-130	4.96	20	
Diisopropyl Ether (DIPE)	12.6	0.50	µg/L	10.0		126	70-130	1.97	20	
1,4-Dioxane	109	50	µg/L	100		109	40-160	22.7 *	20	R-05, V-16 †
Ethylbenzene	10.2	1.0	µg/L	10.0		102	70-130	3.68	20	
Hexachlorobutadiene	9.66	0.50	µg/L	10.0		96.6	70-130	2.25	20	
2-Hexanone (MBK)	130	10	µg/L	100		130	40-160	8.18	20	†
Isopropylbenzene (Cumene)	10.3	1.0	µg/L	10.0		103	70-130	2.85	20	
p-Isopropyltoluene (p-Cymene)	11.0	1.0	µg/L	10.0		110	70-130	0.452	20	
Methyl tert-Butyl Ether (MTBE)	12.8	1.0	µg/L	10.0		128	70-130	0.156	20	
Methylene Chloride	9.79	5.0	µg/L	10.0		97.9	70-130	10.3	20	
4-Methyl-2-pentanone (MIBK)	123	10	µg/L	100		123	40-160	4.30	20	†
Naphthalene	16.3	2.0	µg/L	10.0		163 *	70-130	8.66	20	L-02, V-20

QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B076295 - SW-846 5030B										
LCS Dup (B076295-BSD1)				Prepared & Analyzed: 07/08/13						
n-Propylbenzene	11.1	1.0	µg/L	10.0		111	70-130	2.45	20	
Styrene	10.1	1.0	µg/L	10.0		101	70-130	2.30	20	
1,1,1,2-Tetrachloroethane	10.1	1.0	µg/L	10.0		101	70-130	3.53	20	
1,1,2,2-Tetrachloroethane	11.2	0.50	µg/L	10.0		112	70-130	5.98	20	
Tetrachloroethylene	9.40	1.0	µg/L	10.0		94.0	70-130	5.89	20	
Tetrahydrofuran	12.9	2.0	µg/L	10.0		129	70-130	5.81	20	
Toluene	10.0	1.0	µg/L	10.0		100	70-130	1.78	20	
1,2,3-Trichlorobenzene	15.7	2.0	µg/L	10.0		157 *	70-130	2.06	20	L-02, V-20
1,2,4-Trichlorobenzene	11.8	1.0	µg/L	10.0		118	70-130	4.42	20	
1,1,1-Trichloroethane	10.2	1.0	µg/L	10.0		102	70-130	0.0986	20	
1,1,2-Trichloroethane	10.4	1.0	µg/L	10.0		104	70-130	1.26	20	
Trichloroethylene	9.27	1.0	µg/L	10.0		92.7	70-130	0.108	20	
Trichlorofluoromethane (Freon 11)	8.39	2.0	µg/L	10.0		83.9	70-130	3.97	20	
1,2,3-Trichloropropane	11.8	2.0	µg/L	10.0		118	70-130	6.02	20	
1,2,4-Trimethylbenzene	10.0	1.0	µg/L	10.0		100	70-130	2.07	20	
1,3,5-Trimethylbenzene	9.59	1.0	µg/L	10.0		95.9	70-130	3.93	20	
Vinyl Chloride	6.33	2.0	µg/L	10.0		63.3 *	70-130	1.41	20	L-04
m+p Xylene	21.1	2.0	µg/L	20.0		105	70-130	5.01	20	
o-Xylene	10.5	1.0	µg/L	10.0		105	70-130	0.380	20	
Surrogate: 1,2-Dichloroethane-d4	26.9		µg/L	25.0		108	70-130			
Surrogate: Toluene-d8	25.6		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	25.0		µg/L	25.0		99.9	70-130			

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-07	Elevated reporting limit based on lowest point in calibration. MA CAM reporting limit not met.
U	Analyte included in the analysis, but not detected
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
Acetone	CT,NH,NY,ME
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Diisopropyl Ether (DIPE)	NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012

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Sample Receipt Checklist

CLIENT NAME: Wilcox & Burton RECEIVED BY: JMH DATE: 7/2/13

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

2) Does the chain agree with the samples?

(Yes) No

If not, explain:

3) Are all the samples in good condition?

(Yes) No

If not, explain:

4) How were the samples received:

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

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

Temperature °C by Temp blank _____ Temperature °C by Temp gun 3.6°

5) Are there Dissolved samples for the lab to filter?

Yes (No)

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples?

Yes (No)

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No (N/A)

9) Do all samples have the proper Base pH: Yes No (N/A)

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No (N/A)

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below	<u>9</u>	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl <u>9</u>	# Methanol _____	Time and Date Frozen: _____
Doc# 277 # Bisulfate _____	# DI Water _____	
Rev. 3 May 2012 # Thiosulfate _____	Unpreserved _____	