

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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

AUG 0 5 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: <u>http://www.epa.gov/region1/npdes/mass.html#dgp</u>.

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 technologybased 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,

Julna Murphy.

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 2		013			
Facility/Site Name:	2 Mec	chanics Court			
Facility/Site Address	120 M	Ierrimac Street, Newburyport, MA 01950, Essex County			
Tuenty/Site Address.	Email	address of owner: cwpessina@comcasr.net			
Legal Name of Operat	or:	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			
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Monitoring & Limits are applicable if checked. All samples are to be collected as grab samples

	<u>Parameter</u>	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)
\checkmark	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing ** Me#160.2/ML5ug/L
\checkmark	2. Total Residual Chlorine (TRC) ¹	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
\checkmark	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
\checkmark	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

	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)
	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
\checkmark	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
1-16	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/I
\checkmark	14. Naphthalene ⁵	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
Sy2	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/
	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
d at	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
- R.S.	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
d.M	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
V	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
1	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/
	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
5 frit 1	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
1	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
100	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
19	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
\checkmark	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)
\checkmark	b. Benzo(a) Pyrene ⁷	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
\checkmark	c. Benzo(b)Fluoranthene 7	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√ 0	d. Benzo(k)Fluoranthene 7	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
\checkmark	e. Chrysene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
\checkmark	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
\checkmark	g. Indeno(1,2,3-cd) Pyrene ⁷	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
•	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
	h. Acenaphthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	i. Acenaphthylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
2.4	j. Anthracene	X/Me#8270D/ML Sug/L,Me#610/ML Sug/L & Me#625/ML Sug/L
100	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
1	I. Fluoranthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
40	m. Fluorene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
den	n. Naphthalene ⁵	20 ug/l / Me#8270/ML 5ug/L, Me#610/M 5ug/L & Me#625/ML 5ug/L
^{AP} de	o. Phenanthrene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
110	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
dan	37. Total Polychlorinated Biphenyls (PCBs) ^{8,9}	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
\checkmark	38. Chloride	Monitor only/Me# 300.0/ ML 100 ug/I

france of		<u>Total Recoverable</u> <u>MA/Metal Limit</u> <u>H ¹⁰ = 50 mg/l CaCO3,</u> Units = ug/l ^(11/12)	<u>Minimum</u> level=ML
	Metal Parameters	Saltwater Limits	or a constraint of the state
	39. Antimony	5.6	ML 10
	40. Arsenic **	36	ML 20

	Bussels Line C. Matterseld C. Mar. Bussels Line C. Matterseld C. Mar. Bussel Line Control Statement of Pages. Bill Line Control Statement (Statement Statement Sta	Total Recov <u>MA/Metal</u> <u>H ¹⁰ = 50 mg</u> Units = ug	Minimum level=ML		
	Metal Parameters	READS)	Saltwater Limits	n (in) internation	(
	41. Cadmium **	191902	8.9	ML	10
	42. Chromium III (trivalent) **	Landest	100	ML	15
	43. Chromium VI (hexavalent) **	LINGOC D	50.3	ML	10
\checkmark	44. Copper **	0.0000	3.7 .	ML	15
\checkmark	45. Lead **	and set	8.5	ML	20
	46. Mercury **	CARGO A	1.1	ML	02
\checkmark	47. Nickel **		8.2	ML	20
	48. Selenium **		71	ML	20
	49. Silver	CONTRACT IN	2.2	ML	10
	50. Zinc **	100000	85.6	ML	15
\checkmark	51. Iron	1,000		ML 20	

	Other Parameters	Limi <u>t</u>
\checkmark	52. Instantaneous Flow	Site specific in CFS
\checkmark	53. Total Flow	Site specific in CFS
	54. pH Range for Class A & Class B Waters in MA	6.5-8.3; 1/Month/Grab13
$\sqrt{2}$	55. pH Range for Class SA & Class SB Waters in MA	6.5-8.3; 1/Month/Grab13
	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/Grab14
	58. Daily maximum temperature - Cold water fisheries	68°F; 1/Month/Grab ¹⁴
	59. Maximum Change in Temperature in MA - Any Class A water body	1.5°F; 1/Month/Grab ¹⁴
-	60. Maximum Change in Temperature in MA - Any Class B water body- Warm Water	5°F; 1/Month/Grab ¹⁴
	61. Maximum Change in Temperature in MA – Any Class B water body - Cold water and Lakes/Ponds	3°F; 1/Month/Grab ¹⁴
	62. Maximum Change in Temperature in MA – Any Class SA water body - Coastal	1.5°F; 1/Month/Grab ¹⁴
	63. Maximum Change in Temperature in MA – Any Class SB water body - July to September	1.5°F; 1/Month/Grab ¹⁴
	64. Maximum Change in Temperature in MA – Any Class SB water body - October to June	4°F; 1/Month/Grab ¹⁴

Footnotes:

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

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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.

⁹Although the maximum value for total PCBs is 0.000064 ug/l, the compliance limit is equal to the minimum level (ML) of the test method used as listed in Appendix VI (i.e., 0.5 ug/l for Method 608 or 0.00005 ug/l when Method 1668a is approved). ¹⁰ Hardness. Cadmium, Chromium III, Copper, Lead, Nickel, Silver, and Zinc are Hardness Dependent.

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

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).

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

Temperature sampling per Method 170.1

Wilcox Barton INC.

ENVIRONMENTAL AND ENGINEERING SERVICES

July 11, 2013

U.S. Environmental Protection Agency5 Post Office Square, Suite 100Mail Code OEPO6-4Boston, MA 02109-3912Attn: 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 & BART(

Russell W. Barton Principal Geologist

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

<u>B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit</u>

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 : longitude: 42d48'48.19"N latitude: 70d52'32.97"W	Facility SIC code(s): 1542	Street: 120 Merrimac Street				
b) Name of facility/site owner: Chart House Development, LLC			Town: Newburyport			
Email address of facility/site owner: cwpessina@comcast.net Telephone no. of facility/site owner : (978) 987-7312			State:Zip:County:Massachusetts01950Essex			County: Essex
Fax no. of facility/site owner: Address of owner (if different from site):		Owner is (check one): 1. Federal <u>O</u> 2. State/Tribal <u>O</u> 3. Private <u>O</u> 4. Other <u>O</u> if so, describe:				
Street: 11A Liberty Street						
Town: Newburyport State: MA			950	County: Essex		
c) Legal name of operator :	Operator tel	ephone r	10: (603) 369-4190			
Wilcox & Barton, Inc.	Operator fax	x no.: (60	3) 369-6639	Operato	r email: a	roth@wilcoxandbarton.com
Operator contact name and title: Amy Roth						
Address of operator (if different from Street: 57 Hoit						
Town: Concord	State: NH	Zip: 03	301	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 O N O, if Y, number: 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Y O N O, if Y, date and tracking #: 3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Y O N O 4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y O N O 					
 e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y_ON_O If Y, please list: site identification # assigned by the state of NH or MA: permit or license # assigned: 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 O N O, if Y, number: 2. Final Dewatering General Permit? Y O N O, if Y, number: 3. EPA Construction General Permit? Y O N O, if Y, number: 4. Individual NPDES permit? Y O N O, if Y, number: 5. any other water quality related individual or general permit? Y O N O, if Y, number: 				
g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y_O_N_O_					
h) Based on the facility/site information and any historica discharge falls.	al sampling data, identify the sub-category into which the potential				
Activity Category	Activity Sub-Category				
I - Petroleum Related Site Remediation	 A. Gasoline Only Sites B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) C. Petroleum Sites with Additional Contamination 				
II - Non Petroleum Site Remediation	 A. Volatile Organic Compound (VOC) Only Sites B. VOC Sites with Additional Contamination C. Primarily Heavy Metal Sites 				
III - Contaminated Construction Dewatering	 A. General Urban Fill Sites B. Known Contaminated Sites 				

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites
	B. Well Development/Rehabilitation at Contaminated/Formerly
	Contaminated Sites _
	C. Hydrostatic Testing of Pipelines and Tanks _
	D. Long-Term Remediation of Contaminated Sumps and Dikes _
	E. Short-term Contaminated Dredging Drain Back Waters (if not covered
	by 401/404 permit)

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	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft^3/s)?
2	Average flow (include units) ^{50 gpm} Is average flow a design value or estimate? estimate
3) Latitude and longitude of a	each discharge within 100 feet:

рι.	1: Iat	12010 10.21 11	10ng/70032 34.20 W	pt.2: 1at.	42048 48.12 N	long.	7003234.29 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.		:

4) If hydrostatic testing,	5) Is the discharge intermittent _	\bigcirc or seasonal \bigcirc ?
	-	-

total volume of the_____ Is discharge ongoing? Y __O N ____ discharge (gals):

c) Expected dates of discharge (mm/dd/yy): start July 2013

013 end August 2013

etc.

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.

					Sample	Analytical	<u>Minimum</u>	Maximum dai	ly value	Average daily	value
<u>Parameter *</u>	<u>CAS</u> <u>Number</u>	<u>Believed</u> <u>Absent</u>	<u>Believed</u> <u>Present</u>	<u># of</u> <u>Samples</u>	<u>Tvpe</u> (e.g., grab)	<u>Method</u> <u>Used</u> (method #)	<u>Level</u> (ML) of <u>Test</u> <u>Method</u>	<u>concentration</u> (ug/l)	<u>mass</u> (kg)	<u>concentration</u> (ug/l)	<u>mass</u> (kg)
1. Total Suspended Solids (TSS)			×	1	grab	2540D	5.0e-1	1.3	0.037	1.3	0.025
2. Total Residual Chlorine (TRC)			×	1	grab	4500 CL G	10	0.004	0.0001	0.004	0.0001
3. Total Petroleum Hydrocarbons (TPH)			×	1	grab	8100	10	0.12	0.003	0.12	0.002
4. Cyanide (CN)	57125	×		1	grab	4500	5				
5. Benzene (B)	71432	×		7	grab	8260B	2				
6. Toluene (T)	108883	×		7	grab	8260B	2				
7. Ethylbenzene (E)	100414	×		7	grab	8260B	2				
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	×		7	grab	8260B	4				
9. Total BTEX ²	n/a	×		7	grab	8260B	2				
10. Ethylene Dibromide (EDB) (1,2- Dibromoethane) ³	106934	×		7	grab	8260B	10				
11. Methyl-tert-Butyl Ether (MtBE)	1634044		×	7	grab	8260B	10	5	0.143	5	0.095
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	×		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.

					Sample	Analytical	Minimum	<u>Maximum dai</u>	ly value	Average daily	value
<u>Parameter *</u>	<u>CAS</u> <u>Number</u>	<u>Believed</u> <u>Absent</u>	<u>Believed</u> <u>Present</u>	<u># of</u> <u>Samples</u>	<u>Type</u> (e.g., grab)	<u>Method</u> <u>Used</u> (method #)	<u>Level</u> (ML) of <u>Test</u> <u>Method</u>	concentration (ug/l)	<u>mass</u> (kg)	<u>concentration</u> (ug/l)	<u>mass</u> (kg)
13. tert-Amyl Methyl Ether (TAME)	9940508	×		7	grab	8260B	10				
14. Naphthalene	91203		×	7	grab	8260B	2	1	0.029	1	0.019
15. Carbon Tetrachloride	56235	×		7	grab	8260B	5				
16. 1,2 Dichlorobenzene (o-DCB)	95501	×		7	grab	8260B	5				
17. 1,3 Dichlorobenzene (m-DCB)	541731	×		7	grab	8260B	5				
18. 1,4 Dichlorobenzene (p-DCB)	106467	×		7	grab	8260B	5				
18a. Total dichlorobenzene		×		0							
19. 1,1 Dichloroethane (DCA)	75343	×		7	grab	8260B	5				
20. 1,2 Dichloroethane (DCA)	107062	×		7	grab	8260B	5				
21. 1,1 Dichloroethene (DCE)	75354	×		7	grab	8260B	5				
22. cis-1,2 Dichloroethene (DCE)	156592	×		7	grab	8260B	5	0.40	0.011	0.40	0.008
23. Methylene Chloride	75092	×		7	grab	8260B	5				
24. Tetrachloroethene (PCE)	127184		×	7	grab	8260B	5	2	0.057	2	0.038
25. 1,1,1 Trichloro-ethane (TCA)	71556	×		7	grab	8260B	5				
26. 1,1,2 Trichloro-ethane (TCA)	79005	×		7	grab	8260B	5				
27. Trichloroethene (TCE)	79016		×	7	grab	8260B	5	10	0.285	10	0.190

					Sampla	Analytical	Minimum	Maximum dai	ly value	Average daily	value
Parameter *	<u>CAS</u> <u>Number</u>	<u>Believed</u> <u>Absent</u>	<u>Believed</u> <u>Present</u>	<u># of</u> <u>Samples</u>	<u>Type</u> (e.g., grab)	<u>Method</u> <u>Used</u> (method #)	<u>Level</u> (ML) of <u>Test</u> <u>Method</u>	<u>concentration</u> (ug/l)	<u>mass</u> (kg)	<u>concentration</u> (ug/l)	<u>mass</u> (kg)
28. Vinyl Chloride (Chloroethene)	75014	×		7	grab	8260B	5	0.29	0.008	0.29	0.006
29. Acetone	67641	×		7	grab	8260B	50				
30. 1,4 Dioxane	123911	×		7	grab	8260B	50				
31. Total Phenols	108952	×		1	grab	8270D	5				
32. Pentachlorophenol (PCP)	87865	×		1	grab	8270D	5				
33. Total Phthalates (Phthalate esters) ⁴		×		0							
34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	117817	×		1	grab	8270D	5				
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		×									
a. Benzo(a) Anthracene	56553	×		1	grab	8270D	5				
b. Benzo(a) Pyrene	50328	×		1	grab	8270D	5				
c. Benzo(b)Fluoranthene	205992	×		1	grab	8270D	5				
d. Benzo(k)Fluoranthene	207089	×		1	grab	8270D	5				
e. Chrysene	21801	×		1	grab	8270D	5				
f. Dibenzo(a,h)anthracene	53703	×		1	grab	8270D	5				
g. Indeno(1,2,3-cd) Pyrene	193395	×		1	grab	8270D	5				
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		×									

⁴ The sum of individual phthalate compounds.

					Sampla	Analytical	Minimum	Maximum dai	ly value	Average daily	value
<u>Parameter *</u>	<u>CAS</u> <u>Number</u>	<u>Believed</u> <u>Absent</u>	<u>Believed</u> <u>Present</u>	<u># of</u> <u>Samples</u>	<u>Type</u> (e.g., grab)	<u>Method</u> <u>Used</u> (method #)	<u>Level</u> (ML) of <u>Test</u> <u>Method</u>	concentration (ug/l)	<u>mass</u> (kg)	concentration (ug/l)	<u>mass</u> (kg)
h. Acenaphthene	83329	×		1	grab	8270D	5				
i. Acenaphthylene	208968	×		1	grab	8270D	5				
j. Anthracene	120127	×		1	grab	8270D	5				
k. Benzo(ghi) Perylene	191242	×		1	grab	8270D	5				
l. Fluoranthene	206440	×		1	grab	8270D	5				
m. Fluorene	86737	×		1	grab	8270D	5				
n. Naphthalene	91203	×		1	grab	8270D	5				
o. Phenanthrene	85018	×		1	grab	8270D	5				
p. Pyrene	129000	×		1	grab	8270D	5				
37. Total Polychlorinated	85687; 84742; 117840; 84662; 131113; 117817	×		1	grab	8082A	5.0e-1				
38. Chloride	16887006		×	1	grab	4500	1.0e-2	2000	57.1	2000	38.0
39. Antimony	7440360	×		1	grab	6020A	5.0e-1				
40. Arsenic	7440382		×	1	grab	6020A	1.0	19	0.542	19	0.361
41. Cadmium	7440439	×		1	grab	6020A	2.0e-1				
42. Chromium III (trivalent)	16065831	×		1	grab	6020A	1.0				
43. Chromium VI (hexavalent)	18540299	×		1	grab	7196A	10				
44. Copper	7440508		×	1	grab	6020A	5.0e-1	2.5	0.071	2.5	0.048
45. Lead	7439921		×	1	grab	6020A	2.0e-1	0.72	0.021	0.72	0.014
46. Mercury	7439976	×		1	grab	7470A	2.0e-1				
47. Nickel	7440020		×	1	grab	6020A	2.0e-1	3.2	0.091	3.2	0.061
48. Selenium	7782492	×		1	grab	6020A	2				
49. Silver	7440224	×		1	grab	6020A	2.0e-1				
50. Zinc	7440666	×		1	grab	6020A	5				
51. Iron	7439896		×	1	grab	6010C	50	0.98	0.028	0.98	0.028
Other (describe):											

Remediation General Permit Appendix V - NOI Page 16 of 22

	Parameter * CAS Believed I Number Absent I				Sample	Analytical	Minimum	Maximum daily value		Average daily value	
<u>Parameter *</u>		<u>Believed</u> <u>Present</u>	<u>elieved</u> <u># of</u> <u>Samples</u>	<u>Type</u> (e.g., grab)	<u>Method</u> <u>Used</u> (method #)	Level (ML) of <u>Test</u> <u>Method</u>	concentration (ug/l)	<u>mass</u> (kg)	<u>concentration</u> (ug/l)	<u>mass</u> (kg)	

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

Step 1: Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? $Y O N O$	If yes, which metals?
Step 2: 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? Metal: DF Metal: DF	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? $Y _ O \ N _ O \ If Y$, list which metals:

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

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

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	Frac. tank 🗵	Air stripper 🗖	Oil/water separator \Box	Equalization tanks \Box	Bag filter 🗵	GAC filter 🗵
applicable treatment unit (check all that apply):	Chlorination	De- chlorination	Other (please describe):			

c) Proposed average and maximum the treatment system: Average flow rate of discharge ⁵⁰ gpm Design flow rate of treatment system	flow rates (gal gpm N 75 gpm	lons per minute) f ⁄Iaximum flow rat gpm	or the discharge ar e of treatment syst	nd the design flow em ⁷⁵ gpm	v rate (s) (gallons per minute) of gpm
d) A description of chemical additive	es being used or	planned to be use	ed (attach MSDS s	heets):	
None					
5. Receiving surface water(s). Pleas	se provide infor	mation about the r	eceiving water(s),	using separate sh	eets as necessary:
a) Identify the discharge pathway:	Direct to receiving water	Within facility (sewer)	Storm drain_⊠	Wetlands 	Other (describe):
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 1. For multiple discharges, number the second seco	g the site location the discharges set the location of the the location distance	on and location of equentially. he discharge to the ce to the nearest sa	the outfall to the r e indirect conveyar anitary sewer as w	eceiving water: nce and the discha ell as the locus of	rge to surface water 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 SA

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water not computed (USGS Streamstats)	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 O N O If yes, for which pollutant(s)?
2010 data: Bacteria (fecal coliform), PCBs in fish tissue
Is there a final TMDL ? Y \bigcirc N \bigcirc 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?

 $A \underline{\bigcirc} B \underline{\bigcirc} C \underline{\bigcirc} D \underline{\bigcirc} E \underline{\bigcirc} F \underline{\bigcirc}$

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

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 \bigcirc N \bigcirc

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 \bigcirc 2 \bigcirc 3 \bigcirc

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:	litte					
Printed Name & Title: Amy A. Roth, LSP, Senior Project Manager						
Date: 7/11/13						











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 Project Name: 2 Mechanics Court July 03, 2013

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



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.



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 42.8135577, -70.8759241 42.8135923, -70.8761977 42.8134361)))



Project name: 2 Mechanics Court

Project Counties: Essex, MA

http://ecos.fws.gov/ipac, 07/03/2013 11:15 AM



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.

MACRIS Details

Massachusetts Cultural Resource Information System

Ask

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:		Digital Photo
Address:	120 Merrimac St	Available
City/Town:	Newburyport	
Village/Neighborhood:	-	
Local No:	50-61,62,63,64; L	These is no form for this
Year Constructed:	C 1800	resource. Information can be
Architect(s):		found on the <u>NWB.L</u> form
Architectural Style(s):		forms listed below.
Use(s):	Other Commercial; Single Family Dwelling House	
Significance:	Architecture; Commerce	
Area(s):	NR NWB.L: Newburyport Historic District	
Designation(s):	Nat'l Register District (8/2/1984)	



MHC Home | MACRIS Home

United States Department of the Interior National Park Service

National Register of Historic Places Inventory—Nomination Form

See instructions in How to Complete National Register Forms Type all entries—complete applicable sections

1 Name

Newburyport Historic District

and or common

2. Location

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

city, town

state

historic

Massachusettscode

Essex county

Classification 3.

same

Status **Present Use** Category Ownership X occupied _X district agriculture X_ museum _ public X_commercial X park ____ building(s) private _ unoccupied X both X_educational X_ private residence structure work in progress **Public Acquisition** Accessible entertainment X religious _ site _X yes: restricted X_government scientific _ object in process N/A being considered X_ industrial X yes: unrestricted transportation military other: no

025

Owner of Property 4.

name multiple			
street & number			
city, town	<u>N/A</u> vicinity of	state	e
5. Location of	Legal Descrip	tion	
courthouse, registry of deeds, etc	Essex County Regis	try of Deeds	
street & number	32 Federal Street		
city, town	Salem	state	e Massachusetts 01970
6. Representa	tion in Existin	g Surveys	
title Inventory of Historia	Assets of the has this	s property been determined	(waterfront archeology) eligible? X yes no
Commonwealth date 1980		federal s	tate county local
depository for survey records	Massachusetts Histori	cal Commission	
city, town Boston	294 Washington Street	state	MA 02108

009

code

For NPS use only

received

date entered

7. Description N buryport Historic Distric Newburyport

Condition		Check one	Check one	
excellent	deteriorated	X unaltered	X original site	
_X_good	ruins	X altered	moved date	
fair	unexposed			

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.

USES - Newb & and are moreland

STREET NAME: Merrimac Street p. 2 of 14

312

Sheet #183

NEWBURYPORT DISTRICT DATA SHEET

Anca L

St	creet 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	С
763	87	47-39	gas station	ca 1940	contemporary	INT
/	93-95	47-60	parking lot			
	U.S. Route 1					
900	no #	50-3	raised railroad bed	late 19th c		
764	111-113	50-4	commercial bldg.	ca 1850; 1920s	Greek Revival/ Italianate; storefronts altered	С
1	115-117 \$ 452	50-16	commercial bldg.	ca 1845; ca 1950	Greek Revival; minor alterations	С
765	119 12565 News W.	50-17	commercial bldg.	ca 1940 1970s	astylistic	INT
1	125-129 North	^V , <mark>50-18</mark>	former commer- cial building industrial shed	pre 1875 ca 1935-1945	mid-Victorian astylistic	C INT
166	131-135	50-19	commercial bldg. & apartment	ca 1890; 1960s	Italianate; alterations	С
1767	137-139	50-20	commercial bldg. & apartments	ca 1880; 1960s	Italianate; alterations	С

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. Sanfor President

JRS/jll Enclosures

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Sample Receipt Report

Project:	t: 120 Merrimac St/060501			Delivery: GWA Courier Tem				nperature: 2.0'C		
Client:	Simmons Environmental Services, Inc.			Inc.	Airbill: n/a Chain			Chain of C	Custody:	Present
Lab ID:	D: 96856 La			ab Receipt:	07-14-06		Custody	v 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 Organic	s with Oxygena	ates		
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship			
C726499	40 mL VOA Vial	Profine	BX21477	HCI	R-4683B	05-10-06	n/a			
C726481	40 mL VOA Vial	Proline	8X21477	HCI	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	FPA 8260B	Volatile Organic	s with Oxygena	ates		
Con ID	Container	Vendor	OC Lot	Preserv	OCLet	Pren	Shin			
C726486	40 mL VOA Vial	Proline	BX21477	HCI	R-46838	05-10-06	n/a			
C726480	40 mL VOA Vial	Proline	BX21477	HCI	R-46838	05-10-06	n/a			
			1							· · · · · · · · · · · · · · · · · · ·
Lab ID	Field ID		Matrix	Sampled	Melhod				Notes	
96856-3	MW 3		Aqueous	7/14/06 0:00	EPA 8260B	Volatile Organic	s with Oxygena	atés		10 C 10 100
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship			
C726512	40 mL VOA Vial	Profine	BX21477	HCI	R-46838	05-10-06	n/a			
C/26492	40 mL VOA Vial	Profine	BX214//	HCI	K-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 82608 \	/olatile Organics	with Oxygena	ites		
Con ID	Container	Vendor	QC Lot	Preserv	QCLot	Prep	Ship		-	
C726514	40 mL VOA Vial	Proline	BX21477	HCI	R-4683B	05-10-06	n/a			
C726509	40 mL VOA Vial	Proline	BX21477	HCI	R-4683B	05-10-06	n/a			
			T				2			
Lab ID	Field ID		Matrix	Sampled	Method				Notes	
96856-5	B2, 1'-3'		Soil	7/13/06 0:00	EPA 6010B/7	471A 5 RCRA N	Aetals			
	<u> </u>	No. L.	0000		MA DEP EPH	WITH PAHS	C		_	
Celoniu	Container	vendor	QC LOI	Near	QCLOT	rrep	Ship			
C812035	JOO INC GIASS	1//d	10/4		10/0	iiva .	11/d			
Lab ID	Field ID		Matrix	Sampled	Method			1	Notes	
96856-6	B3, 1'-3'		Soil	7/13/06 0:00	EPA 601 0B/7	471A 5 RCRA N	rietals			
i					MA DEP EPH	with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship			
C812834	500 mL Glass	n/a	rv/a	None	n/a	n/a	n/a			
			T							
Lab ID	Field ID		Matrix	Sampled	Method			P	Notes	
96856-7	B4, 1'-3'		Soil	7/13/06 0:00	EPA 6010B/7	471A 5 RCRA N	tetals	1		
					MA DEP EPH	with PAHs		1		
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	Stald 10		Matrix	Sampled	Mathed					
			Matrix	July (06.0.00	COL COLOD/7		4 + 1		NOTES	
96856-8	15, 1-3		500	//13/06 0:00	MA DEP EPH	47 IA 5 KCKA M Lwith PAHe	ietais			
Con ID	Container	Vendor	OCIA	Presaru	OC Lat	Pres	Shim		• •	
C812812	500 ml Class	n/a	n/a	None	n/a	n/a	n/a			
0012032	100 mil (1077				1.00					
Lab ID	Field ID		Matrix	Sampled	Method			1	Notes	
96856-9	S5 1		Soil	7/13/06 0:00	EPA 6010B /	As Total				
Con ID	Container	Vendor	QC Lot	Preserv	QCLot	Prep	Ship		20128	1.5.1.5.05.5.00
C619654	250 mL Glass	Proline	BX17287	None	n/a	n/a	07-22-05			

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C890155

C890152

1 L Amber Glass

1 L Amber Glass

Proline

Proline

8X22191

BX22191

H2SO4

H2SO4

R-4914F

R-4914F

06-30-06

06-30-06

07-07-06

07-07-06

Sample Receipt Report (Continued)

Project:	120 Merrimac	St/060501			Delivery:	GWA Cou	rie r	Temperature: 2.0'C		
Client:	Simmons Environmental Services, Inc.			Airbill:	n/a		Chain of	Custody:	Present	
Lab ID:	96856			La	b Receipt:	07-14-06		Custod	v Seal(s):	п/а
					·				,	
Lab ID	Field ID		Matrix	Sampled	Method			• •	Notes	
96856-10	55 2		Soil	7/13/06 0:00	EPA 60108	As Total				
Con ID	Container	Vendor	QC Lot	Preserv	QCLot	Prep	Ship			
C727986	250 mL Glass	Proline	BX21043	None	n/a	n/a	n/a	n		
L-LID.	Field (D		AAntaliy	Famalad	Mathind				Mater	
	Field ID		matrix	Sampled	Micinico				INUIES	
96856-11	\$\$ 3		Soil	7/13/06 0:00	EPA 6010B	As Iotal		,		
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship			
C619651	250 mL Glass	Proline	8X17287	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	QCLot	Prep	Ship		t	
C890150	1 L Amber Glass	Proline	BX22191	H25O4	R-4914F	06-30-06	07-07-06			
C890148	1 L Amber Glass	Proline	BX22191	H25O4	R-4914F	06-30-06	07-07-06			
					·····				1	
Lab 1D	Field tD		Matrix	Sampled	Method				Notes	
96856-13	MW 2	1	Aqueous	7/14/06 0:00	MA DEP EPH	with PAHs				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship	<u> </u>		
C890157	1 L Amber Glass	Proline	BX22191	H2SO4	R-4914F	06-30-06	07-07-06			
C890149	1 L Amber Glass	Proline	BX22191	H25O4	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	H25O4	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				
ConID	Container	Vendor	QC Lot	Preserv	QC Lot	Ртер	Ship			



Data Certification

lient:	ioject: 120 Merrimac St/060501 lient: Simmons Environmental Services, Inc.				ab ID: leceived:	96856 07-14-06 19:15			
		MA DEP Compe	endium of Analyti	cal Methods					
Proj	ect Location:	n/a		MA	DEP RTN:		n/a		
This	Form provides ce	ertifications for the following data se	t:						
EPA	82608:	96856-01,-02,-03,-04							
мА	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							
Sam	ple Matrices:	Groundwater (X) Soil/Sedimer	nt (X) Drinking	Water ()	Other	()			
MC	P SW-846	8260B (X) 8151	A ()	8330 ()	6010B	(X)	7470A/1A (X)		
Met	hods Used	8270C () 8081	A ()	VPH ()	6020	()	9012A ² ()		
As spe	cified in MA DEP	8082 () 8021	8 ()	EPH (X)	7000 S ³	()	Other ()		
Comp	endium of Analytical ids.	1. List Release Tracking Number (RTN), if kno	wn.						
(chool	all that applied	 Svv-846 Method 901ZA (Equivalent to 9014 S State State Additional 2000 Sector 1 in india 	i) or MA LIEP Physiolog	ically Available Cya	nide (PAC) Met	юd			
(cliec)		3. 3- Stread Methods 7000 Series. List man	roou frod for "Ore	ne.					
	An antimative les	ponse to questions A, B, C and D is	required for File	sumprive Cental	inty status.				
A.	Were all sam	ples received by the laboratory in a	condition consist	ent with					
	that describe	d on the Chain-of-Custody documer	ntation for the data	i set?		۱	(es		
B.	Were all QAU included in the discuss in a n standards or p	QC procedures required for the spe his report followed, including the re larrative QC data that did not meet a guidelines?	cified analytical n quirement to note appropriate perfor	nethod(s) : and mance		١	/es		
C.	Does the ana for "Presump document CA for the Acqui	lytical data included in this report n tive Certainty," as described in Secti NM VII A, Quality Assurance and Qu sition and Reporting of Analytical D	neet all the require on 2.0 of the MA uality Control Gui Data ?	ements DEP delines		ì	′es		
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 que	stions E and F below is required for	"Presumptive Cer	tainty" status.					
E. Were all QC performance standards and recommendations for the specified methods achieved?							No		
F.	Were results i method(s) rep	N	10						
	All No answers ar	e addressed in the attached Project	Narrative.						
l, the inqui analy	undersigned, a iry of those resp vtical report is, t	ttest under the pains and penalt consible for obtaining the inform o the best of my knowledge and	ies of perjury th ation, the mater belief, accurate	at, based upo ial contained and complete	n my perso in this e.	onal			
Signa	ture:	wayuwad	Position:	Presiden	t				
DIPUG									

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EPA Method 8260B Volatile Organics by GC/MS

Field ID:	MW 1		Matrix:	Aqueous	
Project:	120 Merrimac St/060501		Container:	40 mL VOA	Vial
Client:	Simmons Environmental Services, Inc.		Preservation:	HCI/Cool	
Laboratory ID:	96856-01		OC Batch ID:	VM5-3396-	w
Sampled:	07-14-06 00:00		Instrument ID:	MS-5 HP 68	390
Received:	07-14-06 19:15		Sample Volume:	25 mL	
Analyzed:	07-20-06 13:50		Dilution Factor:	1	
Analyst:	КМС				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-Trichforotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		 	5
75-09-2	Methylene Chlonde	BRL		Lie/L	2.5
156-60-5	trans-1.2-Dichloroethene	0.8		110/1	0.5
1634-04-4	Methyl tert-butyl Ether (MTBE)	BRL	•• ••=	Ug/L	0.5
75-34-3	1.1-Dichloroethane	BRL		118/1	0.5
594-20-7	2.2-Dichloropropane	BRL		119/1	0.5
156-59-2	cis-1.2-Dichloroethene	0.6		100/2	0.5
78-93-3	2-Butanone (MEK)	BRI		ug/]	5
74-97-5	Bromochloromethane	BRI		110/1	0.5
109-99-9	Tetrahydrofuran (THF)	BRI		110/1	5
67-66-3	Chloroform	BRI		ug/t	0.5
71-55-6	1.1.1-Trichloroethane	BRI		ug/1	0.5
56-23-5	Carbon Tetrachloride	BRI		1.10/1	0.5
563-58-6	1 1-Dichloropropene	BRI			0.5
71.43.2	Benzene	BRI	· ·	Ue/I	0.5
107-06-2	1.2-Dichloroethane	BRI			0.5
79-01-6	Trichloroethene	BRI		ug/1	0.5
78-87-5	1.2-Dichloropropane	BRI			0.5
74-95-3	Dibromomethane	BRI			0.5
75-27-4	Bromodichloromethane	BRI		ug/1	0.5
123-91-1	1 4 Diovane	BPI		ug/L	500
10061-01-5	cis-1 3-Dichloropropene	BRI		ug/l	0.5
108-10-1	4-Methyl-2-Peptanone (MIRK)	BDI		ug/l	5
108-88-3	Toluene	BPI		199 C	0.5
10061-02-6	trans 1 3-Dichloropropene			ug/L	0.5
79-00-5	1.1.2-Trichloroethane			ue/I	0.5
127-18-4	Tetrachloroethene	DRL		ug/L	0.5
142-28-9	1 3-Dichloropropage	DKL		ug/L	0.5
591.78-6	2-Hexanone				<u> </u>
1.24 48-1	Dibramachloromathana	DRL		ug/L	0.0
106.03.4	1.2 Dibromosthans (EDP)	DKL		ug/L	0.5
108 00.7	Chlorobanzona	BOU		ug/L	0.5
100-90-/	1 1 1 2 Tetrachloresthese	BKL		ug/L	0.5
030-20-0	1, 1, 1, 2- Tetrachioroethane	BKL		ug/L	0.5
4 14 1/106 43 3	enryibenzene	BKL		ug/L	0.5
0.10-37 (00-42-3	artha Villana	BKL		ug/L	0.5
73-4/-0	onno- Aylene	BRL		ug/L	0.5

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

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

Field ID: Project: Client:	MW 1 120 Merrimac St/060501 Simmons Environmental Se	ervices, Ind	2.		Matrix: Container: Preservation:	Aqueous 40 mL VOA Vial HCl/Cool	
Laboratory ID: Sampled: Received: Analyzed:	96856-01 07-14-06 00:00 07-14-06 19:15 07-20-06 13:50				QC Batch ID: Instrument ID: Sample Volume: Difution Factor:	VM5-3396- MS-5 HP 68 25 mL 1	W 190
Analyst:	КМС						Page: 2 of 2
CAS Number	Analyte		Concer	ntration	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	2		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	UBC881	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-chloropro	pane		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-Trichlorobénzene			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 (ETB	E)		BRL		ug/L	0.5
994-05-8	tert - Amyl Methyl Ether (T	AME)		BRL		ug/L	0.5
QC Surrogate C	ompound	Spiked	Measured	Recove	ry	Q	C Limits
Dibromofluoror	nethane	10	11	105 %		70	- 130 %
1,2-Dichloroeth	ane-d₄	10	10	101 %		70	- 130 %
Toluene-d.		10	9.5	95 %		70	- 130 %

Method Reference:

4-Bromofluorobenzene

Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Sample preparation performed by EPA Method 50308.

9.9

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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.

99 %

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70 - 130 %

EPA Method 8260B Volatile Organics by GC/MS

Field ID:	MW 2		Matrix:	Aqueous	
Project:	120 Merrimac St/060501		Container:	40 mL VOA	\ Vial
Client:	Simmons Environmental Services, Inc.		Preservation:	HCI/Cool	
Laboratory ID:	96856-02		QC Batch ID:	VM5-3396-	w
Sampled:	07-14-06 00:00		Instrument ID:	MS-5 HP 6	890
Received:	07-14-06 19:15		Sample Volume:	25 mL	
Analyzed:	07-20-06 14:30		Dilution Factor:	1	
Analyst:	КМС				Page: 1 of 2
CAS Number	Anaiyte	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		us/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	BRI		ue/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ur/L	0.5
591-78-6	2-Hexanone	BRL		ue/L	5
124-48-1	Dibromochloromethane	BRL		ue/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRI		ue/L	0.5
108-90-7	Chlorobenzene	BRI	<u> </u>	ue/L	0.5
630-20-6	1.1.1.2-Tetrachloroethane	BRI		ue/1	0.5
100-41-4	Ethylbenzene	BRI		uø/l	0.5
108-38-3/106-42-3	meta- Xylene and para- Xylene	BRI		110/1	0.5
95-47-6	ortho-Xylene	RRI		10/1	0.5
		DICE			4.0

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

Field ID: Project:	MW 2 120 Merrimac St/060501				Matrix: Container:	Aqueous 40 mL VOA Vial	
Client:	Simmons Environmental Se	rvices, In	с.		Preservation:	HCI/Cool	
Laboratory ID: Sampled: Received:	96856-02 07-14-06 00:00 07-14-06 19:15 07 20 6 14:20			QC Batch ID: Instrument ID: Sample Volume:	VM5-3396-W MS-5 HP 6890 e: 25 mL		
Analyst:	KMC				Difution Factor:		Page: 2 of 2
CAS Number	Analyte		Conc	entration	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		1	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		1	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		1	BRL		ug/L	0.5
104-51-8	n-Butylbenzene			BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloroprop	pane		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 (ETB	E)		BRL		ug/L	0.5
994-05-8	tert - Amyl Methyl Ether (T/	AME)		BRL		ug/L	0.5
QC Surrogate C	ompound	Spiked	Measured	Recove	ry	Q	C Limits
Dibromofluoron	nethane	10	10	105 %		70) - 130 %
1,2-Dichloroeth	ane-d ₄	10	9.8	98 %	32/75/11	70) - 130 %
Toluene-d ₈		10	9.8	98 %		70) - 130 %
4-Bromofluorob	enzene	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 50308.

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.



EPA Method 8260B Volatile Organics by GC/MS

Field ID:	MW 3		Matrix:	Aqueous	
Project:	120 Merrimac St/060501		Container:	40 mL VOA	Vial
Client:	Simmons Environmental Services, Inc.		Preservation:	HCI/Cool	
Laboratory ID:	96856-03		OC Batch ID:	VM5-3396-)	N
Sampled:	07-14-06 00:00		Instrument ID:	MS-5 HP 68	90
Received:	07-14-06 19:15		Sample Volume:	25 ml	
Analyzed:	07-20-06 15:11		Dilution Factor:	1	
Analyst:	КМС				Page: 1 of 2
CAS Number	Analyte	Concentration	Notes	Linite	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRI	Hotes		0.5
74-87-3	Chloromethane			119/1	0.5
75-01-4	Vinvl Chloride	BRI		ug/1	0.5
74-83-9	Bromomethane	BRI		U9/1	0.5
75-00-3	Chloroethane	BRI			0.5
75-69-4	Trichlorofluoromethane	BRI			0.5
60-29-7	Diethyl Ether	BRI		ug/1	2
75-35-4	1 1-Dichloroethene	BRI		ug/1	0.5
76-13-1	1.1.2-Trichlorotrifluoroethane	BRI		ug/L	5
67-64-1	Acetone			ug/l	10
75-15-0	Carbon Disulfide	BRL		ug/I	5
75-09-2	Methylene Chloride	BRI		110/1	2 5
156-60-5	trans-1.2-Dichloroethene	BRI		- ug/l	0.5
1634-04-4	Methyl tert-butyl Ether (MTBE)	4		up/l	0.5
75-34-3	1.1-Dicbloroethane	BRI		1.10/1	0.5
594-20-7	2.2.Dichloropropage	BRI		110/1	0.5
156-59-2	cis-1.2-Dichloroethene	BRI		ug/	0.5
78-93-3	2-Butanone (MEK)	BRI			5
74-97-5	Bromochloromethane	BRI		ug/l	0.5
109-99-9	Tetrabydrofuran (THE)	BRI			5
67-66-3	Chloroform	BRI			0.5
71-55-6	t.1.1-Trichlorgethane	BRI		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRI		ug/l	0.5
563-58-6	1.1-Dichloropropene	BRI		ug/l	0.5
71-43-2	Benzene	BRI			0.5
107-06-2	1.2-Dichloroethane	BRI		ug/L	0.5
79-01-6	Trichloroethene	10		ug/I	0.5
78-87-5	1.2-Dichloropropage	BRI		-92 119/1	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	BRI		ug/i	0.5
79-00-5	1.1.2-Trichloroethane	BRI		ug/l	0.5
127-18-4	Tetrachloroethene	2		ug/l	0.5
142-28-9	1.3-Dichloropropane			ug/L	0.5
591-78-6	2-Hexanone	BRI		ug/L	5
124-48-1	Dibromochloromethane	BRI		ug/l	0.5
106-93-4	1.2-Dibromoethane (EDB)	BRI		ue/I	0.5
108-90-7	Chlorobenzene	BRI		ug/1	0.5
630-20-6	1.1.1.2-Tetrachloroethane	BRI		up/l	0.5
100-41-4	Ethylbenzene	BRI			0.5
08-38-3/106-42-3	meta-Xylene and para-Xylene	BRI		up/L	0.5
95-47-6	ortho-Xylene	BRI		ug/	0.5

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

Field ID:	MW 3				Matrix:	Aqueous		
Project:	120 Merrimac St/060501		Container:	40 mL VOA Vial				
Client:	Simmons Environmental Se	ervices, In	c.		Preservation:	HCI/Cool		
Laboratory ID:	96856-03				QC Batch ID:	VM5-3396	·W	
Sampled:	07-14-06 00:00				Instrument ID:	MS-5 HP 6	890	
Received:	07-14-06 19:15				Sample Volume:	25 mL		
Analyzed:	07-20-06 15:11				Dilution Factor:	1		
Analyst:	КМС						Page: 2 of 2	
CAS Number	Analyte		Con	centration	Notes	Units	Reporting Limit	
100-42-5	Styrene		-	BRL		ug/L	0.5	
75-25-2	Bromoform	Sect. Incl.	200	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	2	0.00.0000	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-IsopropyItoluene			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-chloroproj	oane		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 (ETB	E)		BRL		ug/L	0.5	
994-05-8	tert - Amyl Methyl Ether (T.	AME)		BRL		ug/L	0.5	
QC Surrogate C	ompound	Spiked	Measured	Recove	ry	Q	C Limits	
Dibromofluoron	nethane	10	10	104 %		70) - 130 %	
1,2-Dichloroeth	ane-d₄	10	9.7	97 %		70) - 130 %	
Toluene-d ₈		10	9.8	98 %		7() - 130 %	
4-Bromofluorob	enzene	10	10	100 %		70	0 - 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 fimit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

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EPA Method 8260B Volatile Organics by GC/MS

Field ID:	MW 4		Matrix:	Aqueous	
Project:	120 Merrimac St/060501		Container:	40 mL VOA	Vial
Client:	Simmons Environmental Services, Inc.		Preservation:	HCI/Cool	
aboratory ID:	96856-04		OC Batch ID:	VM5-3396-\	N
ampled	07-14-06 00:00		Instrument ID:	MS-5 HP 68	90
Received	07-14-06 19:15		Sample Volume:	25 mL	
analyzed:	07-20-06 15:51		Dilution Factor:	1	
Analyst:	KMC				Page: 1 of 2
CAS Number	Applyto	Concentration	Notes	Unite	Reportion Limit
75.71.8	Dichlorodifluoromethane	BRI	TADIES		0.5
74-87-3	Chloromethane	BRI			0.5
75-01-4	Vinyl Chloride	BRI		ug/1	0.5
74-83-9	Bromomethane	BRI		ug/L	0.5
75-00-3	Chloroethane	BRI		ug/l	0.5
75-69-4	Trichlorofluoromethane	BRI		110/1	0.5
60.29.7	Diethyl Ether	BRI			2
75 35 4	1 1-Dichloroethene	BRI		110/1	0.5
76-13-1	1.1.2.Trichlorotrifluoroethane	RRI		uø/I	5
67-64-1	Acetone			10/1	10
75-15-0	Cathon Disulfide	BRI		Ua/I	5
75.09.7	Mathylene Chloride	BRI			25
156_60_5	trans 1.2-Dichloroethene	BRI		119/1	0.5
1634.04.4	Methyl tert, butyl Ether (MTRE)	0.6		ug/L	0.5
75-34-3	1 1-Dichloroethane	BRI			0.5
594-20 7	2.2 Dichloropropage	BRI			0.5
156_50.2	cis 1.2-Dichloroethene	BRI		119/1	0.5
78.02.3	2-Butanone (MEK)	BRI		ug/1	5
74.97.5	Bromochloromethane	BPI		ug/l	0.5
100.00.0	Tetrahydrofuran (THF)	BRI			5
67 66 2	Chloroform	RPI			0.5
71 55 6	1.1.1 Trichlocothano	BPI			0.5
71-33-0 56 33 5	Carbon Totrachloride	BRI		- Ug/L	0.5
563 59 6	1 1 Dichlarapropena	BPI			0.5
71 42 2	Renzono	BRI		ug/L	0.5
107.06.2	1.2 Dichloroothang	BPI BPI			0.5
70.01.6	Trichloroethane	BRI			0.5
79-01-0	1.2 Dichlorographe	BRI			0.5
74.05.3	Dibromomothana	BPI			0.5
75.27.4	Bromodichloromethane	BRI		ug/L	0.5
173.01 1	1 4-Dioyane	BRI			500
120-51-1	cis 1 3 Dichloropropena	BRI			0.5
10001-01-5	4 Methyl 2 Pentanone (MIBK)	BRI BRI		ug/1	5
108-88-3	Toluene	BRI			0.5
10061-02.6	trans_1.3-Dichloropropene	RPI		100/1	0.5
79.00.5	1 1 2 Trichlorgethane	801		10/1	0.5
127.18.4	Tetrachloroethene	DRL PDI			0.5
4.) 28 0	1.2.Dichloropropage	DKL			0.5
591.78.4	2 Hevanope	BDI		108/1	5
124.49.1	Dibromochloromethana	PDI		Ug/L	0.5
124-40-1	1 2 Dibromoethurs (EDR)	DKL			0.5
100-93-4	Chlorobaczopp	DKL DDI			0.5
20.20.4	1 1 1 2 Tatrachioreethane	DKL DDI			0.5
100 41 4	5, 1, 1, 2- Tetractionoethane	ORL			0.5
100-41-4	cinyibenzene			US/L	0.5
05 47 6	meta- Aylene and para- Aylene	DKL		Ugit	0.5
90-4/-0	ortho- Aylene	BKL		UZ/L	0.5

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

Field ID:	MW 4				Matrix:	Aqueous		
Project:	120 Merrimac St/060501				Container:	40 mL VOA Vial		
Client:	Simmons Environmental Se	ervices, Inc	C.		Preservation:	HCI/Cool		
Laboratory ID:	9685 6 -04				QC Batch ID:	VM5-3396-	w	
Sampled:	07-14-06 00:00				Instrument ID: MS-5 HP 6890			
Received:	07-14-06 19:15				Sample Volume:	25 mL		
Analyzed:	07-20-06 15:51				Dilution Factor:	1		
Analyst:	KMC						Page: 2 of 2	
CAS Number	Analyte		Conc	entration	Notes	Units	Reporting Limit	
100-42-5	Styrene			BRL		ug/L	0.5	
75-25-2	Bromoform		1	BRL		ug/L	0.5	
98-82-8	Isopropylbenzene			BRL		∪g/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		T	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		Si 1893	BRL		ug/L	0.5	
96-12-8	1,2-Dibromo-3-chloroprop	bane		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 (ETB	E)		BRL		ug/L	0.5	
994-05-8	tert - Amyl Methyl Ether (T	AME)		BRL		ug/L	0.5	
QC Surrogate C	Compound	Spiked	Measured	Recove	ry	Q	C Limits	
Dibromofluoror	nethane	10	10	103 %		70 - 130 %		
1,2-Dichloroeth	ane-d ₄	10	10	102 %		70	- 130 %	
Toluene-d ₈		10	9.7	97 %		70	- 130 %	
4-Bromofluorob	enzene	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.

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID:	B2, 1'-3'				Matrix:	Soil	
Project:	120 Merrimac St/60501				Container:	500 mL Gl	ass
Client:	Simmons Environmental S	ervices, Inc			Preservation:	Cool	
Laboratory ID:	96856-05				QC Batch ID:	EP-2355-M	
Sampled:	07-13-06 00:00				Instrument ID:	GC-9 Agile	nt 6890
Received:	07-14-06 19:15				Sample Weight:	16 g	
Extracted:	07-18-06 09:00				Einal Volume:	1 ml	
Analyzed (Ai):	07-19-06 23:49				% Solids	87	
Applyzed (AP):	07-20-06 00-33				Alinhatic Dilution Factor	1	
Analyst:	NS				Aromatic Dilution Factor:	1	
FPH Ranges			Con	centration	Notes	Units	Reporting Limit
n-C9 to n-C18 A	liphatic 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-C1	11 to n-C22 Aromatic Hydro	carbons [†]		BRL		mg/Kg	33
CAS Number	Analyte		Con	centration	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	and the second second	mg/Kg	0.55
191-24-2	Benzo[g,h,i]perylene			BRL		mg/Kg	0.55
QC Surrogate Co	ompound	Spiked	Measured	Recove	ry	Q	C 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 Cer	tification			
1. Were all QA/Q	C procedures required by the me	thod followe	d?				Yes
2. Were all perform	mance/acceptance standards for I	the required	QA/QC proced	lures achieved?			Yes
3. Were any signif	icant modifications made to the	method, as sp	pecified in Sect	ion 11.3.1.17			No
Method non-confo control report. Ref and quality control	rmances indicated above are det ease of this data is authorized by report are considered part of thi	ailed below o the accomp s data report.	on this data rep anying signed p	ort, or in the accor project cover letter	npanying project narrat . The accompanying co	ive and project over letter, pro	t quality ject narrative
viethod Reference:	Method for the Determination Sample extraction performed	i of Extractab by microway	le Petroleum H e accelerated s	lydrocarbons, MA iolvent extraction t	DEP (Revision 1.1, 200 echnique. Results are n	4). eported on a d	Iry 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.

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

0 n-CF1 to n-C22 Aromatic Hydrocarbons range data excludes the method target analyte concentrations.

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Field ID: Proiect:	B3, 1'-3' 120 Merrimac St/60501		Matrix: Container:	Soil 500 mL Gla	ass
Client:	Simmons Environmental Services, Inc.		Preservation:	Cool	
Laboratory ID:	96856-06		QC Batch ID:	EP-2355-M	
Sampled:	07-13-06 00:00		Instrument ID:	GC-9 Agile	nt 6890
Received:	07-14-06 19:15		Sample Weight:	15 g	
Extracted:	07-18-06 09:00		Final Volume:	1 mL	
Analyzed (AL):	07-19-06 20:54		% Solids:	80	
Analyzed (AR):	07-19-06 21:37		Aliphatic Dilution Factor:	1	
Analyst:	NS		Aromatic Difution Factor:	1	
EPH Ranges		Concentration	Notes	Units	Reporting Limit
n-C9 to n-C18 A	Niphatic Hydrocarbons '	BRL	•	mg/Kg	36
n-C19 to n-C36	Aliphatic Hydrocarbons 7	220		mg/Kg	36
n-C11 to n-C22	Aromatic Hydrocarbons ^{† 0}	160		mg/Kg	36
Unadjusted n-C	11 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	1	mg/Kg	0.61
129-00-0	Pyrene	3.1		mg/Kg	0.61

191-24-2	Benzo[g,h,i]perylene		2.6		mg/Kg	0.61	
QC Surrogate C	ompound	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 9		
	ortho-Terphenyl	3.2	2.0	63 %	40 - 140		
			QA/QC Certif	ication			
1. Were all QA/Q	C procedures required by the m	ethod followe	ed?			Yes	
2. Were all perfor	mance/acceptance standards for	the required	QA/QC procedure	es achieved?		Yes	
3. Were any signi	ficant modifications made to the	e method, as s	pecified in Section	n TT.3.1.1?		No	

2.5

3.3

4.0

1.9

3.0

2.5

0.71

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:

56-55-3

218-01-9

205-99-2

207-08-9

193-39-5

53-70-3

50-32-8

Benzo[a]anthracene

Benzo[b]fluoranthene

Benzo[k]fluoranthene

Indeno[1,2,3-c,d]pyrene

Dibenzo[a,h]anthracene

Benzo[a]pyrene

Chrysene

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.

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mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

0.61

0.61

0.61

0.61

0.61

0.61

0.61



Field ID:	B4, 1'-3'				Matrix:	Soil	
Project:	120 Merrimac St/60501				Container:	500 mL Gia	15\$
Client	Simmons Environmental S	ervices, Inc			Preservation:	Cool	
Laboratory ID:	96 856- 07				QC Batch ID:	EP-2355-M	
Sampled:	07-13-06 00:00				Instrument ID:	GC-9 Agile	nt 6890
Received:	07-14-06 19:15				Sample Weight:	15 g	
Extracted:	07-18-06 09:00				Final Volume:	1 mL	
Analyzed (AL):	07-19-06 22:21				% Solids:	89	
Analyzed (AR):	07-19-06 23:05				Aliphatic Dilution Factor:	1	
Analyst:	NS				Aromatic Dilution Factor:	1	
EPH Ranges			Conce	entration	Notes	Units	Reporting Limit
n-C9 to n-C18 A	liphatic 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-Ci	11 to n-C22 Aromatic Hydro	ocarbons '		35		mg/Kg	33
CAS Number	Analyte		Conce	entration	Notes	Units	Reporting Limit
91-20-3	Naphthalene			BRL		mg/Kg	0.56
91-57-6	2-MethyInaphthalene			BRL		mg/Kg	0.56
85-01-8	Phenanthrene			BRL			0.56
83-32-9	Acenaphthene			BRL			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			BŔL		mg/Kg	0.56
218-01-9	Chrysene			0.60		mg/Kg	0.56
205-99-2	Benzo[b]fluoranthene			8RL			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 C	ompound	Spiked	Measured	Recove	ry	Q	C 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 Certi	fication	··		
1. Were all QA/Q	C procedures required by the m	ethod folfowe	d?				Yes
2. Were all perfor	mance/acceptance standards for	the required	QA/QC procedu	res achieved?			Yes
 were any signif 	licant modifications made to the	method, as s	pecified in Sectio	21 (F.3.1.FS			NO
Method non-confo control report. Rel and quality control	rmances indicated above are de lease of this data is authorized b Leenort are considered part of th	tailed below (y the accomp is data report	on this data repoi anying signed pro	rt, or in the accon oject cover letter.	panying project narrat The accompanying co	ive and project over letter, proj	t quality ject narrative
	report are considered part of th					· .	
Method Reference:	Method for the Determination Sample extraction performed	n of Extractab I by microway	le Petroleum Hy e accelerated so	drocarbons, MA I lvent extraction te	DEP (Revision 1-1, 200 echnique. Results are r	4). eported on a d	Iry 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.

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

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

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Analyst:	NS	Aromatic Dilution Factor.	1
Analyzed (AR):	07-19-06 20:09	Aliphatic Dilution Factor:	1
Analyzed (AL):	07-19-06 19:26	% Solids:	95
Extracted:	07-18-06 09:00	Final Volume:	1 mL
Received:	07-14-06 19:15	Sample Weight:	16 g
Sampled:	07-13-06 00:00	Instrument ID:	GC-9 Agilent 6890
Laboratory ID:	96856-08	QC Batch ID:	EP-2355-M
Client:	Simmons Environmental Services, Inc.	Preservation:	Cool
Project:	120 Merrimac St/60501	Container:	500 mL Glass
Field ID:	B5, 1'-3'	Matrix:	Soil

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 **	100		mg/Kg	31

Unadjusted n-C1	1 to n-C22 Aromatic Hydr	ocarbons [†]		130		mg/Kg	31
CAS Number	Analyte		Conce	entration	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		BRL 1.4 BRL BRL BRL 0.53 3.5				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		1	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 Co	mpound	Spiked	Measured	Recovery		Q	C 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 %	0.52	40	- 140 %
			QA/QC Certi	fication			
1 Wom all OA/O/	Caracadurar required by the m	ethod follows	d)				Vac

2. Were all performance/acceptance standards for the required QA/QC procedures achieved?

3. Were any significant modifications made to the method, as specified in Section 11.3.1.1?

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. t

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

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Yes

No

Massachusetts DEP EPH Method Extractable Petroleum Hydrocarbons by GC/FID

Field ID: Project: Client:	MW 1 120 Merrimac St/6050† Simmons Environmental S	ervices, Inc	5.		Matrix: Container: Preservation:	Aqueous 1 L Amber H2SO4/Co	Glass ol
Laboratory ID: Sampled: Received: Extracted: Analyzed (AL): Analyzed (AR): Analyst:	96856-12 07-14-06 00:00 07-14-06 19:15 07-19-06 10:00 07-20-06 17:44 07-20-06 18:28 NS				QC Batch ID: Instrument ID: Sample Volume: Final Volume: Aliphatic Dilution Factor: Aromatic Dilution Factor:	EP-1769-F GC-9 Agile 1000 mL 1 mL 1 1	nt 6890
EPH Ranges			Co	ncentration	Notes	Units	Reporting Limit
n-C9 to n-C18 A	liphatic 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-C1	1 to n-C22 Aromatic Hydro	carbons [†]		BRL		ug/L	150
CAS Number	Analyte		Co	ncentration	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			8RL		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 Co	mpound	Spiked	Measured	Recov	егу	Q	C 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 Cert	ification	391-120-515
1. Were all (QA/QC procedures required by the	method followed	95		Yes
2. Were all p	performance/acceptance standards for	or the required (QA/QC proced	ures achieved?	Yes
3. Were any	significant modifications made to th	ne method, as sp	ecified in Sec	ion 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.
 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.

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Field ID:	MW 2	Matrix:	Aqueous
Project:	120 Merrimac St/60501	Container:	1 L Amber Glass
Client:	Simmons Environmental Services, Inc.	Preservation:	H2SO4/Cool
Laboratory ID:	96856-13	QC Batch ID:	EP-1769-F
Sampled:	07-14-06 00:00	Instrument ID:	GC-9 Agilent 6890
Received:	07-14-06 19:15	Sample Volume:	1000 mL
Extracted:	07-19-06 10:00	Final Volume:	1 mL
Analyzed (AL):	07-20-06 19:13	Aliphatic Dilution Factor:	1
Analyzed (AR):	07-20-06 19:57	Aromatic Dilution Factor:	1
Analyst:	N5		

EPH Ranges	Concentration N	lotes 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 10	BRL	ug/L	150

Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons [†] BRL ug/L 150

CAS Number	Analyte		Conce	ntration	Notes	Units	Reporting Lim
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			8RL		ug/L	5
208-96-8	Acenaphthylene			BRL		ug/L	5
86-73-7	Fluorene			BRL	1.5241	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	BRL		5
205-99-2	Benzo[b]fluoranthene			BRL BRL BRL			5
207-08-9	Benzo[k]fluoranthene						5
50-32- B	Benzo[a]pyrene		1				5
193-39-5	Indeno[1,2,3-c,d]pyrene	o[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 Co	mpound	Spiked	Measured	Recovery		Q	C Limits
Fractionation:	2-Fluorobiphenyl	40	36	90 %		40	- 140 %
	2-Bromonaphthalene	40	33	82 %		40	- 140 %
Extraction:	Chloro-octadecane	40	40	99 %		40	- 140 %
Provident	ortho -Terphenyl	40	34	84 %		40	- 140 %
		_	QA/QC Certifi	ication			
Were all QA/Q	C procedures required by the m	ethod followe	d≀				Yes
Were all perform	nance/acceptance standards for	the required	QA/QC procedur	es achieved?			Yes
. Were any signif	icant modifications made to the	method, as s	pecified in Sectio	n 11.37			No

memory 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.
 Sample extraction performed by separatory funnel technique.

Report Notations:

s: 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 staridards eluting in that range.

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

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MW 3				Matrix:	Aqueous	
120 Merrimac St/60501				Container:	1 L Amber	Glass
Simmons Environmental S	ervic <mark>es, In</mark> c			Preservation:	H2SO4/Co	iol
96856-14				QC Batch ID:	EP-1769-F	
07-14-06 00:00				Instrument ID:	GC-9 Agile	ent 6890
07-14-06 19:15				Sample Volume:	1000 mL	
07-19-06 10:00				Final Volume:	1 mL	
07-20-06 21:25				Aliphatic Dilution Factor	: 1	
07-20-06 22:09				Aromatic Dilution Factor:	1	
NS						
		Co	ncentration	Notes	Units	Reporting Limit
liphatic Hydrocarbons *			BR	L	ug/L	500
Aliphatic Hydrocarbons			BR	L	ug/L	500
Aromatic Hydrocarbons **			160		ug/L	150
11 to n-C22 Aromatic Hydro	carbons [†]		170		ug/L	150
Analyte		Co	centration	Notes	Units	Reporting Limit
Naphthalene			BR	L	ug/L	5
2-Methylnaphthalene			BR	L	ug/l	5
Phenanthrene			BR	L	ug/L	5
Acenaphthene			BR	L	ug/L	5
Acenaphthylene			BR	L	ug/L	5
Fluorene			BR	L	ug/L	5
Anthracene			BRI	L	ug/L	5
Fluoranthene			BR	L	ug/L	5
Pyrene			BR	L	ug/L	5
Benzo[a]anthracene			BRI	L	ug/L	5
Chrysene			BRI	L	ug/L	5
Benzo(b)fluoranthene			BRI	L	ug/L	5
Benzo[k]fluoranthene			BRI	L	ug/L	5
Benzo[a]pyrene			BRI	L	ug/L	5
Indeno[1,2,3-c,d]pyrene			BRI	L	ug/l,	5
Dibenzo[a,h]anthracene			BRI	L	ug/L	5
Benzo[g,h,i]perylene			BRI		ug/L	5
ompound	Spiked	Measured	Recov	very	Q	C Limits
2-Fluorobiphenyl	40	35	88 %		40	- 140 %
2-Bromonaphthalene	40	30	75 %		40	- 140 %
Chloro-octadecane	40	40	99 %		40	- 140 %
ortho-Terphenyl	40		84 %		40	- 140 %
		QA/QC Ce	tification			
C procedures required by the me	thod followe	d?				Yes
nance/acceptance standards for t icant modifications made to the	ne required i nethod ar a	QA/QC proce	oures achieved?			Yes
mances indicated above are deta ease of this data is authorized by	iled below of the accomp	on this data re anying signed	port, or in the acc project cover lett	companying project narra ter. The accompanying o	tive and proje over letter, pro	ct quality Spect narrative
	MW 3 120 Merrimac St/60501 Simmons Environmental Sc 96856-14 07-14-06 00:00 07-14-06 19:15 07-19-06 10:00 07-20-06 21:25 07-20-06 21:25 07-20-06 22:09 NS liphatic Hydrocarbons [†] Aromatic Hydrocarbons [†] Aromatic Hydrocarbons [†] 1 to n-C22 Aromatic Hydro Analyte Naphthalene 2-Methylnaphthalene Phenanthrene Acenaphthene Acenaphthene Acenaphthene Acenaphthylene Fluorene Anthracene Fluoranthene Pyrene Benzo[a]anthracene Chrysene Benzo[b]fluoranthene Benzo[b]fluoranthene Benzo[a]pyrene Indeno[1,2,3-c,d]pyrene Dibenzo[a,h]anthracene Benzo[g,h,i]perylene Dibenzo[g,h]anthracene Benzo[g,h,i]perylene Dibenzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene Benzo[g,h]anthracene	MW 3 120 Merrimac St/60501 Simmons Environmental Services, Inc. 96856-14 07-14-06 07-14-06 120 Organization 07-14-06 120 Organization 120 Organization 07-14-06 120 Organization 07-14-06 120 Organization 07-14-06 120 Organization 07-14-06 120 Organization 07-19-06 120 Organization 07-20-06 21:00 07-20-06 22:09 NS	MW 3 120 Merrimac St/60501 Simmons Environmental Services, Inc. 96856-14 07-14-06 00:00 07-14-06 19:15 07-19-06 10:00 07-20-06 21:25 07-20-06 22:09 NS Control Contro	MW 3 120 Merrimac St/60501 Simmons Environmental Services, Inc. 96856-14 07-14-06 00:00 07-14-06 19:15 07-19-06 10:00 07-20-06 21:25 07-20-06 22:09 NS Concentration liphatic Hydrocarbons ' BR Aliphatic Hydrocarbons ' BR Aromatic Hydrocarbons ' 170 Analyte Concentration Naphthalene BR 2-Methylnaphthalene BR Acenaphthylene BR Acenaphthylene BR Fluorene BR Acenaphthylene BR Fluoranthene BR Benzo[a]anthracene BR Benzo[b]fluoranthene BR Benzo[a]anthracene BR Benzo[a]anthracene BR Benzo[a]nthracene BR Benzo[a]nthracene BR Benzo[b]fluoranthene BR BR Benzo[b]fluoranthene	MW 3 Matrix: 120 Merrimac St/60501 Container: Simmons Environmental Services, Inc. Preservation: 96856-14 QC Batch ID: 07-14-06 19:15 07-14-06 19:15 07-20-06 21:25 07-20-06 21:25 07-20-06 21:25 07-20-06 21:25 07-20-06 21:25 07-20-06 21:09 Aromatic Hydrocarbons ' BRL Aromatic Hydrocarbons ' BRL Aromatic Hydrocarbons ' 170 Analyte Concentration Notes Notes Naphthalene BRL Naphthalene BRL Accnaphthene BRL Accnaphthene BRL Accnaphthene BRL Anthracene BRL Fluoranthene BRL Benzo[a]anthracene BRL Benzo[b]fluoranthene BRL </td <td>MW 3 Matrix: Aqueous 120 Merrinac St/60501 Container: 1 L Amber Simmons Environmental Services, Inc. Preservation: H2SO4/Cc 96856-14 QC Batch ID: EP.1769-F 07-14-06 09:15 Sample Volume: 1000 mL 07-19-06 10:00 Final Volume: 1 mL 07-20-06 21:25 Atiphatic Dilution Factor: 1 07-20-06 22:09 Aromatic Onlume: 1 mL 07-20-06 22:09 Aromatic Onlume: 1 mL NS Inplatic Hydrocarbons ' BRL ug/L Aromatic Hydrocarbons ' 170 ug/L Anomatic Hydrocarbons ' 1 Notes Units. Naphthalene BRL ug/L Analyte Concentration Notes Units. Analyte Concentration Notes Units. Naphthalene BRL ug/L Aromatic Hydrocarbons ' 170 ug/L Accanaphthalene BRL ug/L Aromatic Hydrocarbons ' 170 ug/L Accanaphthalene BRL ug/L Aromatic Hydrocarbons '</td>	MW 3 Matrix: Aqueous 120 Merrinac St/60501 Container: 1 L Amber Simmons Environmental Services, Inc. Preservation: H2SO4/Cc 96856-14 QC Batch ID: EP.1769-F 07-14-06 09:15 Sample Volume: 1000 mL 07-19-06 10:00 Final Volume: 1 mL 07-20-06 21:25 Atiphatic Dilution Factor: 1 07-20-06 22:09 Aromatic Onlume: 1 mL 07-20-06 22:09 Aromatic Onlume: 1 mL NS Inplatic Hydrocarbons ' BRL ug/L Aromatic Hydrocarbons ' 170 ug/L Anomatic Hydrocarbons ' 1 Notes Units. Naphthalene BRL ug/L Analyte Concentration Notes Units. Analyte Concentration Notes Units. Naphthalene BRL ug/L Aromatic Hydrocarbons ' 170 ug/L Accanaphthalene BRL ug/L Aromatic Hydrocarbons ' 170 ug/L Accanaphthalene BRL ug/L Aromatic Hydrocarbons '

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.

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Field ID:	MW 4	Matrix:	Aqueous
Project:	120 Merrimac St/60501	Container:	1 L Amber Glass
Client:	Simmons Environmental Services, Inc.	Preservation:	H25O4/Cool
Laboratory ID:	96856-15	QC Batch ID:	EP-1769-F
Sampled:	07-14-06 00:00	Instrument ID:	GC-9 Agilent 6890
Received:	07-14-06 19:15	Sample Volume:	1000 mL
Extracted:	07-19-06 10:00	Final Volume:	1 mL
Analyzed (AL):	07-20-06 22:53	Aliphatic Dilution Factor:	1
Analyzed (AR):	07-20-06 23:37	Aromatic Delution Factor:	1
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 10	BRL		ug/L	150

8RL Unadjusted n-C11 to n-C22 Aromatic Hydrocarbons * 150 ug/L

CAS Number	Analyte		Conce	entration	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/1.	5
83-32-9	Acenaphthene			BRL	Seal of Manager	ug/L	5
208-96-8	Acenaphthylene		1 -	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/	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 Co	ompound	Spiked	Measured	Recovery		Q	C 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 Certif	ication			
1. Were all QA/Q0	C procedures required by the m	ethod followe	ed?				Yes
2. Were all perform	mance/acceptance standards for	the required	QA/QC procedu	res achieved?			Yes
3. Were any signif	icant modifications made to the	method, as s	pecified in Section	m 11.3₹			No

3. Were any significant modifications made to the method, as specified in Section 11.3?

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.

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

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

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Trace Metals

Field ID: Project: Client:	B2, 1'-3' 120 Merrimac St/060: Simmons Environmen	501 tal Services, Inc.			Matrix: Container: Preservation:	:	Soil 500 mL Glass Cool	
Laboratory ID: Sampled: Received:	96856-05 07-13-06 00:00 07-14-06 19:15				Percent Solic	ls:	87	
Analysis Method EPA 60108 ¹ EPA 7471A ²	<u>OC Batch ID</u> MB-0913-S MP-1996-S	Prep Method EPA 3050B EPA 7471A	Prepared 07-17-06 15:31 07-18-06 10:00		<u>Sample Weight</u> 0.503 g 0.6 g		Instrument ID ICP-2 PE 3300 CVAA-1 PE RIMS	<u>Analyst</u> MWR 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 601081
7440-43-9	Cadmium, Total	0.89		mg/Kg	0.57	1	07-17-06 18:56	EPA 601081
7440-47-3	Chromium, Total	22		mg/Kg	11	1	07-17-06 18:55	EPA 601081
7439-92-1	Lead, Total	170		mg/Kg	11	1	07-17-06 18:56	EPA 60108
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.



Field ID: Project: Client:	B3, 1'-3' 120 Merrimac St/0605 Simmons Environment	501 tal Services, Inc.			Matrix: Container: Preservation	:	Soil 500 mL Glass Cool	
Laboratory ID: Sampled: Received:	9 6856-06 07-13-06 00:00 07-14-06 19:15				Percent Solie	ds:	80	
<u>Analysis Method</u> £PA 6010B ¹ EPA 7471A ²	<u>QC Batch ID</u> MB-0913-S MP-1996-S	<u>Prep Method</u> EPA 30508 EPA 7471A	Prepared 07-17-06 15:31 07-18-06 10:00		<u>Sample Weight</u> 0.516 g Q.6 g		Instrument ID ICP-2 PE 3300 CVAA-1 PE FIMS	<u>Analyst</u> MWR 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 6010B1
7440-43-9	Cadmium, Total	2.9		mg/Kg	0.6	1	07-17-06 18:58	EPA 60108
7440-47-3	Chromium, Total	35		mg/Kg	12	4	07-17-06 18:58	EPA 6010B
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.

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B4, 1'-3'				Matrix:		Soil		
120 Merrimac St/060	501			Container:		500 mL Glass		
Simmons Environmen	tal Services, Inc.			Preservation:	:	Cool		
96856-07				Percent Solic	ls:	89		
07-13-06 00:00								
07-14-06 19:15								
QC Batch 1D	Prep Method	Prepare	sl	Sample Weight	t	Instrument ID	Analyst	
MB-0913-5	EPA 3050B 07-17-		5 15:31	0.495 g		ICP-2 PE 3300	MWR	
MP-1996-S	EPA 7471A	07-18-06 10:00		0.6 g		CVAA-1 PE FIMS	MFP	
Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method	
Arsenic, Total	17		mg/Kg	3.4	1	07-17-06 19:01	EPA 60108'	
Cadmium, Total	1.2		mg/Kg	0.57	1	07-17-06 19:01	EPA 60108	
Chromium, Total	19		mg/Kg	11	1	07-17-06 19:01	EPA 601081	
Lead, Total	1,100		mg/Kg	11	1	07-17-06 19:01	EPA 60108	
Mercury, Total	4.7		mg/Kg	0.075	2	07-18-06 14:12	EPA 7471A ²	
	B4, 1'-3' 120 Merrimac St/060: Simmons Environmen 96856-07 07-13-06 00:00 07-14-06 19:15 QC Batch 1D MB-0913-5 MP-1996-S Analyte Arsenic, Total Cadmium, Total Lead, Total Mercury, Total	B4, 1'-3' 120 Merrimac St/060501 Simmons Environmental Services, Inc. 96856-07 07-13-06 00:00 07-13-06 00:00 07-14-06 19:15 QC Batch 1D Prep Method MB-0913-5 EPA 30508 MP-1996-5 EPA 7471A Analyte Concentration Arsenic, Total 17 Cadmium, Total 1-2 Chromium, Total 19 Lead, Total 1,100 Mercury, Total 4.7	B4, 1'-3' 120 Merrimac St/060501 Simmons Environmental Services, Inc. 96856-07 07-13-06 00:00 07-13-06 00:00 07-14-06 19:15 QC Batch ID Prep Method Repare MB-0913-5 EPA 30508 07-17-00 MP-1996-S EPA 7471A 07-18-00 Analyte Concentration Notes Arsen/c, Total 17 Cadmium, Total Chromium, Total 19 Lead, Total 1,100 Mercury, Total 4.7	B4, 1'-3' 120 Merrimac St/060501 Simmons Environmental Services, Inc. 96856-07 07-13-06 00:00 07-14-06 19:15 QC Batch 1D Prep Method MB-0913-5 EPA 30508 MP-1996-S EPA 7471A O7-18-06 10:00 Analyte Concentration Arsenic, Total 17 Mg/tage mg/kg Cadmium, Total 1.2 Mg/tage 19 Mg/kg Lead, Total 1,100 mg/kg	B4, 1'-3' Matrix: 120 Merrimac St/060501 Container: Simmons Environmental Services, Inc. Preservation: 96856-07 Percent Solid 96856-07 Percent Solid 07-13-06 00:00 Prep Method Erepared Sample Weight 07-14-06 19:15 QC Batch 1D Prep Method Erepared Sample Weight MB-0913-5 EPA 30508 07-17-06 15:31 0.495 g MP-1996-S EPA 7471A 07-18-06 10:00 0.6 g Analyte Concentration Notes Units Reporting Limit Arsenic, Total 17 mg/Kg 3.4 Cadmium, Total 17 mg/Kg 3.4 Concentration Notes Units Reporting Limit Arsenic, Total 17 mg/Kg <td>B4, 1'-3' Matrix: 120 Merrimac St/060501 Container: Simmons Environmental Services, Inc. Preservation: 96856-07 Percent Solids: 07-13-06 00:00 Prep Method Prepared Sample Weight 07-14-06 19:15 Concentration Prep Method Prepared Sample Weight MB-0913-5 EPA 3050B 07-17-06 15:31 0.495 g MB-0913-5 EPA 3050B 07-17-06 15:31 0.495 g MB-0913-5 EPA 7471A O7-18-06 10:00 0.6 g Analyte Concentration Notes Units Reporting Limit DF Arsenic, Total 17 mg/Kg 0.57 1 Chromium, Total 12 mg/Kg 1 Cadmium, Total 19 mg/Kg 1 Lead, Total 1,100 mg/Kg <td colsp<="" td=""><td>B4, 1'-3' Matrix: Soil 120 Merrimac St/060501 Container: 500 mL Glass Simmons Environmental Services, Inc. Preservation: Cool 96856-07 Preservation: Cool 96856-07 Preservation: Cool 96856-07 Percent Solids: 89 07-13-06 00:00 07-14-06 19:15 QC Batch 1D Prep Method Erepared Samole Weight Instrument ID M8-0913-5 EPA 30508 07-17-06 15:31 0.495 g CVAA:1 PE Flus MB-0913-5 EPA 7471A 07-18-06 10:00 0.6 g CVAA:1 PE Flus Analyte Concentration Notes Units Reporting Limit DF Analyzed Arsenic, Total 17 mg/Kg 0.57 1 07-17-06 19:01 Cadmium, Total 1.2 mg/Kg</td></td></td>	B4, 1'-3' Matrix: 120 Merrimac St/060501 Container: Simmons Environmental Services, Inc. Preservation: 96856-07 Percent Solids: 07-13-06 00:00 Prep Method Prepared Sample Weight 07-14-06 19:15 Concentration Prep Method Prepared Sample Weight MB-0913-5 EPA 3050B 07-17-06 15:31 0.495 g MB-0913-5 EPA 3050B 07-17-06 15:31 0.495 g MB-0913-5 EPA 7471A O7-18-06 10:00 0.6 g Analyte Concentration Notes Units Reporting Limit DF Arsenic, Total 17 mg/Kg 0.57 1 Chromium, Total 12 mg/Kg 1 Cadmium, Total 19 mg/Kg 1 Lead, Total 1,100 mg/Kg <td colsp<="" td=""><td>B4, 1'-3' Matrix: Soil 120 Merrimac St/060501 Container: 500 mL Glass Simmons Environmental Services, Inc. Preservation: Cool 96856-07 Preservation: Cool 96856-07 Preservation: Cool 96856-07 Percent Solids: 89 07-13-06 00:00 07-14-06 19:15 QC Batch 1D Prep Method Erepared Samole Weight Instrument ID M8-0913-5 EPA 30508 07-17-06 15:31 0.495 g CVAA:1 PE Flus MB-0913-5 EPA 7471A 07-18-06 10:00 0.6 g CVAA:1 PE Flus Analyte Concentration Notes Units Reporting Limit DF Analyzed Arsenic, Total 17 mg/Kg 0.57 1 07-17-06 19:01 Cadmium, Total 1.2 mg/Kg</td></td>	<td>B4, 1'-3' Matrix: Soil 120 Merrimac St/060501 Container: 500 mL Glass Simmons Environmental Services, Inc. Preservation: Cool 96856-07 Preservation: Cool 96856-07 Preservation: Cool 96856-07 Percent Solids: 89 07-13-06 00:00 07-14-06 19:15 QC Batch 1D Prep Method Erepared Samole Weight Instrument ID M8-0913-5 EPA 30508 07-17-06 15:31 0.495 g CVAA:1 PE Flus MB-0913-5 EPA 7471A 07-18-06 10:00 0.6 g CVAA:1 PE Flus Analyte Concentration Notes Units Reporting Limit DF Analyzed Arsenic, Total 17 mg/Kg 0.57 1 07-17-06 19:01 Cadmium, Total 1.2 mg/Kg</td>	B4, 1'-3' Matrix: Soil 120 Merrimac St/060501 Container: 500 mL Glass Simmons Environmental Services, Inc. Preservation: Cool 96856-07 Preservation: Cool 96856-07 Preservation: Cool 96856-07 Percent Solids: 89 07-13-06 00:00 07-14-06 19:15 QC Batch 1D Prep Method Erepared Samole Weight Instrument ID M8-0913-5 EPA 30508 07-17-06 15:31 0.495 g CVAA:1 PE Flus MB-0913-5 EPA 7471A 07-18-06 10:00 0.6 g CVAA:1 PE Flus Analyte Concentration Notes Units Reporting Limit DF Analyzed Arsenic, Total 17 mg/Kg 0.57 1 07-17-06 19:01 Cadmium, Total 1.2 mg/Kg

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.



Field ID: Project: Client:	B5, 1'-3' 120 Merrimac St/060 Simmons Environmen	501 tal Services, Inc.			Matrix: Container: Preservation.	:	Soil 500 mL Glass Cool	
Laboratory ID: Sampled: Received:	96856-08 07-13-06 00:00 07-14-06 19:15				Percent Solic	ds:	95	
Analysis Method	OC Batch ID	Prep Method	Prepare	ed Gran	Sample Weigh	1	Instrument ID	Analyst
EPA 60108 EPA 7471A ²	MB-0913-5 MP-1996-5	EPA 3050B 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	D7-17-06 19:05	EPA 60108
7440-43-9	Cadmium, Total	BF	RL	mg/Kg	0.53	1	07-17-06 19:05	EPA 60108
7440-47-3	Chromium, Total	21		mg/Kg	11	1	07-17-06 19:04	EPA 60108
7439-92-1	Lead, Total	19		mg/Kg	11	1	07-17-06 19:05	EPA 6010B1
7439-97-6	Mercury, Total	BR	<u>دا</u>	mg/Kg	0.035	٦	07-18-06 13:11	EPA 747 1A2

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.

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Trace Metals

Percent Solid	ls:	84	
Sample Weight 0.512 g	ł	Instrument ID ICP-2 PE 3300	<u>Analyst</u> MWR
Reporting Limit	DF	Analyzed	Method
3.5	1	07-17-06 19:13	EPA 60108
•	Reporting Limit	Reporting Limit DF 3.5 1	Coporting Limit DF Analyzed 3.5 1 07-17-06 19:13

Report Notations:

Results are reported on a dry weight basis. 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.



Field ID: Project: Client:	SS 2 120 Merrimac St/060 Simmons Environmen	501 tal Services, Inc.			Matrix: Container: Preservation	;	Soil 250 mL Glass Cool	
Laboratory ID: Sampled: Received:	96856-10 07-13-06 00:00 07-14-06 19:15				Percent Solid	ds:	91	
Analysis Method EPA 60108 ¹	<u>QC Batch ID</u> MB-0913-S	Prep. Method EPA 3050B	<u>Prepare</u> 07-17-00	2 d 5 15:31	<u>Sample Weigh</u> 0.501 g	t	Instrument_ID ICP-2 PE 3300	<u>Analyst</u> 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 601081
Method Reference:	Test Methods for Evalua	iting Solid Waste, US EP	PA, SW-846	, Third Edit	ion, Update III (1	996).		

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.

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Trace Metals

Field ID: Project: Client:	SS 3 120 Merrimac St/060 Simmons Environmen	501 tal Services, Inc.			Matrix: Container: Preservation:	:	Soil 250 mL Glass Cool	
Laboratory ID: Sampled: Received:	96856-11 07-13-06 00:00 07-14-06 19:15				Percent Solid	ds:	60	
<u>Analysis Method</u> EPA 6010B ¹	<u>QC Batch ID</u> MB-0913-5	Prep Method EPA 3050B	<u>Prepar</u> 07-17-0	ed 6 15:31	<u>Sample Weigh</u> 0.49 g	1	Instrument ID	<u>Analyst</u> 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 601081
Method Reference:	Test Methods for Evalua	ating Solid Waste, US EF	PA, SW-846	, Third Edit	ion, Update III (1	996).		

Results are reported on a dry weight basis.

Report Notations:

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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.

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GROUNDWATER ANALYTICAL	228 Marr Street, P.O. Box 1200 Buzzekis Bay, MA 05553 Releptone (508) 759 441 - F-XX (508) 759 4475 www.groundweareare/biosk.com	CHAIN-OF-CUSTODY RECORD AND WORK ORDER				N2 210470
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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

			LCS				LCSD	}		
Category:	MA DEP EPH Method		Insti	rument ID:	GC-9 /	Agilent 6	5890 Instru	iment ID:	GC-9 Agilent	6890
QC Batch ID:	EP-1769-F		Extr	acted:	07-19-	06 10:0	0 Extra	cted:	07-19-06 10:	00
Matrix:	Aqueous		Ana	lyzed (AL):	07-20-	06 14:4	8 Analy	zed (AL):	07-20-06 16:	16
Units:	ug/L		Ana	lyzed (AR):	07-20-	06 15:3	2 Analy	zed (AR):	07-20-06 17:	00
			Ana	lyst:	N\$		Analy	/st:	NS	
CAS Number	Analyte		LC	S		L	CS Duplicate		QC Lim	its
		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 (C10)	50	27	53 %	50	28	56 %	5 %	40 - 140 %	25%
112-40-3	n-Dodecane (C12)	50	27	54 %	50	28	57 %	6%	40 - 140 %	25%
629-59-4	n-Tetradecane (C14)	50	33	65 %	50	34	68 %	4 %	40 - 140 %	25%
544-76-3	n-Hexadecane (C16)	50	37	73 %	50	39	77 %	5%	40 - 140 %	25%
593-45-3	n-Octadecane (C18)	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	л-Nonadecane (С ₁₉)	50	41	82 %	50	43	86 %	5 %	40 - 140 %	25%
112-95-8	n-Eicosane (C20)	50	41	81 %	50	43	86 %	6 %	40 - 140 %	25%
629-97-0	л-Docosane (С ₂₂)	50	40	81 %	50	43	86 %	6 %	40 - 140 %	25%
646-31-1	n-Tetracosane (C24)	50	37	75 %	50	40	80 %	7 %	40 - 140 %	25%
630-01-3	n-Hexacosane (C26)	50	38	77 %	50	41	83 %	7 %	40 - 140 %	25%
630-02-4	n-Octacosane (C28)	50	38	76 %	50	41	82 %	8%	40 - 140 %	25%
638-68-6	n-Triacontane (C30)	50	38	76 %	50	41	82 %	7%	40 - 140 %	25%
630-06-8	n-Hexatriacontane (C ₁₆)	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%
OC Surrogate	Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery		QC Limi	its
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	%
	Fract	ionatio	n Breakt	hrough Evalu	ation				QC Limi	ts
91-20-3	Naphthalene	LCS		0 %	LCSD		0 %		5%	
91-57-6	2-Methylnaphthalene	LCS		0 %	LCSD		1 %		5%	
Method Reference	e: Method for the Deter	mination	of Extrac	table Petroleum	Hydroca	rbons. M	A DEP (Revisio	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.

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Quality Control Report Method Blank

Category: QC Batch ID: Matrix:	MA DEP EPH EP-1769-F Aqueous				instrument ID: Extracted: Analyzed (AL): Analyzed (AR): Analyst:	GC-9 Agiler 07-19-06 1 07-20-06 1 07-20-06 1 NS	nt 6890 0:00 3:20 4:04
EPH Ranges			Con	centration	Notes	Units	Reporting Limit
n-C9 to n-C18 A	liphatic 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-C1	1 to n-C22 Aromatic Hydrod	carbons ⁺		BRL		ug/L	150
CAS Number	Analyte		Con	centration	Notes	Units	Reporting Limit
91-20-3	Naphthalene			BRL		ug/L	5
91.57-6	2-Methylnaphthalene			BRI		ug/L	5
85-01-8	Phenanthrene		<i>a.</i>	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	Ругеле			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 Co	mpound	Spiked	Measured	Recove	ry	Q	C 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.

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

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Quality Control Report Laboratory Control Samples

			LCS				LCSE)		
Category:	MA DEP EPH Method		Inst	rument ID:	GC-9 /	Agilent 6	890 Instru	iment ID:	GC-9 Agilent	6890
OC Batch ID:	EP-2355-M		Extr	acted:	07-18-	06 09:0	0 Extra	cted:	07-18-06 09:	00
Matrix:	Soil		Ana	lyzed (AL):	07-18-	06 20:2	4 Analy	zed (AL):	07-18-06 21:	52
Units:	mg/Kg		Ana	lyzed (AR):	07-18-	06 21:0	8 Analy	zed (AR):	07-18-06 22:	36
	0.0		Ana	lyst:	NS		Analy	/st:	NS	
CAS Number	Analyte		- 10	<u>s</u>			S Duplicate		QC Lim	its
		Spiked	Measured	Recovery	Spiked	Meanwed	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 (C12)	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 (C19)	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 (C22)	3.3	2.7	81 %	3.3	2.4	73 %	11 %	40 - 140 %	25%
646-31-1	n-Tetracosane (C24)	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 (C36)	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 Limi	its
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	%
	Fract	ionation	Breakt	hrough Evalu	ation	_			OC Limi	its
91-20-3	Naphthalene	LCS		0 %	TECSD		0 %		5%	-
91-57-6	2-Methylnanhthalene	LCS		0 %	LCSD		0 %		5%	
	a menty map have been			able Bettert-				. 1 1 300.0		
method Kelerend	e: Method for the Deter Method modified by	mination use of mi	crowave	accelerated sol	vent extra	ction tech	n DEP (Revisio) Inique.	n 1.1, 2004).		

Report Notations: All

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.

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Quality Control Report Method Blank

Category: QC Batch ID: Matrix:	MA DEP EPH EP-2355-M Soil				Instrument ID: Extracted: Analyzed (AL): Analyzed (AR): Analyst:	GC-9 Agilent 6890 07-18-06 09:00 07-18-06 18:56 07-18-06 19:40 NS		
EPH Ranges			Conce	ntration	Notes	Units	Reporting Limit	
n-C9 to n-C18 A	liphatic Hydrocarbons '			BRL		mg/Kg	30	
n-C19 to n-C36	Aliphatic Hydrocarbons ¹			BRL		mg/Kg	30	
n-C11 to n-C22	Aromatic Hydrocarbons **			BRL		mg/Kg	30	
Unadjusted n-C	1 to n-C22 Aromatic Hydro	carbons ^t		BRL		mg/Kg	30	
CAS Number	Analyte		Conce	ntration	Notes	Units	Reporting Limit	
91-20-3	Naphthalene			BŔL		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			8RL		mg/Kg	0.50	
191-24-2	Benzo[g,h,i]perylene			BRL		mg/Kg	0.50	
QC Surrogate C	ompound	Spiked	Measured	Recover	ry	Q	C 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.

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Quality Control Report Laboratory Control Samples

Category: Matrix:	Metals Soil										
Units:	mg/Kg										
Sample Type	Method	QC Batch ID	Prep Meth	od Pre	epared		Analyzed	ln:	strument ID		Analyst
LCS	EPA 6010B	MB-0913-St	EPA 30508	3 07	17-06 15	:31	07-17-06 18	41 IC	P-2 PE 3300		MFP
LCS	EPA 7471A	MP-1996-SL	EPA 7471/	07	-18-06 10	:00	07-18-06 12	25 C	VAA-1 PE FIMS	;	MFP
LCSD	EPA 6010B	MB-0913-SL	EPA 3050E	3 07	-17-06 15	:31	07-17-06-18	44 IC	P-2 PE 3300		MFP
LCSD	EPA 7471A	MP-1996-SL	EPA 7471/	N 07	18-06 10	:00	07-18-06 12	28 CV	VAA-T PE FIMS		MFP
CAS Number	Analyte		LCS			LCS	Duplicate		QC Lin	nits	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 60108
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 60108
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: Matrix:	Metals Soil							
Analysis Method	QC Batch ID	Prep Method	Prepare	ed	Sample Volum	e	Instrument ID	Analyst
EPA 6010B EPA 7471A	MB-0913-5B MP-1996-5B	EPA 3050B EPA 7471A	07-17-0 07-18-0	6 15:31 6 10:00	0.5 g 0.6 g		ICP-2 PE 3300 CVAA-1 PE FIMS	MFP MFP
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-38-2	Arsenic	BR	۲L	mg/Kg	3.0	1	07-17-06 18:38	EPA 6010B
7440-43-9	Cadmium	BR	۲L	mg/Kg	0.5	1	07-17-06 18:38	EPA 6010B
7440-47-3	Chromium	BR	ar i	mg/Kg	10	1	07-17-06 18:38	EPA 6010B
7439-92-1	Lead	BR	ti.	mg/Kg	10	1	07-17-06 18:38	EPA 6010B
7439-97-6	Mercury	BR	۲L	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.

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Quality Control Report Laboratory Control Samples

		L	CS				LCSD				
Category: EPA Method 8260B QC Batch ID: VM5-3396-WL		Instrument ID: MS-5 HP 6890					Instrument	ID: M	IS-5 HP 6890	-5 HP 6890	
		Analyzed: 07-20-06 10:27					Analyzed:	03	7-20-06 11:08		
Matrix:	Aqueous	Analyst: kmc					Analyst:	kı	THC		
Units:	ug/L								Page:	1 of 2	
CAS Number	Analyte		LCS		ľ	LCS	5 Duplicate		QC Lin	nits	
		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	66 %	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-Dichtoroethene	10	8.1	61 %	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-Dichloropropage	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	Bromodichloromethage	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 2 Dichlotopropene	10	9.2	92 %	10	6.8	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%	
147.78.9	1.3-Dichloropropage	10	9.9	99 %	10	9.3	93 %	5 %	70 - 130 %	25%	
591-78-6	2.Hexanone	20	71	104 %	20	19	97 %	7 %	70 - 130 %	25%	
174-48-1	Dibromochloromethage	10	9	90 %	10	8.9	89 %	1 %	70 - 130 %	25%	
106.93.4	1 2-Dibromoethase (EDB)	10	9.8	98 %	10	9.6	96 %	2 %	70 - 130 %	25%	
108-90 7	Chloroben zene	10	91	91 %	10	9.1	91 %	2 %	70 - 130 %	25%	
630.20.4	1 1 1 2-Tetrachloroethane	10	9.4	94 %	10	9.2	92 %	2 %	70 - 130 %	25%	
100-41-4	Fthylhenzene	10	9.7	92 %	10	9.3	93 %	1 %	70 - 130 %	25%	
108.38.3/106.42.7	mata, Xylene and mara, Xylene	20	19	94 %	20	19	94 4	0 %	70 - 130 %	25%	
95.47.6	ortho Xylene	10	96	96 %	10	9.1	93 %	ર થ	70 - 130 %	259	
73-47-0	Shirene	10	9.0	95 %	10	9.3	93 %	3 m	70 - 130 %	25%	
75.25.2	Bromoform	10	10	104 %	t0	10	102 %	1 %	70 - 130 %	75%	
1 3-23-2	Isopeonulbun zena	10	8.9	88 %	10	87	87 %	1 %	70, 120 %	259	
70.07.0	isupropyidenzene	1 10	0.0	00 %	10	0./	¢7/7a	1 %	1/0-130%	207	

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Quality Control Report Laboratory Control Samples

		L	CS				LCSD			
Category:	EPA Method 82608	le:	strument	ID: MS-	5 HP 68	90	Instrument	ID: M	S-S HP 6890	
QC Batch ID: VM5-3396-WL Matrix: Aqueous		A	nalyzed:	07-2	0-06 10):27	Analyzed: 07-20-06 11:08			
		Analyst: kmc Analyst: kmc						nc		
Units:	ug/L								Page	2 of 2
CAS Number	Analyte		LCS			LCS	5 Duplicate		QC Lin	nits
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
108-86-1	Bromobenzene	10	9.3	93 %	01	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 Lim	iits
Dibromofluoron	nethane	10	9.5	95 %	10	9.4	94 %		70 - 130 %	
1,2-Dichloroeth	ane-d ₄	10	9.3	93 %	10	8.8	88 %		70 - 130 %	
Toluene-d _a		10	9.3	93 %	10	9.6	96 %		70 - 130 %	
4-Bromofluorob	enzene	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.

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Quality Control Report Method Blank

Category: QC Batch 1D: Matrix:	EPA Method 8260B VM5-339 6 -WB Aqueous	Instrument ID: Analyzed: Analyst:	MS-5 HP 6890 07-20-06 11:48 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-Trichlorotrilluoroethane	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)	BRI			0.5
75-34-3	1 1-Dichloroethane	BRI		ug/1	0.5
594-20-7	2 2-Dichloropropage	BRI		110/1	0.5
156-59-2	cis 1.2 Dichlorothene	BRI		ug/1	0.5
78-93-3	2-Butanone (MEI)	BRI			5
74.07.5	Promachloromethane	BPI BPI		- Ug/L	0.5
100.00.0	Tetrahydrofuran (THE)	DNL		ug/L	U.3
67663	Chloroform	DAL		ug/L	05
71 65 6		DKL DKL		ugr	0.5
71-53-0	Carbon Totra ablasi da	DKL		ug/L	0.5
562.59.6		DKL		ug/L	0.5
363-38-6	1, I-Dichloropropene	BKL		Ug/L	0.5
/1-43-2	benzene	BKL		ug/L	0.5
107-06-2	T,2-Dichloroethane	BKL		ug/1	0.5
79-01-6	1 2 Disklauren en e	BKL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BKL		ug/L	0.5
74-95-3	Dibromomethane	BKL		ug/L	0.5
/5-27-4	Bromodichloromethane	BKL			0.5
123-91-1	1,4-Dioxane	BKL		ug/L	500
10061-01-5	cis-1,3-Dichloropropene	BKL		Ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/1_	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

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Quality Control Report Method Blank

Category:	EPA Method 82608	Instrument ID:	MS-5 HP 6890
QC Batch ID:	VM5-3396-WB	Analyzed:	07-20-06 11:48
Matrix:	Aqueous	Analyst:	kmc
			Page: 2 of 2

CAS Number	Analyte		Conc	entration	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-Trichforopropane			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-Chiorotoluene			BRL		ug/L	0.5
98-06-6	tert-Butylbenzene			BRL		ug/l.	0.5
95-63-6	1,2,4-Trimethylbenzene			BRI.		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-chloroprop	Dane	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 (ETB	E)		BRL		ug/L	0.5
994-05-8	tert-Amyl Methyl Ether (T/	AME)		BRL		ug/L	0.5
QC Surrogate C	ompound	Spiked	Measured	Recovery		QC Limits	
Dibromofluoron	nethane	10	10	105 %		70 - 130 %	
1,2-Dichloroetha	ane-d	10	9.5	95 %		70 - 130 %	
Toluene-d ₈		10	9.5	95 %		70	- 130 %
4-Bromofluorob	enzene	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.

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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/labs/CT_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, 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

Page 1 of 11



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

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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/labs/CT_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

Page 41 of 41

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



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

Page 1 of

June 28, 2007

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

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

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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

Container

C987623 250 mL Amber Glass

Vendor

Proline

QC Lot

BX26694

Preserv

None

Con ID

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 1D		Matrix	Sampled	Method			Notes	
108219-1	SHB6AA		\$oil	6/15/07 0:00	EPA 60108 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	SHBAA		Soil	6/15/07 0:00	EPA 60108 Cd	CrPb			

QC Lot

n/a

Prep

n/a

Ship

n/a



Data Certification

roject:		Lab ID: Received:	108219 06-20-07 18:00							
			DED C			- 44 - 14-			VO 20 0 /	
Braige	et La anti-an-	MA	DEP Compend	num of A	nalytical Mi	etnoas			e la	
Projec		<u>n/a</u>				N	A DEP KIN:		nva.	
This F	orm provides ce	rtifications for the follo	wing data set:							
EPA 6	6010B:	108219-1,-2								
Samp	le Matrices:	Groundwater ()	Soil/Sediment	(X) D	rinking Water	r ()	Other	()		
MCP	SW-846	82608 ()	8151A	()	8330) ()	6010B	(X)	7470A	<u>IA ()</u>
Metho	ods Used	8270C ()	8081A	()	VPH		6020A	()	9012	<u>A² ()</u>
As spec	ified in MA DEP	8082 ()	80218	()	EPH	()	7000 S ²	()	Oth	ber ()
Comper	ndium of Analytical k.	1. List Release Tracking Nun	iber (RTN), it known.							
talk and a	-11 als	2. SW-846 Method 9012A (quivalent to 9014) o	R MA DEP P	hysiologically A	vailable C	yankle (PAC) Met	nod		
	ar mai appry:	3. 5- SW-646 Methods / Out	Cand Dir m	nuicod fo	e "Drocument	ina Car	-			
	n ammanve res	ponse to questions A, I		quireo it	r resumpt	ive cer	tanty status.			
A.	Were all sam	ples received by the la	boratory in a co	ondition (consistent w	ith				
	that describe	d on the Chain-of-Cust	ody documenta	tion for t	ne data set?				Yes	
B .	Were all QA	QC procedures require	ed for the specif	fied analy	tical metho	d(s)	j			
	included in t	his report followed, inc	luding the requ	irement	o note and					
	discuss in a r	arrative QC data that c	lid not meet app	propriate	performanc	e				
	standards or	guidelines?							Yes	
c	Doer the and	lutical data included in	this report me	et all the	requirement					
<u> </u>	for "Presumn	tive Certainty * as desc	rihed in Section	20 of t	e MA DEP					
	document C	AM VII A Onality Assu	rance and Qua	lity Cont	ol Guidelin	.				
	for the Acqui	isition and Reporting of	f Analytical Dat	ta ?	or Goldenin	C 5			Yes	
	tor the negative									
D.	VPH and EPH	I methods only: Was t	he VPH or EPH	I method	run without	t				
-	significant m	odifications, as specifie	d in Section 11	.3?			1		Yes	
	response to que	stions E and F below is	required for "F	resumpt	ve Certainty	/" status	}			
-										
E.	were all QC	performance standards	and recommer	ngations	or me				Vor	
	specified me	nous achieveus								
E.	Were results	for all analyte-list com	ounds/element	ts for the	specified					
	method(s) rea	ported?			,		[No	
			1 15 1							
	II No answers a	re addressed in the att	ached Project N	Narrative						
l, the	undersigned, a	attest under the pains	s and penaltie	s of per	ury that, ba	ased u	pon my pers	onal		
inqui	ry of those res	onsible for obtainin	g the informat	tion, the	material co	ontaine	d in this			
analy	tical report is,	to the best of my kno	wledge and b	elief, ac	curate and	compl	ete.			
		Must Mar 1-0		_						
Signat	ture:	MUMANIA		Pe	sition:	Presid	ent			
Printe	d Name:	Jonathan R Santord		п	ate:	06-28-	07			
. mile	o name.	jonathan n. Jamoru				50 20				

Page 3 of 11



Field ID: Project: Client:	SHB6AA Tuxbury/060501A Simmons Environment	tal Services, Inc.	Matrix: Container: Preservation:	:	Soil 250 mL Glass Cool				
Laboratory ID: Sampled: Received:	108219-1 06-15-07 00:00 06-20-07 18:00				Percent Solids: 74				
Analysis Method EPA 60108 ¹	<u>QC Batch ID</u> MB-01213-5	QC Batch ID Prep Method MB-01213-S EPA 3050B			<u>Sample Weigh</u> 0.508 g	L	Instrument JD KCP-1 PE 3000	<u>Anabst</u> MWR	
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method	
7440-43-9	Cadmium, Total	BI	۱۲	mg/Kg	0.66	1	06-22-07 11:58	EPA 601081	
7440-47-3	Chromium, Total	25		mg/Kg	13	1	06-22-07 11:57	EPA 6010B	
7439-92-1	Lead, Total	1,600		mg/Kg	13	1	06-22-07 11:57	EPA 601081	

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

DF



Field ID: Project: Client:	SHB8A Tuxbury/060501A Simmons Environmen	tal Services, Inc.	Matrix: Container: Preservation	:	Soil 250 mL Amber Glass Cool			
Laboratory ID: Sampled: Received:	108219-2 06-15-07 00:00 06-20-07 18:00			Percent Solids: 74				
Analysis Method	OC Batch ID	Prep Method	Prepar	ed	Sample Weigh	1	Instrument ID	Analyst
EPA 6010B1	MB-01213-5	EPA 30508	06-21-0	7 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	BF	κL	mg/Kg	0.67	1	06-22-07 12:01	EPA 6010B ¹
7440-47-3	Chromium, Total	30	30		13 1		06-22-07 12:01	EPA 601081
7439-92-1	Lead. Total	1.700		mg/Kg	13	1	06-22-07 12:01	EPA 60108

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.

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.

Report Notations:



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.

8. 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.

CHAIN-OF-CUSTODY RECORD AND WORK ORDER	TURNAROUND ANALYSIS REQUEST					谢내 이 정말 이 이 이 바람들은 수 것을 알 <mark>하고 있다. 아파리에 있는 것을 하는 것을 알 알 하고 있는 것을 알 알 알 알 알 알 알 알 알 알 알 알 알 알 알 알 알 알 </mark>		「「「「」」「「」」」「「」」」」」」 DATA CUALITY OBJECTIVES CONTRACTION REAL AND A	m Project Specific QC NOTE: Al samples automated subject to Standard Terms and Conditions on inverse hereol.	Merchine Merc
	TURNAROUND ANALYSIS REOU	STANDARD (10 Buttons 2878) B M M B M	342V NNH DPARAE FAILE DE SANATHE LLE CON					在問題簡牘的例例。與認定的問題的記念的意識。 DATA GUALITY OBJECTIVES	utatory Program Project Specific QC	And Derivertition Merry Ingulatory programs and ETA methods noticine project sevence CC. Project severile CC includes Servery Dipletions. 29 GW 145-1 Derivertition Sevence CC. Project severile CC includes Servery Dipletions. 29 GW 145-1 Derivertition Sevence CC. Project severile CC includes Servery Dipletions. 29 GW 145-1 Derivertition Sevence CC. Project severile CC includes Servery Dipletions. 29 GW 145-1 Derivertition Sevence CC. Project severile CC includes Servery Dipletion Severe Dipletions. 20 Miles Fill Derivertition 21 Miles Dipletion Severe Dipletion Severe Dipletions. Severe Dipletion Sever
ROUNDWATER 24 Mai Bree, FO. Bar 1 ROUNDWATER 254 Mai Bree, FO. Bar 1 NALYTICAL 2000 1001 709 1111	Tirrorio Constrate	NATIONAL ANTONIA A ANTONIA ANTONIA	WIN NUTING AN ALACTURS ON (BILLED) SALAS	1074 StructorUS + FBA	CHBEAN INT W	6 SHBEA N		FWARKS APECIAL INSTRUCTIONS	MA DEP MCP Data Enhancement Affirmation Reg	17755 LINO MOP Daw Carlbordin marani State Stan 17755 LINO MOP Daw Carlbordin marani State Stan 17757 LINO MOP Oriving Weise Sample inducted Dir Refit 1789 Lino MOP Oriving Weise Sample inducted Dir Refit 1780 Lino MOP Oriving Weise Sample inducted Dir Refit 178 Lino MOP Oriving Weise Sample inducted Dir Refit 178 Lino MOP Oriving Weise Sample inducted Dir Refit 178 Lino MOP Oriving Weise Sample inducted Dir Refit 178 Lino MOP Oriving Weise Sample inducted Dir Refit 178 Lino MOP Oriving Weise Sample inducted Dir Refit 178 Lino MOP Oriving Weise Sample inducted Dir Refit 179 Lino MOP Oriving Weise Sample inducted Dir Refit 170 Lino MOP Oriving Weise Sample inducted Dir Refit 170 Lino MOP Oriving Weise Sample inducted Dir Refit 170 Lino MOP Oriving Weise Sample inducted Dir Refit 170 Lino MOP Oriving Weise Sample inducted Dir Refit 170 Lino MOP Oriving Weise Sample inducted Dir Refit 170 Lino MOP Oriving Weise Sample inducted Dir Refit 171 Lino MOP Oriving Weise Sample inducted Dir Lino MOP Oriving Weise Sample induct

Quality Assurance/Quality Control

GROUNDWATER

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.

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: Matrix: Units:	Metals Soil mg/Kg										
Sample Type	Method	OC Batch II	Prep Meth	nod Pr	epared		Analyzed	lo	strument ID		Analyst
LCS	EPA 6010B	MB-1213-5L	EPA 3050	B 06	-21-07 11	:16	06-22-07 11;	19 IC	P-1 PE 3000		MWR
LCSD	EPA 6010B	MB-1213-5L	EPA 3050	B 06	21-07 11	:16	06-22-07 11:	21 10	P-1 PE 3000		MWR
CAS Number	Analyte		ics	-	1	LCS	Duplicate		QC Lin	nits	Method
		Spike	d 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:

• . · · • • •

Report Notations:

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

Page 9 of 11

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: Matrix:	Metais Soil							
Analysis Method EPA 6010B	Aethod OC Batch ID Prep Method 8 MB-1213-SB EPA 30508		<u>Prepared</u> 06-21-07 11:16		<u>Samole Volume</u> 0.5 g		tostrument ID KCP-1 PE 3000	Analyst MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium	BR	L	mg/Kg	0.5	1	06-22-07 11:16	EPA 6010B
7440-47-3	Chromium	BR	L	mg/Kg	10	1	06-22-07 11:16	EPA 6010B
7439-92-1	Lead	BR	Ĺ	mg/Kg	10	1	06-22-07 11:16	EPA 60108

Method Reference: Report Notations:

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

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. Dilution Factor. DF



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CONNECTICUT	
Department of Health Services, PH-0586 http://www.dph.state.ct.us/BRS/Environmental_Lab/or	Potable Water, Wastewater, Solid Waste and Soil ut_state.pdf
FLORIDA	
Department of Health, Bureau of Laboratories, E876 http://www.fioridadep.org/labs/qa/dohforms.htm	43 SDWA, CWA, RCRA/CERCLA
MAINE	
Department of Health and Human Services, MA010 http://www.maine.gov/dhhs/eng/water/Templates/Lab	3 Drinking Water and Wastewater Certification/LabCertification.htm
Department of Environmental Protection, LB-0072	Asbestos Analytical Laboratory (Bulk)
MASSACHUSETTS	
Department of Environmental Protection, M-MA-10 http://public.dep.state.ma.us/labcert/labcert.aspx	3 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
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/pimtm.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, AAI http://www.health.ri.gov/environment/occupational/as	Asbestos Analytical Service, Polarized Light Microscopy (PLM) L-110B3 Sbestos/licensees/AsbestosAnalyticalLabs.pdf
U.S. DEPARTMENT OF AGRICULTURE	
USDA, Soil Permit, S-53921	Foreign soil import permit

VERMONT

Department of Health, VT87643

Drinking Water Microbiological, Inorganic and Organic Analyses http://healthvermont.gov/enviro/ph_lab/documents/certified_labs.pdf

Page 11 of 11



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

Page 1 of 27



Sample Receipt Report

Project:	120 Merrimack	Street/06	0501A		Delivery:	GWA Cour	rier	Temperat	ture: 2'	с
Client:	Simmons Envir	onmental S	Services,	Inc.	Airbill:	n/a		Chain of Cust	ody: Pr	resent
Lab ID:	99804			La	b Receipt:	10-10-06		Custody Sea	al(s): n/	a
Lab ID	Field ID		Matrix	Sampled	Method			Note	5	
99804-1	B6, 0'-3'		Soil	10/6/06 0:00	EPA 60108	Pb Cd Cr Total				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Ртер	Ship	· · · · · · · · · · · · · · · · · · ·		
C828403	500 mL Glass	n/a	n/a	None	rı/a	n/a	n/a			
Lab ID	Field ID		Matrix	Sampled	Method			Note	5	
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			
	61 LUD		1		L. M. al.					
Lab ID	Field ID		Matrix	Sampled	Method			Note	5	
99804-3	B7, 0'-3'		Şoil	10/6/06 0:00	EPA 6010B	Cd Cr Pb Total				
Con ID	Container	Vendor	QCLot	Preserv	QC Lot	Prep	Ship			
C828400	500 mL Glass	<u>n/a</u>	n/a	None	n/a	n/a	n/a			
Lab ID	Field (D		Matrix	Sampled	Method			Note		
00804.4	P7 5' 7'		Soil	10/6/06 0:00	EDA 4010P	C. Cd Ph Total				
99004-4	B7, 5-7	Vandaa	300	10/6/06 0:00	001-4		Ehin		_	
C828392	S00 ml Class	vendor		None		Prep	snip n/a			
020372	Joo nic class	10.4	104		140					
Lab ID	Field 1D		Matrix	Sampled	Method			Note	5	
99804-5	88.0'-3'		Soil	10/6/06 0:00	EPA 60108	Cd Cr Pb Total				
Con ID	Container	Vendor	OC Lot	Preserv	OC 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			Note	s	
99804-6	B8, 5'-7'		Soil	10/6/06 0:00	EPA 6010B	Cr Cd Pb Total				
ConID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship			
C828405	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a			
Labin	Riald ID		Matula		Mathod			histo		
	Field IU		Matrix	Sampled	Method				5	
99804-/	B9, 0-3		501	10/6/06 0:00	EPA 6010B	La Cr Pio Total				
CONID	Container	Vendor	QC Lot	Preserv	QCLOR	Prep	Ship	<u> </u>		
C020399	500 mit Glass	iva .	nra	None	n/a	n/a	nva			
Lab ID	Field ID		Matrix	Sampled	Method			Note	5	
99804-8	89.5'-7'		Soil	10/6/06 0:00	EPA 6010B	Cr Cd Pb Total				
Con ID	Container	Vendor	OC Lot	Preserv	OC Lot	Prep	Shin			
C828401	500 mL Glass	n/a	n/a	None	n/a	n/a	n/a			
Lab ID	Field ID		Matrix	Sampled	Method			Note	5	
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			
	Field ID		Matrix	Sampled	Method			Note	5	
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	<u> </u>			



Sample Receipt Report (Continued)

Project:	120 Merrimac	k Street/06)501A		Delivery:	GWA Cour	er	Temperature:	2'C
Client:	Simmons Envir	onmental S	ervices, I	nc.	Airbill:	n/a		Chain of Custody:	Present
Lab ID:	99804			La	b Receipt:	10-10-06		Custody Seal(s):	n/a
								· · · ·	
Lab ID	Field 1D		Matrix	Sampled	Method			Notes	
99804-11	86A, 0'-3' (dup)		5oil	10/6/06 0:00	EPA 6010B C	d 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		
					r				
Lab ID	Field ID		Matrix	Sampled	Method			Notes	
99804-12	Railroad Embankme	nt#1, 0'-1'	Soil	10/6/06 0:00	EPA 60108 C	d 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 Embankme	nt #2, 0'-1*	Soil	10/6/06 0:00	EPA 60108 C	d Cr Plo 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 Embankme	nt #3, 0'-1'	Soil	10/6/06 0:00	EPA 60108 C	d Cr Pb Total			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C886186	250 mL Glass	Greenwood	BX23243	None	п/а	n/a	rı/a		



Data Certification

Project: Client:	ct: 120 Merrimack Street/060501A t: Simmons Environmental Services, Inc.						Lab ID: Received:	99804 10-10-06 18:40		18:40
		м	A DEP Compend	lium a	f Analytical N	lethod	<u> </u>			
Project I	Location:	n/a					MA DEP RTN:		n/a	
This For	m provides ce	entifications for the fol	lowing data set:							
EDA (01		00904.01.03.03.0	A 05 06 07 08	00.						
EPA 601	OB:	99804-01,-02,-03,-0		,-09,-	0,-11,-12,-13,	-14				
Sample	Matrices:	Groundwater ()	Soil/Sediment	(X)	Drinking Wat	r ()) Other	()		
MCP SW	¥-846	8260B ()	8151A	()	833	0 ()	6010B	(X)	7470A	<u>/1A ()</u>
memods	s Used	<u> </u>	$\frac{()}{()}$	9012	<u>2A' ()</u>					
As specified Compendia	in MA DEP Im of Analytical	/000 5	()		ner ()					
Methods.	:	2. SW-846 Method 9012A	(Equivalent to 9014) o		P Physiologically	Available	Cvanide (PAC) Met	hod		
(check all th	hat apply)	3. S- 5W-846 Methods 70	00 Series. List individu	al meth	od and analyte.		C C D THE D THE THE			
An	affirmative res	ponse to questions A	, B, C and D is re	quire	for "Presump	tive C	ertainty" status.			
A	Were all cam	plac received by the	laboration in a co	nditic	n consistent v	uith.				
<i>/</i> .	that describe	d on the Chain-of-Cu	stody documenta	tion fr	or the data set	VIL II			Vec	
B .	Were all QA	QC procedures requi	ired for the specif	ied ar	alytical metho	od(s)				
	included in t	his report followed, in	ncluding the requ	ireme	nt to note and					
	discuss in a narrative QC data that did not meet appropriate performance									
	standards or guidelines?								Yes	
c –	Doet the ana	htical data included	in this report me		ne requiremen					
C.	for "Presumo	tive Certainty * as de	cribed in Section	200	f the MA DEP	115				
Í	document C/	M VII A. Ouality As	surance and Qua	lity Co	ntrol Guidelii)ec				
	for the Acqui	sition and Reporting	of Analytical Dat	a ?					Yes	
D.	VPH and EPH	<u>1 methods only</u> : Was	s the VPH or EPH	meth	od run withou	t			- 1-	
	significant in	ocincations, as specif	led in Section 11	. 21					nva <u> </u>	
A re	sponse to que	stions E and F below	is required for "P	resurr	ptive Certaint	y" stat	<u>us.</u>	_		_
E.	Were all QC	performance standard	ds and recommer	datio	ns for the					
	specified met	hods achieved?							Yes	
F.	Were results	for all analyte-list con	npounds/element	s for t	ne specified					
	method(s) rep	orted?	popriod cicricity		in specifico				No	
		a addressed in the st	tached Project N	arrati						
	to answers as	e audressed in the at	tached ridjett is							
I, the un	dersigned, a	ittest under the pair	ns and penaltie	s of p	erjury that, b	ased	upon my pers	onal		
inquiry (or mose resp	orisidie tor odtaini	ng the informat	ion, t alief	ne material c	ontair	ned in this			
analytic	al report is, i	to the best of my sh	iowiedge and p	ener,	accurate and	com				
		50111								
Signature	e: 2	2 TIL			Position:	Oper	rations Manage	r		
Printed N	lame:	Eric H. Jensen			Date:	10-1	8-06			
										_
Printed N		Enc Pi. Jensen			Uate:		0~V0			

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Field ID: Project: Client:	B6, 0'-3' 120 Merrimack Street Simmons Environmen	86, 0'-3' 120 Merrimack Street/060501A Simmons Environmental Services, Inc.					Soil 500 mL Glass Cool		
Laboratory ID: Sampled: Received:	D: 99804-01 10-06-06 00:00 10-10-06 18:40				Percent Solic	ls:	87		
Analysis Method	OC Batch ID	Prep Method	Prepare	<u>ed</u>	Sample Weigh	1	Instrument (D	Analyst	
EPA 601081	MB-0983-S	EPA 3050B	10-11-0	6 09:46	0.503 g		ICP-7 PE 3300	MWR	
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method	
7440-43-9	Cadmium, Total	B	રા	mg/Kg	0.57	1	10-12-06 14:20	EPA 60108	
7440-47-3	Chromium, Total	24		mg/Kg	11	1	10-12-06 14:20	EPA 60108'	
7439-92-1	Lead, Total	900		mg/Kg	11	1	10-12-06 14:20	EPA 6010B	
Method Reference:	Test Methods for Evalua	iting Solid Waste, US EF	PA, SW-846	, Third Editi	ion, Update III (I	996).			

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. Dilution Factor.

DF



Field ID: Project: Client:	B6, 5'-7' 120 Merrimack Street Simmons Environment	/060501A tal Services, Inc.		Matrix: Container: Preservation:	:	Soil 500 mL Glass Cool		
Laboratory ID: Sampled: Received:	99804-02 10-06-06 00:00 10-10-06 18:40				Percent Solic	ls:	80	
<u>Analysis Method</u> EPA 6010B ¹	<u>QC Batch ID</u> MB-0983-S	<u>Prep Method</u> EPA 30508	Prepare 10-11-0	±d 6 09:46	<u>Sample Weigh</u> 0.511 g	L	Instrument ID KCP-2 PE 3300	<u>Analyst</u> MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BR	21	mg/Kg	0.61	1	10-12-06 14:23	EPA 60108
7440-47-3	Chromium, Total	23	_	mg/Kg	12	1	10-12-06 14:23	EPA 601081
7439-92-1	Lead, Total	76		mg/Kg	12	1	10-12-06 14:23	EPA 601081

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. Dilution Factor.

DF



Field ID: Project: Client:	B7, 0'-3' 120 Merrimack Street Simmons Environmen		Matrix: Container: Preservation:	:	Soil 500 mL Glass Cool			
Laboratory ID: Sampled: Received:	99804-03 10-06-06 00:00 10-10-06 18:40				Percent Solic	ls:	84	
Analysis Method	OC Batch ID	Pren Method	Prepare	न्य	Sample Weigh	2	Instrument_ID	Analyst
EPA 6010B1	MB-0983-5	EPA 3050B	10-11-0	6 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	8	RL	mg/Kg	0.61	1	10-12-06 14:27	EPA 6010B
7440-47-3	Chromium, Total	23	-	mg/Kg	12	1	10-12-06 14:27	EPA 601081
7439-92-1	Lead, Total	990		mg/Kg	12	1	10-12-06 14:27	EPA 6010B

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.



Field ID: Project: Client:	B7, 5'-7' 120 Merrimack Street Simmons Environmen	/060501A tal Services, Inc.		Matrix: Container: Preservation	:	Soil 500 mL Glass Cool		
Laboratory ID: Sampled: Received:	99804-04 10-06-06 00:00 10-10-06 18:40			Percent Solid	ls:	75		
Analysis Method EPA 6010B	<u>QC Batch ID</u> MB-0983-S	Prep Method EPA 30508	<u>Prepar</u> 10-11-0	<u>ed</u> 6 09:46	<u>Sample Weigh</u> 0.512 g	1	Instrument ID ICP-2 PE 3300	Analysi MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BI	2L	mg/Kg	0.65	1	10-12-06 14:30	EPA 6010B
7440-47-3	Chromium, Total	17		mg/Kg	13	1	10-12-06 14:30	EPA 601081
7439-92-1	Lead, Total	330		mg/Kg	13	1	10-12-06 14:30	EPA 601081

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.



Field ID: Project: Client:	Bð, 0'-3' 120 Merrimack Street Simmons Environmen		Matrix: Container: Preservation:	:	Soil 500 mL Class Cool			
Laboratory ID: Sampled: Received:	99804-05 10-06-06 00:00 10-10-06 18:40		Percent Solic	łs:	81			
Analysis Method EPA 6010B ¹	QC Batch 1D MB-0983-S	Prep Method EPA 3050B	<u>Prepar</u> 10-11-0	<u>ed</u> 6 09:46	<u>Sample Weigh</u> 0.492 g	1	<u>litstrument ID</u> KP-2 PE 3300	<u>Analys</u> t 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 60108
7440-47-3	Chromium, Total	34		mg/Kg	13	1	10-12-06 14:34	EPA 60108
7439-92-1	Lead, Total	2,100		mg/Kg	13	1	10-12-06 14:34	EPA 60108

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



Field ID: Project: Client:	B8, 5'-7' 120 Merrimack Street/060501A Simmons Environmental Services, Inc.				Matrix: Container: Preservation	:	Soil 500 mL Glass Cool		
Laboratory ID: Sampled: Received:	99804-06 10-06-06 00:00 10-10-06 18:40				Perc e nt Solic	ds:	69		
<u>Analysis Method</u> EPA 6010B ¹	<u>OC Batch ID</u> MB-0983-S	Prep Method EPA 3050B	<u>Prepare</u> 10-11-0	ed 6 09:46	<u>Sample Weigh</u> 0.507 g	1	Instrument ID ICP-2 PE 3300	<u>Analyst</u> MWR	
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method	
7440-43-9	Cadmium, Total	8	RL	mg/Kg	0.71	1	10-12-06 14:44	EPA 6010B	
7440-47-3	Chromium, Total	16		mg/Kg	14	1	10-12-06 14:44	EPA 6010B	
7439-92-1	Lead, Total	460		mg/Kg	14	1	10-12-06 14:44	EPA 60108	

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.

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.

Report Notations:

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Field ID: Project: Client:	B9, 0'-3' 120 Merrimack Street Simmons Environmen		Matrix: Container: Preservation:	:	Soil 500 mL Glass Cool			
Laboratory ID: Sampled: Received:	99804-07 10-06-06 00:00 10-10-06 18:40				Percent Solic	ls:	90	
Analysis Method EPA 6010B ¹	<u>QC Batch ID</u> MB-0963-S	Prep Method EPA 3050B	<u>Prepare</u> 10-11-0	<u>=d</u> 6 09:46	<u>Sample Weigh</u> 0.512 g	L	Instrument ID KCP-2 PC 3300	<u>Analyst</u> 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
7440-47-3	Chromium, Total	95		mg/Kg	11	1	10-12-06 14:48	EPA 60108
7439-92-1	Lead, Total	770		mg/Kg	11	1	10-12-06 14:48	EPA 601081

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.



Field ID: Project: Client:	B9, 5'-7' 120 Merrimack Street Simmons Environmen	/060501A tal Servic es , Inc.		Matrix: Container: Preservation	:	Soil 500 mL Glass Cool		
Laboratory ID: Sampled: Received:	99804-08 10-06-06 00:00 10-10-06 18:40	Percent Solids:			78			
Analysis Method EPA 6010B ¹	<u>OC Batch ID</u> MB-0983-S	Prep Method EPA 30508	<u>Prepar</u> 10-11-0	<u>ed</u> 6 09:46	<u>Sample Weigh</u> 0.481 g	L	Instrument_1D 1CP-2 PE 3300	<u>Analys</u> t MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BF	21	mg/Kg	0.66	1	10-12-06 14:51	EPA 60108
7440-47-3	Chromium, Total	BR	ε ι .	mg/Kg	13	1	10-12-06 14:51	EPA 60108
7439-92-1	Lead, Total	BF	<u>۱</u>	mg/Kg	13	1	10-12-06 14:51	EPA 60108

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.

> 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.

Report Notations:

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Field ID:	B10, 0'-3'				Matrix:		Soil		
Project:	120 Merrimack Street	/060501A			Container:		500 mL Glass		
Client:	Simmons Environmen	tal Services, Inc.			Preservation	:	Cool		
Laboratory ID:	99804-09				Percent Solid	ls:	87		
Sampled:	10-06-06 00:00								
Received:	10-10-06 18:40								
Analysis Method	OC Batch ID	Prep Method	Prepar	ed	Sample Weigh	t	Instrument ID	Analyst	
EPA 6010B ¹	MB-0983-5	EPA 30508	10-11-0	6 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	BF	RL I	mg/Kg	0.58	1	10-12-06 14:55	EPA 60108'	
7440-47-3	Chromium, Total	16		mg/Kg	12	1	10-12-06 14:55	EPA 6010B	
7439-92-1	Lead, Total	200		mg/Kg	12	1	10-12-06 14:55	EPA 601081	

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.



Field ID: Project: Client:	B10, 5'-7' 120 Merrimack Street Simmons Environmen		Matrix: Container: Preservation:		Soil 500 mL Glass Cool			
Laboratory ID: Sampled: Received:	99804-10 10-06-06 00:00 10-10-06 18:40				Percent Solic	ls:	76	
<u>Analysis Method</u> EPA 6010 B '	OC Batch ID MB-0983-5	Prep Method EPA 3050B	<u>Prepare</u> 10-11-0	5 년 6 09:46	<u>Samole Weigh</u> 0.487 g	t	Instrument ID ICP-2 PE 3300	<u>Anaivs</u> i MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BR	L	mg/Kg	0.67	1	10-12-06 14:58	EPA 6010B
7440-47-3	Chromium, Total	19		mg/Kg	13	1	10-12-06 14:58	EPA 6010B
7439-92-1	Lead, Total	58	-	mg/Kg	13	1	10-12-06 14:58	EPA 6010B

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

Report Notations:

Results are reported on a dry weight basis.

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.

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Field ID: Project: Client:	B6A, 0'-3' (dup) 120 Merrimack Street Simmons Environmen	/060501A tal Services, Inc.			Matrix: Container: Preservation	:	Soil 250 mL Glass Cool	
Laboratory ID: Sampled: Received:	99804-11 10-06-06 00:00 10-10-06 18:40				Percent Solid	ds:	82	
Analysis Method EPA 6010B'	<u>QC Batch ID</u> MB-0984-S	Prep Method EPA 3050B	<u>Prena</u> 10-11-0	r <u>ed</u>)6 11:05	<u>Sample Weigh</u> 0.502 g	1	Instrument ID KCP-2 PE 3300	<u>Analyst</u> MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BF	۲L	mg/Kg	0.61	1	10-12-06 19:17	EPA 60108
7440-47-3	Chromium, Total	25		mg/Kg	12	1	10-12-06 19:17	EPA 601081
7439-92-1	Lead, Total	1,800		mg/Kg	12	1	10-12-06 19:17	EPA 60108

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.

> 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.

Report Notations:



frace metals	Trace	Metals
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Field ID: Project: Client:	Railroad Embankment 120 Merrimack Street Simmons Environmen	l #1, 0'-1' 1/060501A tal Services, Inc.			Matrix: Container: Preservation:	:	Soil 500 mL Glass Cool	
Laboratory ID: Sampled: Received:	99804-12 10-06-06 00:00 10-10-06 18:40				Percent Solic	is:	90	
Analysis Method EPA 601081	<u>QC Batch ID</u> MB-0984-5	Prep Method EPA 3050B	<u>Prepare</u> 10-11-0	ed 6 11:05	<u>Sample Weigh</u> 0.49 g	1	Instrument ID ICP-2 PE 1300	<u>Analyst</u> MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BR	RL T	mg/Kg	0.57	1	10-12-06 19:21	EPA 601081
7440-47-3	Chromium, Total	16		mg/Kg	11	1	10-12-06 19:21	EPA 6010B
7439-92-1	Lead, Total	240		mg/Kg	11	1	10-12-06 19:21	EPA 6010B

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.

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.

Report Notations:

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Field ID: Project: Client:	Railroad Embankmen 120 Merrimack Street Simmons Environmen	: #2, 0'-1' /060501A tal Services, Inc.			Matrix: Container: Preservation:	:	Soil 500 mL Glass Cool	
Laboratory ID: Sampled: Received:	99804-13 10-06-06 00:00 10-10-06 18:40				Percent Solic	ds:	89	
<u>Analysis Method</u> EPA 6010B ¹	<u>QC Batch (D</u> MB-0984-S	Prep Method EPA 3050B	<u>Prepar</u> 10-11-0	<u>ed</u> 6 11:05	<u>Sample Weigh</u> 0.508 g	t	Instrument ID KP-2 PE 1300	<u>Analyst</u> MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	BF	RL	mg/Kg	0.55	,	10-12-06 19:24	EPA 60108
7440-47-3	Chromium, Total	23	1	mg/Kg	11	1	10-12-06 19:24	EPA 6010B
7439-92-1	Lead. Total	430		me/Kg	11	1	10-12-06 19:24	EPA 60108

Method Reference:

ence: 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.



Field 1D: Project: Client:	Railroad Embankment 120 Merrimack Street Simmons Environmen	#3, 0'-1' /060501A tal Servic e s, Inc.			Matrix: Container: Preservation:	:	Soil 250 mL Glass Cool	
Laboratory ID: Sampled: Received:	99804-14 10-06-06 00:00 10-10-06 18:40				Percent Solic	ds:	76	
Analysis Method EPA 601081	<u>QC Batch 1D</u> MB-0984-S	Prep Method EPA 30508	<u>Prepar</u> 10-11-0	±d 6 11·05	<u>Sample Weigh</u> 0.487 g	t	Instrument ID ICP-2 PE 3300	<u>Analvst</u> MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-43-9	Cadmium, Total	Bi	۲۲	mg/Kg	0.67	1	10-12-06 19:28	EPA 60108
7440-47-3	Chromium, Total	25		mg/Kg	13	1	10-12-06 19:28	EPA 60108
7439-92-1	Lead, Total	930		mg/Kg	13	1	10-12-06 19:28	EPA 6010B

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.

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Project Narrative

Project: Client: 120 Merrimack Street/060501A 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.

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	Project Name:		TURNAROUND	ANALYSIS REQUEST				
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Quality Assurance/Quality Control

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GROUNDWATER ANALYTICAL

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: Matrix: Units:	Metals Soil mg/Kg											
Sample Type	Method	OC.Batch ID	Prep Meth	od <u>Pre</u>	pared		Analyzed	Ins	strument ID		Analyst	
LCS	EPA 60108	MB-0983-SL	EPA 30508	3 10-	11-06 09	:46	10-11-06 15:4	17 IC	P-2 PE 3300		MWR	
LCSD	EPA 60108	MB-0983-SL	EPA 30508	3 10-	11-06 09	:46	10-11-06 15:5	50 ICI	P-2 PE 3300		MWR	
CAS Number	Analyte		LCS			LCS Duplicate				QC Limits		
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD		
7440-43-9	Cadmium	120	120	99%	120	110	98%	1 %	82-119 %	30 %	EPA 60108	
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 60108	

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.

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Quality Control Report Method Blank

Category: Matrix:	Metals Soil								
<u>Analysis Method</u> EPA 6010B	alysis Method <u>QC Batch ID</u> Pr A 6010B MB-0983-SB EF		<u>Prepar</u> 10-11-0	<u>ed</u> 6 09:46	<u>Sample Volume</u> 0.5 g		Instrument ID ICP-2 PE 3300	<u>Analyst</u> MWR	
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method	
7440-43-9	Cadmium	BI	રા 🗌	mg/Kg	0.5	1	10-11-06 15:33	EPA 6010B	
7440-47-3	Chromium	BI	રા 🗌	mg/Kg	10	1	10-11-06 15:33	EPA 6010B	
7439-92-1	Lead	BI	۲L ا	mg/Kg	10	1	10-11-06 15:33	EPA 6010B	
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Method Reference: Report Notations:

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

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: Matrix: Units:	Metals Soil mg/Kg										
Sample Type	Method	OC Batch ID	Prep Meth	od <u>Pre</u>	pared		Analyzed	1	nstrument ID		Analyst
LCS	EPA 60108	MB-0984-SL	EPA 3050E	3 10-	11-06 11	:05	10-12-06 18:3	9 1	CP-2 PE 3300		MWR
LCSD	MB-0984-SL	EPA 30508	3 10-	11-06 11	:05	10-12-06 18:4	13 1	CP-2 PE 3300		MWR	
CAS Number	Analyte		LCS			LCS Duplicate			QC Lin	nits	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 60108
7440-47-3	Chromium	73	71	97%	73	65	89%	4 %	79-121 %	30 %	EPA 60108
7439-92-1	Lead	170	170	99%	170	150	92%	4 %	81-119 %	30 %	EPA 60108

Method Reference: 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.

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

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Quality Control Report Method Blank

Category: Matrix:	Metals Soil								
<u>Analysis Method</u> EPA 6010B	<u>QC Batch ID</u> MB-0984-58	Prep Method EPA 3050B	<u>Prepar</u> 10-11-0	<u>ed</u> 6 11:05	<u>Sample Volume</u> 0.5 g		instrument ID ICP-2 PE 3300	<u>Analvs</u> i 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 60108	
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	

Report Notations:

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

> 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.

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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/gualifications.htm

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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/ga/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, Inc. P.O. Box 1200 228 Main Street Buzzards Bay, MA 02532

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

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. Jeinsen

Derations Manager

EHJ/ajh Enclosures

Page 1 of 15



Sample Receipt Report

Project: Tuxbury/060501A Client: Simmons Environmental Services, Ir Lab ID: 108943		Inc. La	Delivery: • Airbill: Lab Receipt:		rier	Terr Chain of Custoc	Temperature: Chain of Custody: Custody Seal(s):			
Lab ID	Field ID		Matrix	Sampled	Method				Notes	
108943-1	SHB6AA		Soil	6/15/07 0:00	EPA 60108	CLP 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	1	1	
Lab ID	Field 1D		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 H	exavalent Chro	muin	
Con ID	Container	Vendor	QCLot	Preserv	QC Lot	Ртер	Ship	
C964897	250 mL Amber Glass	n/a	n/a	None	n/a	n/a	n/a	

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



Data Certification

oject: ent:	Tuxbury/00 Simmons E	60501A invironmental Services, Ir		Lab ID: Received:			108943 06-15-07 18		
		MA D	EP Compendium	of Analytical	Methods				
Projec	t Location:	n/a			MA	DEP RTN:		n/a	
This F	orm provides ce	ertifications for the follow	ing data set:						
EPA 7	196A:	108943-3	0						
Sampl	e Matrices:	Groundwater () So	nil/Sediment (X)	Drinking W	ater ()	Other	()	*	-
MCP S	5W-846	8260B ()	8151A ()	83	30 ()	6010B	$\frac{()}{()}$	7470A/1A	1
Metho	ods Used	8270C ()	8081A ()	V	PH ()	6020A	()	9012A	2 (
s speci	fied in MA DEP	8082 ()	8021B ()	E	PH ()	7000 S ³	(X)	Othe	r (
опрев	dium of Analytical	1. List Release Tracking Numbe	r (RTN), if known.						
rethods	i.	2. 5W-846 Method 9012A (Equ	ivalent to 9014) or MA D	EP Physiological	y Available Cy	mide (PAC) Met	hod		
theck al	II that apply)	3. S - SW-846 Methods 7000 Se	ries. List individual met	hod and analyte.					
A	n affirmative res	sponse to questions A, B,	C and D is require	d for "Presun	nptive Certa	inty" status.			
x .	Were all sam	nples received by the labo	ratory in a conditi-	on consistent	with				
1	that describe	d on the Chain-of-Custod	y documentation f	or the data se	et?			Yes	
	included in t discuss in a i standards or	this report followed, inclu narrative QC data that did guidelines?	ding the requirement not meet appropri	ent to note ar iate performa	nd Ince			Yes	
2.	Does the and for "Presump document C for the Acqu	alytical data included in th ative Certainty," as describ AM VII A, Quality Assura isition and Reporting of A	tis report meet all t bed in Section 2.0 o nce and Quality C malytical Data ?	the requirem of the MA DI ontrol Guide	ents P lines			Yes	
D,	<u>VPH and EP</u> 1 significant m	H methods only: Was the odifications, as specified	VPH or EPH meth in Section 11.3?	od run with	out			Yes	
A	response to que	estions E and F below is re	equired for "Presur	nptive Certai	nty" status.				
÷.	Were all QC specified me	performance standards at thods achieved?	nd recommendatio	ons for the				Yes	
	Were results method(s) re	for all analyte-list compo ported?	unds/elements for t	the specified				Yes	
A	ll No answers a	re addressed in the attacl	hed Project Narral	tive.	579 I. S.				
, the i nquir inalyt	undersigned, a y of those res lical report is,	attest under the pains a ponsible for obtaining t to the best of my jinow	and penalties of p the information, tedge and belief,	perjury that, the material accurate a	based up contained nd comple	on my pers) in this te.	onal		
ignatu	ure: 🖌	5 Alfre		Position:	Operati	ons Manage	r		
		1 - 1							



Toxicity Characteristic Leaching Procedure (TCLP) Trace Metals

Field ID: Project: Client:	SHB6AA Tuxbury/060501A Simmons Environme	ental Services, I	nç.		Matrix: Container: Preservatio	n:	TCLP Leachate 250 mL Amber Glass Cool		
Laboratory ID: Sampled: Received:	108943-1 06-15-07 00:00 06-15-07 18:00					Date Leach TCEP Fluid	ed:	07-20-07 16:00 1	
<u>Analysis Method</u> EPA 6010B [°]	<u>QC Batch ID</u> MB-2802-W	Prep Method EPA 3010A		<u>Prepared</u> 07-21-07 07.52		Sample Volu 50 mt	me	Instrument (D 102-1 PE 1000	<u>Analys</u> t MWR
CAS Number	Analyte	Concentration	Notes	Units	RCRA Limit	Reporting Limit	DF	Analyzed	Method
7439-92-1	Lead	BR	L	mg/L	5.0	0.3	10	07-23-07 10:40	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.

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: Project: Client: Matrix: Container: Preservation:	SHB6AA Tuxbury/060501A Simmons Environmental Services, Inc. TCLP Leachate 250 mL Amber Glass Cool			Laboratory ID: Sampled: Received: Leached: TCLP Fluid:	Pare 1089 06-1 06-1 07-2	ent Sample 943-1 5-07 00:00 5-07 18:00 0-07 16:00	Matrix Spike 108943-1MS 06-15-07 00:00 06-15-07 18:00 07-20-07 16:00 1		
Method EPA 6010B	<u>OC Batch ID</u> MB-2802-W	Prep Method EPA 3010A	Prepared 07-21-07 07.52	<u>Volume</u> 50 mL	<u>DF</u> 10	<u>Analyzed</u> 07-23-07 10-46	Instrument ID	<u>Analyst</u> MWR	
CAS Number	Analyte	Unspiked Sample (ing/L)	MS Spiked (mg/L)	MS Measured (mg/L)		M5 Recovery	QC Limits	Method	
7439-92-1	Lead	BRI	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.

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.

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Report Notations:



Toxicity Characteristic Leaching Procedure (TCLP) Trace Metals

Field ID:	SHB8A					Matrix:		TCLP Leachate	
Project:	Tuxbury/060501A					Container:		250 mL Amber G	lass
Client:	Simmons Environm	ental Services, I	Inc.			Preservatio	n:	Cool	
Laboratory ID:	108943-2					Date Leach	ed:	07-20-07 16:00	
Sampled:	06-15-07 00:00					TCLP Fluid	:	1	
Received:	06-15-07 18:00								
Analysis Method	QC Batch ID	Prep Method		Prepared		Sample Volu	me	instrument ID	Analyst
EPA 6010B'	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 601081

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									Matrix:	Soil		
Project:	Tuxbury	060501A								Received:	06-15-07 18:	00	
Client:	Simmon	s Environ	nental	Services, Inc.									
Lab ID:	108943-	03 Sar	npled:	06-15-07 00:00	% Solids:	74	Con	tainer:	250 mL Amb	er Glass	Preservation	n: Cor	ol -
	Analyte			Result	Units	RL	DF	Weight	Analyzed	QC Batch	Method	Inst	Analyst
Chromi	um, Hexav	alent		BRL	mg/Kg	10	1	2.5 g	07-23-07 00.00	HC-0273-5	EPA 7196A	1	JK
Method Re	ference:	Methods f Determina Methods fi	or Cher ition of	nical Analysis of Wat Inorganic Substances xamination of Water	er and W in Envir and Was	/astes, US onmental	EPA, E Sample	PA-600 es, US E	/4-790-020 (Rev PA, EPA/600/R-1 th Edition (1998	ised 1983), an 93/100 (1993), 1) and Test Me	d Methods for the and Standard	e	

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	Lab ID:	108943
Client:	Simmons Environmental Services, Inc.	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.

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GROUNDWATER ANALYTICAL

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: Matrix: Units:	Inorganic: Soil mg/Kg	5										
Sample Type	Method		latch ID	Prep Meth	2 0	Prepared		Analyzed	L	nstrument ID		Analyst
LCS	EPA 7196/	N HC-0	1273-S	EPA 3060A		7/23/200	7 0:00	7/23/2007 0:0	00 🔥	Ailton Roy Spect	ronic 401	JK
LCSD	EPA 71964	HC-0	273-5	EPA 3060A		7/23/200	70.00	7/23/2007 D:	00 4	Ailton Roy Spect	ronic 401	JK
	Analyte		-	LCS			LCS	Duplicate	1.45	QC Lir	nits	Method
			Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPÐ	
Chromium,	Hexavalent		75	65	86%	75	71	94%	4%	42-158%	30 %	EPA 7196A
Method Refer	rence: T M	est Methods Aethods for C Aethods for th 1994), and 40	for Evalua hemical A he Determ C.F.R. 13	ting Solid W malysis of W ination of M 36, Appendia	aste, US EP. (ater and W etals in Envi « C (1990).	A, SW-846 astes, EPA- ironmental	, Third Editi 600/4-79-0. Samples, S	ion, Update III 20, Revised (19 upplement I, E	(1996). 983), and PA-600/R-9	4-111.		
Report Notati	ons: A	Il calculation	is perform	ed prior to re	ounding. Q	uality Con	trol Limits a	re defined by	the method	ology,		

or alternatively based upon the historical average recovery plus or minus three standard deviation units.

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Quality Control Report Method Blank

Category: **Inorganic Chemistry** Soil

Matrix:

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	1	Įκ

Methods for Chemical Analysis of Water and Wastes, US EPA, £PA-600/4-790-020 (Revised 1983), and Methods for the Method Reference: 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, 5W-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.

RŁ Reporting Limit.

1 Instrument ID: Milton Roy Spectronic 401



Quality Control Report Laboratory Control Samples

Category: Matrix: Units:	Metals Aqueous mg/L										
Sample Type	Method	OC Batch ID	Prep Metho	od <u>Pre</u>	gared		Analyzed	ļ	nstrument IQ		<u>Analys</u> t
LCS	EPA 6010B	MB-2802-WL	EPA 3010A	07	21-07 07	:52	07-23-07 10:3	4 1	CP-1 PE 3000		MWR
LCSD	EPA 6010B	MB-2802-WL	EPA 3010A	07	21-07 07	:52	07-23-07 10:3	7 1	CP-1 PE 3000		MWR
CA5 Number	Analyte		LCS			LCS	Duplicate	~~~	QC Lin	nits	Method
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPÐ	
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.

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Quality Control Report Method Blank

Category: Matrix:	Metals Aqueous							
<u>Analysis Method</u> EPA 6010B	<u>OC Batch ID</u> MB-2802-WB	Prep Method EPA 3010A	<u>Prepare</u> 07-21-0?	d 07.52	Sample Volum 50 mL	e	Instrument ID ICP-1 PE 3000	<u>Analys</u> MWR
CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7439-92-1	Lead	B	RL	mg/L	0.3	1	07-23-07 10:31	EPA:6010B
Method Reference:	Test Methods for Evalua	ting Solid Waste, US EP	A, SW-846,	Third Editi	on, Update III (19	996).		
Report Notations:	BRL Indicates concent	tration, if any, is below r	eporting lin	hit for analy	/te. Reporting lin	uit is th	e lowest concentratio	in that can be

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/LabCe	Drinking Water and Wastewater rtification.htm
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-pt_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 ACCREDITATIC	ON PROGRAM (NVLAP)
NVLAP Lab Code 200751-1 http://ts.nist.gov/Standards/scopes/plmtm.htm	Bulk Asbestos Fiber Analysis (PLM)
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Department of Health, 11754 http://www.wadsworth.org/labcert/elap/comm.html	Potable Water, Non-Potable Water and Solid Waste
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Department of Health, Potable and Non-I Division of Laboratories, LAO00054 http://www.health.ri.gov/labs/outofstatelabs.pdf Image: Content of Content o	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/As	Asbestos Analytical Service, Polarized Light Microscopy (PLM) bestosAnalyticalLabs.pdf
U.S. DEPARTMENT OF AGRICULTURE	
USDA, Soil Permit, S-53921	Foreign soil import permit
VERMONT	
Department of Health, VT87643 Dri http://healthvermont.gov/enviro/ph_lab/documents/certified_labs.pdf	inking Water Microbiological, Inorganic and Organic Analyses

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



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,

elegante ames

James M. Georgantas Project Manager



Wilcox & Barton 1115 Route 100B, Suite 200 Moretown, VT 05660 ATTN: Amy Roth 39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

REPORT DATE: 7/2/2013

SUB LAB

PURCHASE ORDER NUMBER:

PROJECT NUMBER: CHART0001

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13F0934

TEST

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

MATRIX

PROJECT LOCATION: Newburyport, MA

FIELD SAMPLE #

MW-2

13F0934-01 Ground Water

LAB ID:

SAMPLE DESCRIPTION

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 7196A SW-846 8082A 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

Oualifications:

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

Oualifications:

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



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.

Culu

Michael A. Erickson Laboratory Director



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

Work Order: 13F0934

Project Location: Newburyport, MA Date Received: 6/26/2013 Field Sample #: MW-2

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Sampled: 6/26/2013 16:15

			Semivola	tile Organic (Compounds by	GC/MS				
								Date	Date/Time	
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	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	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Bis(2-chloroethoxy)methane	ND	11	3.4	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Bis(2-chloroethyl)ether	ND	11	4.8	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Bis(2-chloroisopropyl)ether	ND	11	4.4	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Bis(2-Ethylhexyl)phthalate	ND	11	7.7	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
4-Bromophenylphenylether	ND	11	4.1	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Butylbenzylphthalate	ND	11	2.8	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
4-Chloroaniline	ND	11	3.1	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2-Chloronaphthalene	ND	11	4.4	$\mu g/L$	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
2-Chlorophenol	ND	11	3.9	$\mu g/L$	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	με/L	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Hexachloroethane	ND	5.4	4.9	ug/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	ц <u>е</u> /Г.	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
Isophorone	ND	11	3.4	ц <u>е</u> /Г.	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
- 2-Methylnaphthalene	ND	5.4	3.8	ц <u>е</u> /Г.	1	U	SW-846 8270D	6/26/13	6/27/13 12:44	CMR
						-				

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Semivolatile Organic Compounds by GC/MS

Project Location: Newburyport, MA Date Received: 6/26/2013

Field Sample #: MW-2

p-Terphenyl-d14

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Sampled: 6/26/2013 16:15

Sample Description:

Work Order: 13F0934

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		% Reco	very	Recovery Limits	6	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	

30-130

87.3

6/27/13 12:44



Project Location: Newburyport, MA Date Received: 6/26/2013

Field Sample #: MW-2

Sample ID: 13F0934-01

Sampled: 6/26/2013 16:15

Sample Description:

70.4

65.1

72.6

Sample Matrix: Ground Water Polychlorinated Biphenyls By GC/ECD Date Date/Time Analyte Results RL DL Units Dilution Flag Method Prepared 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 U SW-846 8082A 6/26/13 $\mu g/L$ 1 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 1 U SW-846 8082A 6/26/13 6/27/13 13:35 MJC $\mu g/L$ Aroclor-1254 [1] ND 0.20 0.11 U SW-846 8082A 6/26/13 6/27/13 13:35 MJC $\mu g/L$ 1 Aroclor-1260 [1] ND U 0.20 0.077 $\mu g/L$ 1 SW-846 8082A 6/26/136/27/13 13:35 MJC Aroclor-1262 [1] ND U SW-846 8082A 6/26/13 6/27/13 13:35 0.20 0.12 μg/L 1 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 Flag **Recovery Limits** Surrogates % Recovery Decachlorobiphenyl [1] 66.2 30-150 6/27/13 13:35

30-150

30-150

30-150

Decachlorobiphenyl [2] Tetrachloro-m-xylene [1] Tetrachloro-m-xylene [2] 6/27/13 13:35 6/27/13 13:35

6/27/13 13:35

Work Order: 13F0934



	39 Spruce S	street * Ea	ast Longn	neadow, MA 0	1028 * FAX 4′	13/525-6405 *	TEL. 413/525-2332			
Project Location: Newburyport, MA	Sa	ample Des	cription:					Work Ord	er: 13F0934	
Date Received: 6/26/2013										
Field Sample #: MW-2	Sa	ampled: 6	/26/2013	16:15						
Sample ID: 13F0934-01										
Sample Matrix: Ground Water										
			Pe	troleum Hydro	carbons Analy	ses				
								Date	Date/Time	
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	Analyzed	Analyst
ТРН (С9-С36)	0.12	0.21	0.074	mg/L	1	J	SW-846 8100 Modified	6/26/13	6/27/13 10:21	SCS
Surrogates		% Reco	overy	Recovery Limi	its	Flag				

40-140

81.5

o-Terphenyl

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6/27/13 10:21



Sample Description:

Sampled: 6/26/2013 16:15

Work Order: 13F0934

Project Location: Newburyport, MA Date Received: 6/26/2013

Field Sample #: MW-2

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Metals Analyses (Total) Date Date/Time Analyte Results RL DL Units Dilution Flag Method Prepared Analyzed Analyst $\mu g/L$ Antimony ND 5.0 0.75 5 U SW-846 6020A 6/26/13 6/27/13 13:05 KSH Arsenic 19 2.0 1.8 $\mu g/L$ 5 SW-846 6020A 6/26/13 6/27/13 13:05 KSH Beryllium ND 2.0 5 U SW-846 6020A 6/26/13 0.36 $\mu g/L$ 6/27/13 13:05 KSH Cadmium ND 2.5 0.15 5 U SW-846 6020A 6/26/13 6/27/13 13:05 KSH μg/L Chromium ND 5.0 5 U SW-846 6020A 6/26/13 KSH 3.3 6/27/13 13:05 $\mu g/L$ Copper 2.5 25 5 SW-846 6020A 6/26/13 6/27/13 13:05 KSH 0.40 $\mu g/L$ J Iron 9.8 0.050 mg/L 1 SW-846 6010C 6/26/136/27/13 9:30 OP Lead 5.0 5 SW-846 6020A 6/27/13 13:05 0.72 0.30 μg/L J 6/26/13 KSH Mercury ND 0.00010 0.000048 mg/L 1 U SW-846 7470A 6/28/137/1/13 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 5 U SW-846 6020A 6/26/13 6/27/13 13:05 KSH μg/L Zinc ND 50 9.6 5 U SW-846 6020A 6/26/13 6/27/13 13:05 KSH $\mu g/L$



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

Work Order: 13F0934

Project Location: Newburyport, MA Date Received: 6/26/2013 Field Sample #: MW-2

Sample ID: 13F0934-01

Sample Matrix: Ground Water

Sampled: 6/26/2013 16:15

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

								Date	Date/Time	
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	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	СМ
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]		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	6/26/13 Anal	yzed: 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							Ŭ
4-Nitrophenol	ND	10	μg/L							Ŭ
Pentachlorophenol	ND	10	μg/L							Ŭ
Phenanthrene	ND	5.0	ug/L							Ŭ
	nD	2.0	1.0-							0

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B075654 - SW-846 3510C										
Blank (B075654-BLK1)				Prepared: 06	5/26/13 Anal	yzed: 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	5/26/13 Anal	yzed: 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			
Dibenzoturan	40.9	5.0	μg/L	50.0		81.8	40-140			
	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			MAG
3,3-Dichlorophenel	66.2	10	µg/L	70.0		94.6	40-140			V-06
2,4-Dichlorophenor	43.3	10	μg/L μg/I	50.0		80.0	30-130			
2.4 Dimethylphenol	44.5	10	μg/L μg/Ι	50.0		02.0	20.120			
2,4-Dimethylphenol	47.0	10	μg/L μg/I	50.0		93.9	30-130			
2 4-Dinitrophenol	45.5	10	μg/L μg/I	50.0		72.0	15 140			V 10
2 4-Dinitrotoluene	30.3 41.2	10	μg/L 11σ/Ι	50.0		826	40 140			v-19
2 6-Dinitrotoluene	41.5	10	μg/L μσ/Γ	50.0		92.0	40-140			
Di-n-octylphthalate	40.5	10	μg/L 11σ/Ι	50.0		92.3 98 1	40-140			V-06
1 2-Dinhenvlhydrazine (as Azobenzene)	49.0	10	μg/L μσ/Γ	50.0		102	40-140			v-00
Fluoranthene	51.0	5.0	μg/L μσ/Γ	50.0		81.1	40-140			
Fluorene	40.0	5.0	на/Г.	50.0		83.1	40-140			
Hexachlorobenzene	41.3	10	но/Г.	50.0		88.5	40-140			
	44.5	10	<u>н6</u> /12	50.0		00.5	40-140			



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332 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 (B075654-BS1)				Prepared: 06	6/26/13 Analy	zed: 06/27/1	3			
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		ug/L	200		57.2	15-110			
Surrogate: Phenol-d6	92.7		иg/L	200		46.4	15-110			
Surrogate: Nitrobenzene-d5	76.6		ug/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-BSD1)				Prepared: 06	6/26/13 Analy	vzed: 06/27/1	3			
Acenaphthene	40.4	5.0	ug/L	50.0	-	80.7	40-140	2.28	20	
Acenaphthylene	40.9	5.0	ug/L	50.0		81.8	40-140	0.973	20	
Acetophenone	40.0	10	ug/L	50.0		80.1	40-140	10.2	20	
Aniline	39.8	5.0	ug/L	50.0		79.6	40-140	9.84	20	
Anthracene	43.2	5.0	ις με/Γ	50.0		86.5	40-140	2.42	20	
Benzo(a)anthracene	43.5	5.0	ug/L	50.0		87.1	40-140	1.89	20	
Benzo(a)pyrene	45.6	5.0	ις με/Γ	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)pervlene	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	ug/L	50.0		87.9	40-140	5 36	20	
4-Bromophenylphenylether	40.8	10	ug/L	50.0		81.7	40-140	12.2	20	
Butylbenzylphthalate	40.8	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	.ε μg/L	50.0		71.6	40-140	2.40	20	
	55.0		. 0	- 0.0					20	


		Reporting	TT '	Spike	Source	0/DEC	%REC	DDD	RPD	NT -
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B075654 - SW-846 3510C										
LCS Dup (B075654-BSD1)				Prepared: 06	6/26/13 Anal	yzed: 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		$\mu g/L$	100		76.2	30-130			
Surrogate: 2-Fluorobiphenyl	77.4		$\mu g/L$	100		77.4	30-130			
Surrogate: 2,4,6-Tribromophenol	169		$\mu g/L$	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
Batch B075712 - SW-846 3510C										
Blank (B075712-BLK1)				Prepared: 06	5/26/13 Anal	yzed: 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	5/26/13 Anal	yzed: 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	5/26/13 Anal	yzed: 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			



Petroleum Hydrocarbons Analyses - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B075653 - SW-846 3510C										
Blank (B075653-BLK1)				Prepared: 06	5/26/13 Anal	yzed: 06/27/	13			
ТРН (С9-С36)	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	5/26/13 Anal	yzed: 06/27/	13			
ТРН (С9-С36)	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									
ТРН (С9-С36)	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			



Metals Analyses (Total) - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B075715 - SW-846 3005A										
Blank (B075715-BLK1)				Prepared: 06	5/26/13 Anal	yzed: 06/27/	13			
Iron	ND	0.050	mg/L	-						
LCS (B075715-BS1)				Prepared: 06	5/26/13 Anal	vzed: 06/27/	13			
Iron	0.483	0.050	mg/L	0.500		96.7	80-120			
LCS Dup (B075715-BSD1)				Prepared: 06	5/26/13 Anal	vzed: 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	6/26/13 Anal	yzed: 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	ug/L							U
Selenium	ND	25	ug/L							U U
Silver	ND	2.5	119/L							U
Thallium	0.20	1.0	µg/L							I
Zinc	ND	50	μg/L							U U
LCS (B075716-BS1)				Prepared: 06	5/26/13 Anal	yzed: 06/27/	13			
Antimony	495	10	μg/L	500		98.9	80-120			
Arsenic	493	4.0	ug/L	500		96.5	80-120			
Beryllium	469	4.0	119/L	500		93.6	80-120			
Cadmium	408	5.0	μg/I	500		06.0	80 120			
Chromium	483	10	μg/L μg/Ι	500		06.2	80 120			
Compor	481	50	μg/L μα/Ι	500		90.2	80-120			
Land	485	10	μg/L 	500		97.0	80-120			
Ni-l-1	494	10	μg/L	500		98.8	80-120			
Nickel	476	50	µg/L	500		95.5	80-120			
Selemum	475	30	µg/L	500		95.0	80-120			
Silver	497	5.0	µg/L	500		99.5	80-120			
Inallium	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	5/26/13 Anal	yzed: 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	



Metals Analyses (Total) - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B075903 - SW-846 7470A Prep										
Blank (B075903-BLK1)				Prepared: 06	/28/13 Anal	yzed: 07/01/1	13			
Mercury	ND	0.00010	mg/L							U
LCS (B075903-BS1)				Prepared: 06	/28/13 Anal	yzed: 07/01/1	13			
Mercury	0.00198	0.00010	mg/L	0.00200		99.2	80-120			
LCS Dup (B075903-BSD1)				Prepared: 06	/28/13 Anal	yzed: 07/01/1	13			
Mercury	0.00195	0.00010	mg/L	0.00200		97.3	80-120	1.86	20	



QUALITY CONTROL

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

Applyto	Danult	Reporting	Unita	Spike	Source	%PEC	%REC	רותם	RPD Limit	Notes
Analyte	Result	Limit	Units	Level	Kesult	%REC	Limits	RPD	Limit	Notes
Batch B075545 - EPA 420.1										
Blank (B075545-BLK1)				Prepared: 06	6/25/13 Anal	yzed: 06/27/	13			
Phenol	ND	0.050	mg/L							U
LCS (B075545-BS1)				Prepared: 06	5/25/13 Anal	yzed: 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)	Sour	ce: 13F0934-(01	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)	Sour	ce: 13F0934-(01	Prepared &	Analyzed: 06	/27/13				
Chlorine, Residual	0.027	0.020	mg/L		0.040	1		38.2	47.5	
Matrix Spike (B075764-MS1)	Sour	ce: 13F0934-(01	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



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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%RFC	%REC Limits	RPD	RPD Limit	Notes
1 may to	Kesun	Liint	Onits	Level	Result	JUNEC	Linns	NI D	Lillin	110005
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)	Sour	- ce: 13F0934-	01	Prepared &	Analyzed: 06	/27/13				
Hexavalent Chromium	ND	0.0040	mg/L		ND)		NC	20	U
Matrix Spike (B075768-MS1)	Sour	ce: 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)	Sour	- ce: 13F0934-	01	Prepared &	Analyzed: 06	/27/13				
Hexavalent Chromium	ND	0.0040	mg/L	0.100	ND	1	* 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)	Sour	ce: 13F0934-	01	Prepared &	Analyzed: 07	/02/13				
Cyanide	ND	0.010	mg/L		ND)		NC	20	U
Matrix Spike (B075945-MS1)	Sour	ce: 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	



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

*	QC result is outside of established limits.
Ť	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. Possiblity 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. Possiblity 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.



Aroclor-1262

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

	CERTIFICATIONS	
Certified Analyses included in this Report		
Analyte	Certifications	
EPA 420.1 in Water		
Phenol	CT,MA,NH,NY,RI,NC,ME,VA	
SM18-20 2540D in Water		
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA	
SM18-20 4500 CL B in Water		
Chloride	NH,CT,MA,NY,RI,NC,ME,VA	
SM18-20 4500 CL G in Water		
Chlorine, Residual	CT,MA,RI,ME	
SM18-20 4500 CN E in Water		
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA	
SW-846 6010C in Water		
Iron	CT NH NY ME NC VΔ	
SW-846 6020A in Water		
Antimony	OT NULIVALO ME VA	
Arconia	CT NH NY NG ME VA	
Berullium	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	
SW-846 7196A in Water		
Hexavalent Chromium	CT,NH,NY,NC,ME,VA	
SW-846 7470A in Water		
Mercury	CT,NH,NY,NC,ME,VA	
SW-846 8082A in Water		
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	

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	
Acananhthana	CT NV NH
A conspiration	CT NV NH
Anilina	CT NV
Anthracana	CT NV NH
Benzo(a)anthracene	CT NV NH
Benzo(a)nvrana	CT NV NH
Benzo(h)fluoranthene	CT NV NH
Benzo(g h i)pervlene	CT NV NH
Bonzo(k)fluoranthana	
Bis(2 ablaraathaya)mathana	
Bis(2 chloroathyl)athar	
Bis(2 chloroisopropyl)ether	CT NV NH
Bis(2 Ethylbeyyl)phthalata	CT NV NH
A Bromonhenvlnhenvlether	CT NV NH
Butylbenzylahthalate	CT NV NH
4-Chloroaniline	CT NV NH
2-Chloronanhthalene	CT NV 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	
SW-846 8270D in Water		
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
СТ	Connecticut Department of Publilc 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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Meccaba	ust ujaceli	3 1950	[†] Require la	ab approval	Other:						in the second se	ints fi nd sit diseccellata sitescer		ⁱ n	<u>eľ</u>	36	й Га 4	,	WB	E/DBE Certified
" TURNAROUND TIME S	TARTS AT 9:00 A.M. TH	IE DAY AFTER	SAMPLE R	ECEIPT UNL	ESS THERE	ARE (QUEST	IONS OF	V YOL	IR CH	AIN.	IF TH	IIS FO	RM IS	S NO	T FILL	LED	OUT C	COMP	PLETELY OR

IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St. East Longmeadow, MA. 01028 P: 413-525-2332 F: 413-525-6405 www.contestlabs.com Sample Receipt Checklist												
CLIENT NAME: WILCOX + P	arten	RECEIVED BY: RUF	=	76/13								
 Was the chain(s) of custody r Does the chain agree with the If not, explain: 	elinquished and sign samples?	ed? (Yes	No No CoC Inc No	cluded								
3) Are all the samples in good could be all the samples in good co	ondition?	Yes	Νο									
4) How were the samples receiv On Ice Direct from S	ed: ampling	Ambient 🗌 In Coc	bler(s)									
were the samples received in Te	mperature Compliance	ce of (2-6°C)? (Yés)	No N/A									
Temperature °C by Temp blank		Temperature °C by Temp	gun <u>4.7</u> C									
 5) Are there Dissolved samples Who was notified 6) Are there any RUSH or SHOR 	for the lab to filter? Date THOLDING TIME san	Yes Time nples? Yes	No									
 a) Do all samples have the proper Acid pH: b) Do all samples have the proper Base pH: b) Do all samples have the proper Base pH: c) Date Time Permission to subcontract samples? Yes No (Walk-in clients only) if not already approved Client Signature: No N/A 												
10) Was the PC notified of any di	screpancies with the	CoC vs the samples:	Yes No (N/A									
Co	ontainers reco	eived at Con-Te	est									
	# of containers											
1 Liter Amber	(n	8 oz ambor/o	# 0	r containers								
500 mL Amber		4 oz amber/c	lear jar									
250 mL Amber (8oz amber)		2 oz amber/c	lear jar									
1 Liter Plastic	1	Air Casse	nte									
500 mL Plastic		Hg/Hopcalite	Tube									
250 mL plastic	8	Plastic Bag /	Ziploc									
40 mL Vial - type listed below		PM 2.5 / PM	И 10									
Colisure / bacteria bottle		PUF Cartri	dge									
Dissolved Oxygen bottle		SOC Ki	t									
Encore		TO-17 Tul	pes									
Flashpoint bottle		Non-ConTest C	Container									
Perchlorate Kit		Other glass	s jar									
Other Laboratory Comments:		Other										
40 mL vials: # HCI	# Metha	nol	Time and Date	Frozen:								
Doc#277		tor										
	# DI Wa											
nev 3 way 2012 # I NOSUITAte	Unprese	erved		Dogo 20 of 20								



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,

exporte ames

James M. Georgantas Project Manager



Wilcox & Barton 1115 Route 100B, Suite 200 Moretown, VT 05660 ATTN: Amy Roth 39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

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.

Curles

Michael A. Erickson Laboratory Director



Work Order: 13G0085

Project Location: Newburyport, MA Date Received: 7/2/2013

Field Sample #: MW-2

Sample ID: 13G0085-01

Sample Matrix: Ground Water

Sampled: 6/26/2013 16:30

	Volatile Organic Compounds by GC/MS													
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst				
Acetone	ND	10	47	ug/L	1	II	SW-846 8260C	7/8/13	7/8/13 17:24	EEH				
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	н <u>е</u> /L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH				
Benzene	ND	1.0	0.079	но	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH				
Bromobenzene	ND	1.0	0.044	ug/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	ug/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	ug/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				
									Page 6	of 22				



Work Order: 13G0085

Analyst

EEH

EEH EEH

EEH

EEH

EEH

Project Location: Newburyport, MA Date Received: 7/2/2013 Field Sample #: MW-2

Sample ID: 13G0085-01 Sample Matrix: Ground Water Sampled: 6/26/2013 16:30

Sample Description:

Volatile Organic Compounds by GC/MS												
								Date	Date/Time			
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	Analyzed			
Hexachlorobutadiene	ND	0.50	0.17	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
2-Hexanone (MBK)	ND	10	1.5	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
Isopropylbenzene (Cumene)	ND	1.0	0.11	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.12	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
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			
Methylene Chloride	ND	5.0	3.2	μg/L	1	RL-07, U	SW-846 8260C	7/8/13	7/8/13 17:24			
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
Naphthalene	ND	2.0	0.12	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
n-Propylbenzene	ND	1.0	0.094	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
Styrene	ND	1.0	0.12	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
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			
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			
Tetrachloroethylene	ND	1.0	0.080	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
Tetrahydrofuran	ND	2.0	1.1	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
Toluene	ND	1.0	0.090	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
1,2,3-Trichlorobenzene	ND	2.0	0.14	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
1,2,4-Trichlorobenzene	ND	1.0	0.12	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
1,1,1-Trichloroethane	ND	1.0	0.094	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
1,1,2-Trichloroethane	ND	1.0	0.12	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
Trichloroethylene	ND	1.0	0.077	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
1,2,3-Trichloropropane	ND	2.0	0.12	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
1,2,4-Trimethylbenzene	ND	1.0	0.18	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
1,3,5-Trimethylbenzene	ND	1.0	0.10	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
Vinyl Chloride	ND	2.0	0.13	μg/L	1	L-04, U	SW-846 8260C	7/8/13	7/8/13 17:24			
m+p Xylene	ND	2.0	0.18	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			
o-Xylene	ND	1.0	0.11	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24			

o-Xylene	ND	1.0	0.11	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 17:24	EEH
Surrogates		% Reco	very	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	



Work Order: 13G0085

Project Location: Newburyport, MA Date Received: 7/2/2013

Field Sample #: MW-1

Sample ID: 13G0085-02

Sample Matrix: Ground Water

Sampled: 6/26/2013 17:30

Volatile Organic Compounds by GC/MS													
Analyte	Results	RI.	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time	Anglyet			
Acetone	ND	10	47	ug/I	1	Tiag	SW-846 8260C	7/8/13	7/8/13 18:03	FEH			
ert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	μg/L μg/Ι	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	FEH			
Benzene	ND	1.0	0.079	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	FEH			
Bromobenzene	ND	1.0	0.044	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	FFH			
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			
-Butanone (MEK)	ND	10	2.4	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
	ND	1.0	0.054	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
ec-Butylbenzene	ND	1.0	0.084	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
ert-Butylbenzene	ND	1.0	0.096	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
ert-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	BL-07 II	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
Carbon Tetrachloride	ND	1.0	0.10	μg/L μg/Ι	1	кц-07, 0 Ш	SW-846 8260C	7/8/13	7/8/13 18:03	FEH			
Thlorobenzene	ND	1.0	0.12	μg/L μg/Ι	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	FEH			
Thorodibromomethane	ND	0.50	0.054	μg/L μg/Ι	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	FEH			
	ND	2.0	0.16	μg/L	1	R-05 II	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
Thereform	ND	2.0	0.10	μg/L μg/Ι	1	N-05, 0	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
Thloromethane	ND	2.0	0.14	µg/L	1		SW 846 8260C	7/8/13	7/8/13 18:03	EEH			
-Chlorotoluene	ND	1.0	0.52	µg/L	1	L-04, V-05, O	SW 846 8260C	7/8/13	7/8/13 18:03	EEH			
-Chlorotoluene	ND	1.0	0.074	µg/L	1	U	SW 846 8260C	7/8/13	7/8/13 18:03	EEH			
2-Dibromo-3-chloropropage (DBCP)	ND	2.0	0.074	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
2-Dibromoethane (EDB)	ND	0.50	0.04	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
).	ND	1.0	0.089	µg/L	1	U	SW-846 8260C	7/0/13	7/8/13 18.03	EEH			
2-Dichlorobenzene	ND	1.0	0.076	µg/L	1	U	SW 846 8260C	7/8/13	7/0/13 10.03	EEH			
3-Dichlorobenzene	ND	1.0	0.070	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
4 Dichlorobenzene	ND	1.0	0.079	µg/L	1	U	SW-846 8260C	7/0/13	7/8/13 18.03	EEH			
)ichlorodifluoromethane (Freon 12)	ND	2.0	0.040	µg/L	1		SW-846 8260C	7/0/13	7/8/13 18.03	EEH			
1 Dichloroethane	ND	2.0	0.12	µg/L	1	L-04, U	SW-846 8260C	7/0/13	7/8/13 18.03	EEH			
2 Diabloroathana	ND	1.0	0.10	µg/L	1	U	SW-846 8260C	7/0/13	7/0/13 10:03	EEH			
1 Dichloroethylene	ND	1.0	0.19	µg/L	1	U	SW-846 8260C	7/0/13	7/8/13 18.03	EEH			
is-1 2-Dichloroethylene	ND 0.40	1.0	0.21	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18.03	EEH			
rans 1.2 Dichloroathylene	0.40	1.0	0.15	µg/L	1	J	SW-846 8260C	7/0/13	7/8/13 18:03	EEH			
2 Dichloropropage	0.75 ND	1.0	0.15	µg/L	1	J	SW-846 8260C	7/0/13	7/8/13 18.03	EEH			
3 Dichloropropane	ND	0.50	0.11	µg/L	1	U	SW-846 8260C	7/0/13	7/8/13 18.03	EEH			
2 Dichloropropane	ND	0.50	0.099	µg/L	1	U	SW-846 8260C	7/0/13	7/0/13 10:03	EEH			
1 Diabloropropana	ND	1.0	0.072	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
is 1.3 Dishloropropene	ND	0.50	0.13	µg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
rang 1.2 Dichloropropene	ND	0.40	0.062	μg/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:03	EEH			
ians-1,5-Diemoiopiopene	ND	0.40	0.056	μg/L	1	U	SW-846 82600	7/0/13	7/8/13 18:03	EEH			
Disonronyl Ether (DIDE)	ND	2.0	0.22	μg/L	1	U	5 W-840 82000	7/8/13	7/8/12 18:03	EEH			
4 Diovano	ND	0.50	0.18	μg/L	1		5 w -846 8260C	//8/13	7/8/13 18:03	EEH			
,+-DIOAAIIC	ND	50	20	μg/L	1	к-uэ, v-16, U	5 w -846 8260C	//8/13	7/8/13 18:03	EEH			
Any rocal care	ND	1.0	0.092	μg/L	1	U	3 W-040 820UC	//8/15	Page 8	of 22			



Work Order: 13G0085

Project Location: Newburyport, MA Date Received: 7/2/2013 Field Sample #: MW-1

Sample ID: 13G0085-02

Sample Matrix: Ground Water

Sampled:	6/26/2013	17:30

			Vola	tile Organic Comp	pounds by G	C/MS				
								Date	Date/Time	
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	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		% Reco	overy	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	



Work Order: 13G0085

Project Location: Newburyport, MA Date Received: 7/2/2013

Field Sample #: MW-5

Sample ID: 13G0085-03

Sample Matrix: Ground Water

Sampled: 6/26/2013 18:00

	Volatile Organic Compounds by GC/MS													
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prenared	Date/Time Analyzed	Analyst				
Acetone	ND	10	47	ug/L	1	II	SW-846 8260C	7/8/13	7/8/13 18:40	EEH				
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	ug/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH				
Benzene	ND	1.0	0.079	48 ug/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH				
Bromobenzene	ND	1.0	0.044	ug/L	1	U	SW-846 8260C	7/8/13	7/8/13 18:40	EEH				
Bromochloromethane	ND	1.0	0.22	ug/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	ug/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	ug/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				
								Г	Page 10	of 22				



Work Order: 13G0085

Project Location: Newburyport, MA Date Received: 7/2/2013 Field Sample #: MW-5

Sample ID: 13G0085-03

Sampled: 6/26/2013 18:00

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		% Reco	overy	Recovery Limits	6	Flag							
1,2-Dichloroethane-d4		105		70-130					7/8/13 18:40				
Toluene-d8		100		70-130					7/8/13 18:40				
4-Bromotluorobenzene		101		70-130					//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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	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 (1BEE)	ND	0.50	μg/L							U
Carbon Disullide	ND	5.0	μg/L							U
Chlorobenzene	ND	1.0	μg/L							U
Chlorodibromomethane	ND	0.50	µg/L µg/I							U
Chloroethane	ND	2.0	µg/∟ µg/I							
Chloroform	ND	2.0	μg/L μg/L							K-05, U
Chloromethane	ND	2.0	μ <u>σ</u> /Γ							L-04 V-05 II
2-Chlorotoluene		1.0	ны) Г. µg/Г.							,, U
4-Chlorotoluene		1.0	μg/L							Ŭ
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	μg/L							Ŭ
1,2-Dibromoethane (EDB)	ND	0.50	μg/L							Ŭ
Dibromomethane	ND	1.0	.υ 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
I,4-Dioxane	ND	50	μg/L							R-05, V-16, U
Etnyibenzene	ND	1.0	μg/L							U
Hexachlorobutadiene	ND	0.50	μg/L							U
2-nexanone (MBK)	ND	10	μg/L							U
n Isopropulteluone (n Currene)	ND	1.0	μg/L							U
p-isopropyiloidene (p-Cymene) Mathyl fart Butyl Ethor (MTPE)	ND	1.0	µg/L							U
Methylene Chloride	ND	1.0	μg/L							U
4-Methyl_2_pentapone (MIRK)	ND	5.U 10	μg/L							U
version versio	ND	2.0	μg/L μg/I							U
rapidiatene	ND	2.0	μg/∟							U



QUALITY CONTROL

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	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
1,3,5-1 rimethylbenzene	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		$\mu g/L$	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-Butylbonzone	11.2	1.0	μg/L	10.0		112	70-130			
tert-Butylbenzene	10.5	1.0	μg/L	10.0		105	70-130			
Carbon Digulfida	12.5	0.50	μg/L	10.0		125	70-130			
Carbon Disullide	10.6	5.0	μg/L	10.0		106	70-130			
Chlorohonzono	10.3	1.0	μg/L	10.0		103	/0-130			
Chlorodibromomethane	10.6	1.0	μg/L	10.0		106	70-130			
Chloroethane	10.2	0.50	μg/L	10.0		102	70-130			D 05
Chloroform	10.2	2.0	μg/L 11σ/I	10.0		102	70-130			K-03
Chloromethane	11.0	2.0	μg/L 11σ/L	10.0		110 16.4 *	40-160			L-04 V-05 I
2-Chlorotoluene	1.04	1.0	µв/L µø/L	10.0		10.4 *	70-130			
4-Chlorotoluene	10.4	1.0	не/L	10.0		107	70-130			
1 2-Dibromo-3-chloropropane (DBCP)	10.7	2.0	µв/L µø/L	10.0		125	70-130			
1.2-Dibromoethane (EDB)	12.3	0.50	не/L	10.0		108	70-130			
Dibromomethane	10.8	1.0	μg/L	10.0		106	70-130			
1.2-Dichlorobenzene	10.0	1.0	με/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	.ε μg/L	10.0		98.5	70-130			
	2.00		. 0	10.0						



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			
1,1,2,2-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			



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	Ť
2-Butanone (MEK)	131	10	μg/L	100		131	40-160	6.77	20	L-14, V-20	Ť
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 *	s 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	Ť
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	Ť
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 *	s 20	R-05, V-16	Ť
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		Ť
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		t
Naphthalene	16.3	2.0	μg/L	10.0		163 *	70-130	8.66	20	L-02, V-20	

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	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		$\mu g/L$	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	25.0		μg/L	25.0		99.9	70-130			



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332 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	
SW-846 8260C in Water		
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	
SW-846 8260C in Water		
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
СТ	Connecticut Department of Publilc 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

	n-test ^{® Phone: 4} Fax: 413	13-525-2332 CHÂ -525-6405	IN OF	CUSTO	DY R	REC	ORD	39 Spru East lor	ce Stree Igmeado	t w, MA 0	1028	Pageof
ANALY ANALY	TICAL LABORATORY Email: in	fo@contestlabs.com	Re	ev 04.05.12		9						# of Containers
	www.col	ntestlabs.com	â	0,0	Lant	<u>ا</u> لد						** Preservation
Company Name: (VILCOX+Barto	Telephone Telephone	: <u>(q0'S</u>	569	91901	J						***Container Code
Address: S7	- fleit Rd	Project #	CHA	RTOCK	31		ANA	LYSIS RE	QUEST	FED.		Dissolved Metals
()	ncord_NH	Client PO#	!									O Field Filtered
Attention: Am	4 Roth	DATA DELIV	ERY (check all t	hat apply)		o						O Lab to Filter
Project Location: N	Jewburypart,	A Fax#		BSITE		ð				-		***Cont. Code:
Sampled By: Liv	dsey flouron	C Email:			0	ũ						A=amber glass G=glass
Project Proposal Prov	ided? (for billing purposes) proposal date	Format:	OPDF OE O OTHER									P=plastic ST=sterile V= vial
Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Beginning Ending Date/Time, Date/Time	Composite	Grab Cade	<u>er</u> Zonc Code	>						S=summa can T≈tedlar bag
<u> </u>	mue-2	Ce/24/13/16:30		1 40	42	7						O =Other
02	MW-1	col 2001 7:30		/ gw	Ú /	/						**Preservation
03	mw-5	(126/3 18:00		/ GW	u	/						1 = lced
	-											M = Methanol
	;											N = Nitric Acid S = Sulfuric Acid
												8 = Sodium bisulfate X = Na bydrovide
												T = Na thiosulfate
												*Matrix Code:
												WW=wastewater
Comments:	\wedge			Please	use the fe may be t	ollowing high in c	codes to le concentration	et Con-Tes	st know i x/Conc.	f a specifi Code Bo	ic sample «	DW= drinking water A = air S = soil/solid
Relinguished/zv: (signatu		Aurnaround #	Detection	L imit Reg	H - High; Uire mon	M - Me	dium; L - L I	ow; C - C	lean; U	- Unknow	/n	SL = sludge O = other
MAS	Y III FR	7-Day	Massachuset	its:			is you	r proje	et M	CP or I	RCP?	
Received by signature	CULL 7 SIZ 125	10-Day	_				o o	MCP For	m Requi	red		
Pa viguened by Asignator	A ()-1) Date/Time		Connecticut:					MA State	n kequi DW Fo	rea m Requir	ed PWSID)#
eser 11 Tol	xmu-112/12/17 5	10 [†] 24-Hr □ [†] 48-Hr	_				Victoria interv	R. LLC KANNENT .	IN AGO	One .	NELAC &	AIHA-LAP, LLC
9 aly Al	13.6° 7/2/13 00000	1 '72-Hr I '4-Day T Require lab approval	Other:				Mart San reads along Bard a long Anna San along Anna San along		hel		WB	E/DBE Certified
	TARTS AT 9:00 A.M. THE DAY AFT	ER SAMPLE RECEIPT UNI	ESS THERE	ARE QUESTIC	ONS ON Y	OUR CI	HAIN. IF T	HIS FORM	IS NO	r filled	OUTCOM	PLETELYOR

ICORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St. East Longmeadow, MA. 01028 P: 413-525-2332 F: 413-525-6405 www.contestlabs.com	Sample Receip	LABORATORY	11. 1					
CLIENT NAME: WILLOR &	Bartor RECE	EIVED BY: JMI		2/2/13				
 Was the chain(s) of custody i Does the chain agree with the If not, explain: 	relinquished and signed? e samples?	(Yes) Ves) No No () No	CoC Included				
3) Are all the samples in good c If not, explain:	ondition?	Yes	No					
4) How were the samples received on loce On loce Direct from S Were the samples received in Termo plank	ed: ampling Ambie mperature Compliance of Temp	erature °C by Temr	bler(s) 📶 No N/A	c				
 5) Are there Dissolved samples Who was notified 6) Are there any RUSH or SHOR Who was notified 	for the lab to filter? Date 1 T HOLDING TIME samples Date	Yes Γime ? Yes Γime	No					
7) Location where samples are stored:								
 b) all samples have the prop 9) Do all samples have the prop 10) Was the PC notified of any d 	er Acid pH: Yes No er Base pH: Yes No iscrepancies with the CoC Ontainers receive	NA Vs the samples:	Yes No (
	# of containers							
1 Liter Amber		P.oz. ombor/c		# of containers				
500 ml Amber	+	4 oz amber/c	lear jar					
250 ml Amber (8oz amber)		2 oz amber/c	lear jar					
1 Liter Plastic		<u> </u>						
500 ml Plastic		Ha/Hopcalit						
250 mL plastic	<u>+</u>	Plastic Bag /						
40 mL Vial - type listed below	9	PM 2.5 / P	 M 10					
Colisure / bacteria bottle	┨──┦───┤──┤	PLIE Cartr	idae					
Dissolved Oxygen bottle		<u></u>	it					
Encore		TO-17 Tu	hes					
Flashpoint bottle	†	Non-ConTest (Container					
Perchlorate Kit	<u>†</u> ∭ -		siar					
Other		Other	- jui					
aboratory Comments:		Ouler						
40 mL vials: # HCI	4 # Methanol		Time a	and Date Frozen:				
)or#277 # Rigulfate	-t		1					
			-					
Hev. 3 May 2012 # Thiosulfate	Unpreserved]	Page 22 of				