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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

OCT 19 2011

Christopher E. Gill
Senior Project Manager
Corporate Environmental Advisors, Inc.
127 Hartwell Street
W. Boylston, MA 0153

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Former Ocean Spray Building site located at 1057 Main Street, Hanson, MA 02341, Plymouth County; Authorization # MAG910506

Dear Mr. Gill:

Based on the review of a Notice of Intent (NOI) submitted on behalf of J & M Realty Trust by the firm Corporate Environmental Advisors, Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Operator, to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

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

Please note the enclosed checklist includes parameters that exceeded Appendix III limits. The checklist also includes other parameters for which your laboratory reports indicated there was insufficient sensitivity to detect these parameters at the minimum levels established in Appendix VI of the RGP. The checklist also includes ethylene dibromide (1,2-dibromo-methane), trivalent and hexavalent chromium, and total iron for which you have not provided information as required by the category and sub-category selected. You may request a deletion of these and any other compounds not present in the influent during the first six months to a year of continuously monitoring these compounds by

filing a notice of change (NOC) request. Please see the notice of change (NOC) information under Appendix V on the RGP website.

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on a dilution factor range (DFR). With the absence of dilution wetlands or to ponds, EPA determined that the DFR for each parameter is in the one to five (1-5) range. (See the RGP Appendix IV for Massachusetts facilities) Therefore, the limits for antimony of 5.6 ug/L, arsenic of 10 ug/L, cadmium of 0.2 ug/L, trivalent chromium of 48.8 ug/L, hexavalent chromium of 11.4 ug/L, copper of 5.2 ug/L, lead of 1.3 ug/L, mercury of 0.9 ug/L, nickel of 29 ug/L, zinc of 66.6 ug/L and iron of 1,000 ug/L, are required to achieve permit compliance at your site.

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

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on January 15, 2012. 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,

David M. Webster, Chief
Industrial Permits Branch

Enclosure

cc: Kathleen Keohane, MassDEP
Richard J. Vacca, Town of Hanson
Conservation Commission

2010 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910506**
Authorization Issued:	October, 2011
Facility/Site Name:	Former Ocean Spray Building
Facility/Site Address:	1057 Main Street, Hanson, MA 02341, Plymouth County
	Email address of owner: Not provided
Legal Name of Operator:	Corporate Environmental Advisors, Inc.
Operator contact name, title, and Address:	Christopher E. Gill, Senior Project Manager
	Email: alast@cea-Inc.com
Estimated Date of project Completion:	January 15, 2012
Category and Sub-Category:	Category III. Contaminated Construction Dewatering. Sub-category A. General Urban Fill Sites
RGP permit expiration date Date:	September 9, 2015
Receiving Water:	Class: Greater Cedar Swamp to Burrage Pond

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

	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)
√	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing **, Me#60.2/ML5ug/L
	2. Total Residual Chlorine (TRC) [1]	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
√	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
√	4. Cyanide (CN) [2, 3]	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
√	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
√	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
√	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
√	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]	100 ug/L/ Me#8260C/ ML 2ug/L
√	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L

	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)
	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
√	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
√	14. Naphthalene [5]	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
√	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
√	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
√	33. Total Phthalates (Phthalate esters) [6]	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
√	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L
√	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
√	a. Benzo(a) Anthracene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	b. Benzo(a) Pyrene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L

	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)
√	c. Benzo(b)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	d. Benzo(k)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	e. Chrysene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	f. Dibenzo(a,h)anthracene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	g. Indeno(1,2,3-cd) Pyrene [7]	0.0038 ug/L /Me#8270D/ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML5ug/L
	36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	100 ug/L
√	h. Acenaphthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	i. Acenaphthylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	j. Anthracene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	k. Benzo(ghi) Perylene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	l. Fluoranthene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	m. Fluorene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	n. Naphthalene [5]	20 ug/l / Me#8270/ML 5ug/L, Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	o. Phenanthrene	X/Me#8270D/ML 5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
√	p. Pyrene	X/Me#8270D/ML5ug/L,Me#610/ML 5ug/L & Me#625/ML 5ug/L
	37. Total Polychlorinated Biphenyls (PCBs) [8, 9]	0.000064 ug/L/Me# 608/ ML 0.5 ug/L
√	38. Chloride	Monitor only/Me# 300.0/ ML 0.1ug/L

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
		Freshwater	Saltwater		
√	39. Antimony	5.6/ML 10			
√	40. Arsenic **	10/ML20	36/ML 20		
√	41. Cadmium **	0.2/ML10	8.9/ML 10		
√	42. Chromium III (trivalent)	48.8/ML15	100/ML 15		

	Metal parameter	Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]		Minimum level=ML	
		Freshwater	Saltwater		
	**				
√	43. Chromium VI (hexavalent) **	11.4/ML10	50.3/ML 10		
√	44. Copper **	5.2/ML15	3.7/ML 15		
√	45. Lead **	1.3/ML20	8.5/ML 20		
√	46. Mercury **	0.9/ML0.2	1.1/ML 0.2		
√	47. Nickel **	29/ML20	8.2/ML 20		
	48. Selenium **	5/ML20	71/ML 20		
	49. Silver	1.2/ML10	2.2/ML 10		
√	50. Zinc **	66.6/ML15	85.6/ML 15		
√	51. Iron	1,000/ML 20			

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

Footnotes:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[14] Temperature sampling per Method 170.1

MAG910506

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

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

a) Name of facility/site: Former Ocean Spray Building			Facility/site mailing address:		
Location of facility/site: longitude: 72deg 52' 49" latitude: 42deg 02' 38"		Facility SIC code(s): 1542	Street: 1057 Main Street,		
b) Name of facility/site owner:			Town: Hanson		
Email address of facility/site owner:			State: MA	Zip: 02341	County: Plymouth
Telephone no. of facility/site owner: 617.549.5408					
Fax no. of facility/site owner:			Owner is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ⊙ 4. Other ○ if so, describe:		
Address of owner (if different from site):					
Street: PO Box 818					
Town: Pembroke	State: MA	Zip: 02359	County: Plymouth		
c) Legal name of operator:			Operator telephone no: 508.835.8822		
Corporate Environmental Advisors, Inc.			Operator fax no.: 508.835.8812	Operator email: alast@cea-inc.com	
Operator contact name and title: Christopher E. Gill, Senior Project Manager					
Address of operator (if different from owner):			Street: 127 Hartwell Street		
Town: W. Boylston	State: MA	Zip: 01583	County: Worcester		

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

e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y ○ N ◉
If Y, please list:
1. site identification # assigned by the state of NH or MA:
2. permit or license # assigned:
3. state agency contact information: name, location, and telephone number:

f) Is the site/facility covered by any other EPA permit, including:
1. Multi-Sector General Permit? Y ○ N ◉, if Y, number:
2. Final Dewatering General Permit? Y ○ N ◉, if Y, number:
3. EPA Construction General Permit? Y ○ N ◉, if Y, number:
4. Individual NPDES permit? Y ○ N ◉, if Y, number:
5. any other water quality related individual or general permit? Y ○ N ◉, if Y, number:

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

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

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:

Extraction, treatment and discharge of water from basement of former cranberry processing plant.

b) Provide the following information about each discharge:

1) Number of discharge points: 1

2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft^3/s)?
Max. flow 0.45 Is maximum flow a **design value**? Y ◉ N ○
Average flow (include units) 200 gpm Is average flow a design value or estimate? design value

3) Latitude and longitude of each discharge within 100 feet:

pt.1: lat	42 02" 31.51"	long	70 50' 49.04"	pt.2: lat.		long.	;
pt.3: lat		long		pt.4: lat.		long.	;
pt.5: lat		long		pt.6: lat.		long.	;
pt.7: lat		long		pt.8: lat.		long.	; etc.

4) If hydrostatic testing, total volume of the discharge (gals):

5) Is the discharge intermittent ◉ or seasonal ○ ?
Is discharge ongoing? Y ○ N ◉

c) Expected dates of discharge (mm/dd/yy): start Nov 15, 2011 end Jan 15, 2012

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): Attached to original submittal

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.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		☐	☒	1	Grab	SM 2540D	50,000 ug/l	360000	392.43		
2. Total Residual Chlorine (TRC)		☒	☐	1	Grab	HACH 8167	1000 ug/l	<1,000	<1,000		
3. Total Petroleum Hydrocarbons (TPH)		☐	☒	1	Grab	1664	1,000 ug/l	17500	19.08		
4. Cyanide (CN)	57125	☐	☒	1	Grab	335.4	5 ug/l	6.3	0.0069		
5. Benzene (B)	71432	☒	☐	1	Grab	8260b	1.0 ug/l	<1.0	<0.0016		
6. Toluene (T)	108883	☐	☒	1	Grab	8260b	1.0 ug/l	49.9	0.0544		
7. Ethylbenzene (E)	100414	☐	☒	1	Grab	8260b	1.0 ug/l	1.4	0.0015		
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☐	☒	1	Grab	8260b	3.0 ug/	6.4	0.0070		
9. Total BTEX [2]	n/a	☐	☒	1	Grab	8260b	---	57.7	0.0540		
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐							To be collected	
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	1	Grab	8260b	1.0 ug/l	<1.0	<0.0016		
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	Grab	8260b	10 ug/l	<10	<0.01		

* 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.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
13. tert-Amyl Methyl Ether (TAME)	9940508	☐	☒	1	Grab	8260b	1.0 ug/l	498	0.001		
14. Naphthalene	91203	☒	☐	1	Grab	8260b	29.4 ug/l	<29.4	0.294		
15. Carbon Tetrachloride	56235	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
18a. Total dichlorobenzene		☐	☐								
19. 1,1 Dichloroethane (DCA)	75343	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
21. 1,1 Dichloroethene (DCE)	75354	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
22. cis-1,2 Dichloroethene (DCE)	156592	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
23. Methylene Chloride	75092	☒	☐	1	Grab	EPA 624	10.0 ug/l	<10.0	<0.0164		
24. Tetrachloroethene (PCE)	127184	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
25. 1,1,1 Trichloro-ethane (TCA)	71556	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
27. Trichloroethene (TCE)	79016	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
28. Vinyl Chloride (Chloroethene)	75014	☒	☐	1	Grab	EPA 624	1.0 ug/l	<1.0	<0.0016		
29. Acetone	67641	☐	☒	1	Grab	EPA 624	10 ug/l	40.7	0.0444		
30. 1,4 Dioxane	123911	☒	☐	1	Grab	EPA 8260b	20 ug/l	<20	<0.048		
31. Total Phenols	108952	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.0481		
32. Pentachlorophenol (PCP)	87865	☒	☐	1	Grab	EPA 625	118 ug/l	<118	<0.1929		
33. Total Phthalates (Phthalate esters) [4]		☒	☐	1	Grab	EPA 625	29.4 ug/l	Results BDL, see			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	Grab	EPA 625	29.4 ug/l	Results BDL, see			
a. Benzo(a) Anthracene	56553	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
b. Benzo(a) Pyrene	50328	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
c. Benzo(b)Fluoranthene	205992	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
d. Benzo(k)Fluoranthene	207089	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
e. Chrysene	21801	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
f. Dibenzo(a,h)anthracene	53703	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
i. Acenaphthylene	208968	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
j. Anthracene	120127	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
k. Benzo(ghi) Perylene	191242	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
l. Fluoranthene	206440	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
m. Fluorene	86737	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
n. Naphthalene	91203	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
o. Phenanthrene	85018	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
p. Pyrene	129000	☒	☐	1	Grab	EPA 625	29.4 ug/l	<29.4	<0.048		
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	Grab	SW8082	0.330 ug/l	<0.330	<0.330		
38. Chloride	16887006	☐	☐							To be collected	
39. Antimony	7440360	☐	☒	1	Grab	EPA 200.7	6 ug/l	16.4	0.0179		
40. Arsenic	7440382	☐	☒	1	Grab	EPA 200.7	4 ug/l	18.8	0.0205		
41. Cadmium	7440439	☐	☒	1	Grab	EPA 200.7	2.5 ug/l	18.4	0.0201		
42. Chromium III (trivalent)	16065831	☐	☐							To be collected	
43. Chromium VI (hexavalent)	18540299	☐	☐							To be collected	
44. Copper	7440508	☐	☒	1	Grab	EPA 200.7	5 ug/l	206	0.2246		
45. Lead	7439921	☐	☒	1	Grab	EPA 200.7	7.5 ug/l	1320	1.4389		
46. Mercury	7439976	☐	☒	1	Grab	7470A	0.30 ug/l	1.13	0.0012		
47. Nickel	7440020	☐	☒	1	Grab	EPA 200.7	5 ug/l	580	0.0632		
48. Selenium	7782492	☒	☐	1	Grab	EPA 200.7	15.0 ug/l	<15.0	<0.0245		
49. Silver	7440224	☒	☐	1	Grab	EPA 200.7	5 ug/l	<5.0	<0.082		
50. Zinc	7440666	☐	☒	1	Grab	EPA 200.7	5 ug/l	4740	5.167		
51. Iron	7439896	☐	☐								
Other (describe):		☐	☐							To be collected	

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

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 ⊙ N ○	If yes, which metals? An, As, Cd, Cu, Pb, Hg, Ni, Se, Ag, Zn
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: Metal: DF: Metal: DF: Etc.	Look up the limit calculated at the corresponding dilution factor in **Appendix IV.** Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ⊙ N ○ If Y, list which metals: An, As, Cd, Cu, Pb, Hg, Ni, Se, Ag, Zn

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 Figure 3 for a description of the treatment system, including a schematic of the proposed treatment system.

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ☒	Air stripper ☐	Oil/water separator ☒	Equalization tanks ☐	Bag filter ☒	GAC filter ☒
	Chlorination ☐	De-chlorination ☐	Other (please describe):	Flocculation		

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate(s)** (gallons per minute) of the treatment system:
Average flow rate of discharge 200 gpm Maximum flow rate of treatment system 200 gpm
Design flow rate of treatment system 200 gpm

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

Storm Klear (flocculating agent), MSDS are attached.

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

a) Identify the discharge pathway:	Direct to receiving water ☐	Within facility (sewer) ☐	Storm drain ☐	Wetlands ☐	Other (describe): X

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
Discharge via existing concrete sluiceway (part of historical cranberry processing infrastructure)to Great Cedar Swamp which flows to Burrage Pond

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:
1. For multiple discharges, number the discharges sequentially.
2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water
The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water B

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water NA Intermittent Flow cfs
Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y ○ N ◉ If yes, for which pollutant(s)?

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

6. ESA and NHPA Eligibility.

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

a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?

A ◉ B ○ C ○ D ○ E ○ F ○

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

c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Y ○ N ◉

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

e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?

1 ○ 2 ◉ 3 ○

f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

7. Supplemental information.

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

See cover letter and report.

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: Former Ocean Spray Building

Operator signature: Christoph E Gill

Printed Name &Title: Christopher E. Gill, Senior Project Manager

Date: 10/4/11

MAG910

Enter your transmittal number → X240062 (Transmittal Number)

Your unique Transmittal Number can be accessed online: http://mass.gov/dep/service/online/trasmfrm.shtml

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. Copy 2 must accompany your fee payment. Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

* Note:
For BWSC Permits, enter the LSP.

A. Permit Information

BRP WM 12 — 1. Permit Code: 7 or 8 character code from permit instructions

EPA General Permit: Groundwater Remediation — 2. Name of Permit Category

Dewatering — 3. Type of Project or Activity

B. Applicant Information – Firm or Individual

J & M Realty Trust — 1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. Last Name of Individual | 3. First Name of Individual | 4. MI

PO Box 818 — 5. Street Address

Pembroke — 6. City/Town | MA — 7. State | 02359 — 8. Zip Code | 781-335-1342 — 9. Telephone # | 10. Ext. #

Joe Marangiello — 11. Contact Person | 12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

1. Name of Facility, Site Or Individual

Former Ocean Spray Building — 2. Street Address

Hanson — 3. City/Town | MA — 4. State | 02341 — 5. Zip Code | 6. Telephone # | 7. Ext. #

8. DEP Facility Number (if Known) | 9. Federal I.D. Number (if Known) | 10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

Corporate Environmental Advisors, Inc. — 1. Name of Firm Or Individual

127 Hartwell Street — 2. Address

W. Boylston — 3. City/Town | MA — 4. State | 01583 — 5. Zip Code | 508-835-8822 — 6. Telephone # | 7. Ext. #

Christopher Gill — 8. Contact Person | 9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

1. ☐ Fee Exempt (city, town or municipal housing authority)(state agency if fee is $100 or less). *There are no fee exemptions for BWSC permits, regardless of applicant status.*
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

839 — Check Number | $775.00 — Dollar Amount | 9/19/2011 — Date

CORPORATE ENVIRONMENTAL ADVISORS, INC.

Consultants Engineers Contractors

September 16, 2011

US Environmetnal Protection Agency
5 Post Office Square, Suite 100
Mail Code OEPO6-4
Boston, Massachusetts 02109-3946
ATTN: Remediation General Permit NOI Processing

RE: EPA Remediation General Permit Notice of Intent
Former Ocean Spray Building
1057 Main Street (Route 27)
Hanson, Massachusetts
CEA Project # 6461-07

To Whom It May Concern:

On behalf of J & M Realty Trust, Corporate Environmental Advisors, Inc. (CEA) is submitting this Notice of Intent (NOI) to pump, treat and discharge water under the EPA Remediation General Permit (RGP), National Pollutant Discharge Elimination System (NPDES) at the above referenced location (the "Site"). The water (estimated at approximately 800,000 gallons) is contained in the basement of the Former Ocean Spray Building located at 1057 Main Street in Hanson, Massachusetts. Based on information obtained from existing and former property owners, stormwater catch basins located in nearby public roads discharge via a stormwater pipe which terminates in the basement of the structure. As the structure was in a state of significant disrepair for numerous years, rain water, run off and stormwater have accumulated in the basement of the structure. The structure was condemned and subsequently demolished. To complete the demolition process and begin backfilling the basement as part of Site development, the water must be removed and any other discharges or infiltrations of water controlled. The current property owners are working with the Town of Hanson to address the stormwater discharge pipe that is discharging stormwater from the nearby roads into the basement. The standing water in the basement must be removed to access the stormdrain discharge.

Work on the project is being coordinated with the Town of Hanson and the Hanson Conservation Commission by others.

Figure 1, Site Locus Map, depicts the property location with respect to surrounding topography. **Figure 2,** Site Layout depicts pertinent site features.

ADDRESS Hartwell Business Park
127 Hartwell Street, Suite 2
West Boylston, MA 01583
TEL 508.835.8822 800.358.7960
FAX 508.835.8812
WEB www.cea-inc.com

On April 6, June 16 and July 27, 2011, water samples were collected from the standing water contained in the basement of the Former Ocean Spray Building. The following is a summary of samples and analyses:

Date	ID	Analysis
6/16/2011	1A, B, C	RCRA 8 Metals
	2A, B, C	Total Suspended Solids
	3A, B, C	Total Petroleum Hydrocarbons
7/27/2011	Standing Water	Biological Oxygen Demand
		Total Cyanide
		Dissolved Oxygen
		pH
		Total Residual Chlorine
		Total Dissolved Solids
		Total Suspended Solids
		Ammonia as Nitrogen
		Nitrogen total Kjeldahl
		Phenolics
		Hardness
		Nitrate/Nitrite
		Phosphorous
		Oil & Grease (EPA 1664)
		Semi-VOCs (SW846 3510C)
		VOCs (SW846 5030)
		Total and Soluble Metals:
		Silver
		Arsenic
		Beryllium
		Cadmium
		Chromium
		Copper
		Mercury
		Nickel
		Lead
		Antimony
		Selenium
		Thalium
		Zinc
4/6/2011	Surface Water	PCBs

Additional analysis is to be conducted for the following compounds:

- Ethylene Dibromide (1,2-dibromo-methane);
- Chromium III and Chromium VI; and,
- Total and dissolved iron.

These analytical results will be submitted in an addendum following submittal of this Notice of Intent. Laboratory analytical results are included in **Attachment 1.** Analytical results are summarized in the Remediation General Permit – Notice of Intent included in **Attachment 2.**

J & M Realty has contracted Service Tech. Inc. of North Providence, Rhode Island to provide the components for treating the water prior to discharge. Service Tech has designed two treatment systems for review by the client. One system to operate at a flow rate of 100 gallons per minute (gpm) and one treatment system to operate at a flow rate of 200 gpm. Variations in groundwater treatment flow rates are designed to allow flexibility to respond to changes in water recharge that may occur during the dewatering process. Additional treatment capacity may be necessary to respond to water discharging from the storm drains in the event of a precipitation event or seepage of groundwater or surface water during backfilling of the basement.

Groundwater will be recovered from an existing concrete water separator located along the western wall of the building foundation. The separator is a remnant of the former cranberry processing system that operated in the basement of the building. Water will be pumped from the separator using an appropriately sized electric total fluids recovery pump. The water will be treated using StormKlear flocculating agent prior to discharging to a water-tight rolloff dumpster fitted with a weir system to provide separation of solids from the water stream. In the 200 gpm treatment system, water from the roll-off will be pumped to a 21,000 gallon capacity fractionation (frac) tank for additional separation of solids. In the 100 gpm treatment system, the frac tank will not be incorporated into the treatment system. Water discharging from either the rolloff (100 gpm system) or the frac tank (200 gpm system) will be pumped through four bag filter housing units fitted with 50 micron bag filters operated in parallel.

In the 200 gpm treatment system, water from the bag filters will be treated via two 2,000-pound capacity granular activated carbon adsorbers (GACs) operated in parallel. In the 100 gpm treatment system, water from the bag filters will be treated via two 1,000-pound capacity GACs operated in parallel. Groundwater flow rate and total flow will be monitored at the effluent of the treatment system using a digital flow meter capable of reading flow rate to within 0.1 gpm and total flow to within 0.1 gallons

Treated groundwater will be discharged to a concrete sluiceway located along the western wall of the building foundation. The sluiceway, which was once part of the cranberry processing system as well, discharges to the wetlands located southwest of the site. According to the MassDEP MCP Numerical Ranking System Map dated August 22, 2011, the wetland is identified as a Protected Open Space. A copy of the MassGIS Map is attached as **Figure 4.**

CEA conducted a review of the listed species of concern pursuant to the Endangered Species Act. Based on this review, there are no activities associated with the proposed project that will have an adverse affect on endangered or threated species. Additionally, there are no activities associated with this project that will have an adverse affect on critical habitat.

Refer to **Figure 2** for the location of the pumping and discharge locations. A process and instrumentation diagram (PID) of the treatment system is included as **Figure 3.**

If you have any questions or require additional information, please do not hesitate to contact the undersigned at (508) 835- 8822.

Sincerely,
CORPORATE ENVIRONMENTAL ADVISORS, INC.

Christopher E. Gill, LSP
Senior Project Manager

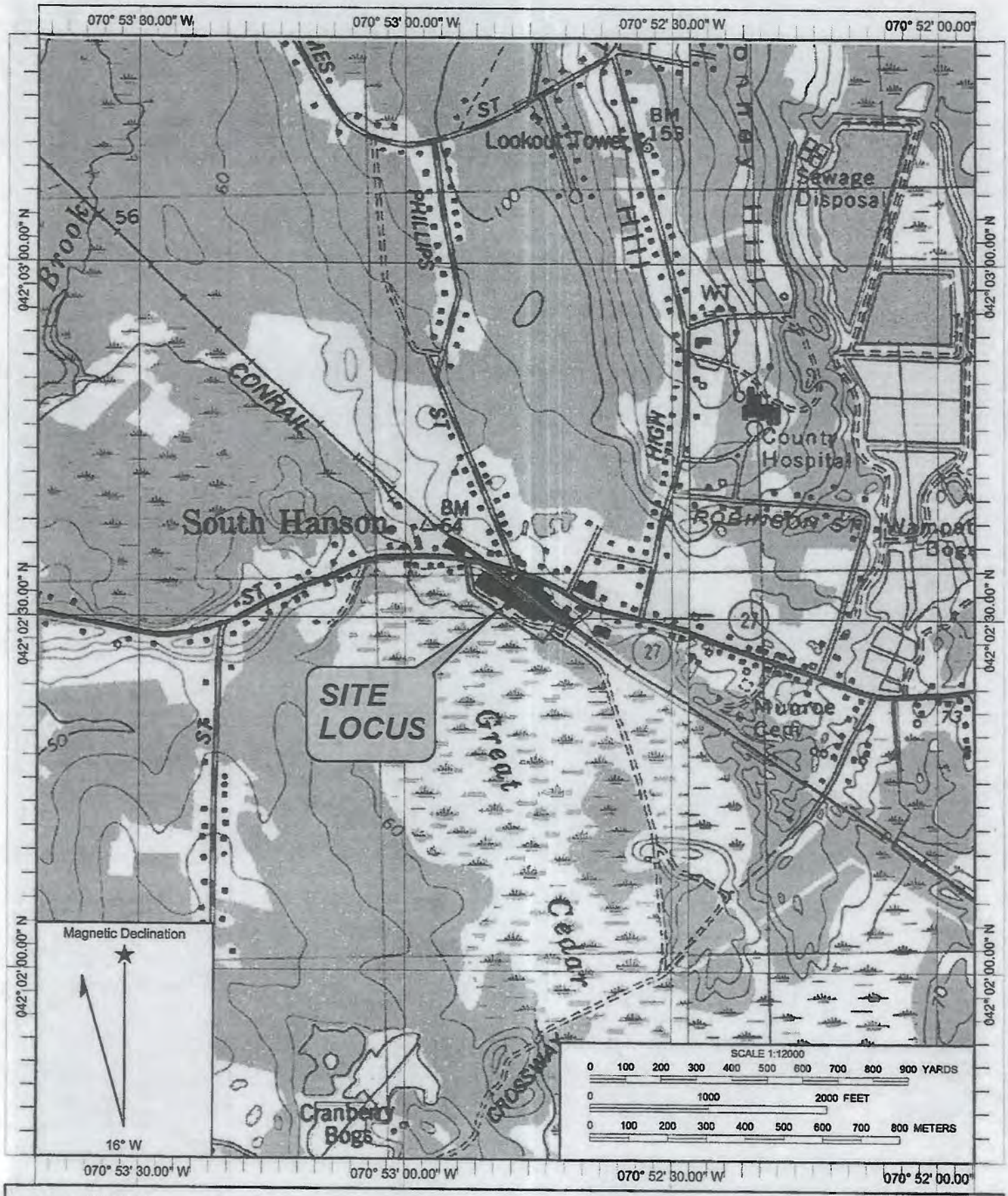
Figures

Figure 1	Site Locus
Figure 2	Site Layout Depicting Pumping and Discharge Locations
Figure 3	Treatment System Process and Instrumentation Diagram
Figure 4	MassGIS Map

Attachments

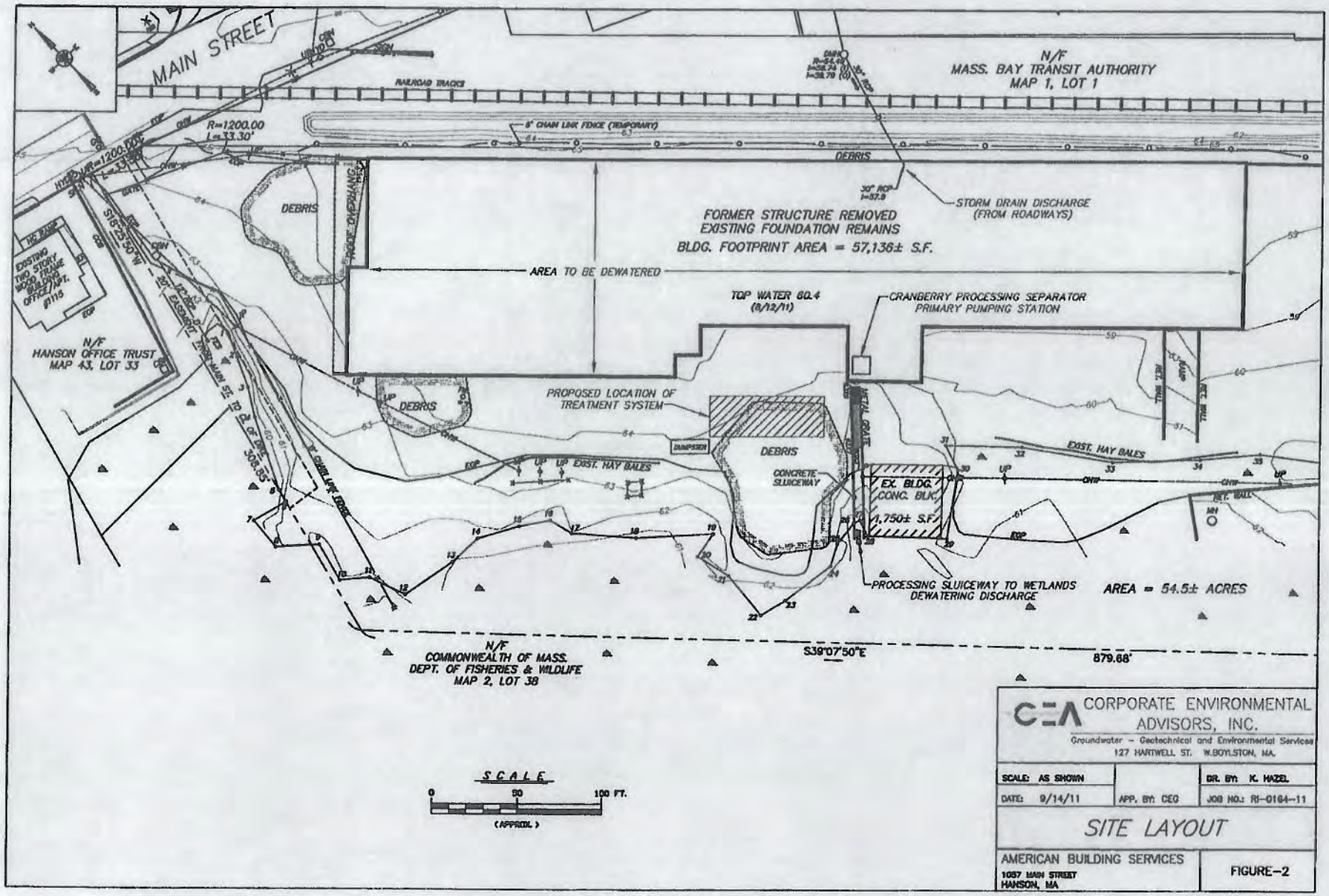
Attachment A: Laboratory Analytical Reports
Attachment B: Remediation General Permit - Notice of Intent

cc w/ attachments: Mr. Peter Carvalo American Builders, Inc.
Mr Joe Marangiello, J&M Realty Trust
Town of Hanson Conservation Commission



Name: WHITMAN
Date: 9/14/2011
Scale: 1 inch equals 1000 feet

Location: 042° 02' 31.63" N 070° 52' 48.77" W WGS 84
Caption: Figure-1 Site Locus Map
1057 Main Street
Hanson, MA



CEA CORPORATE ENVIRONMENTAL ADVISORS, INC.

Groundwater – Geotechnical and Environmental Services

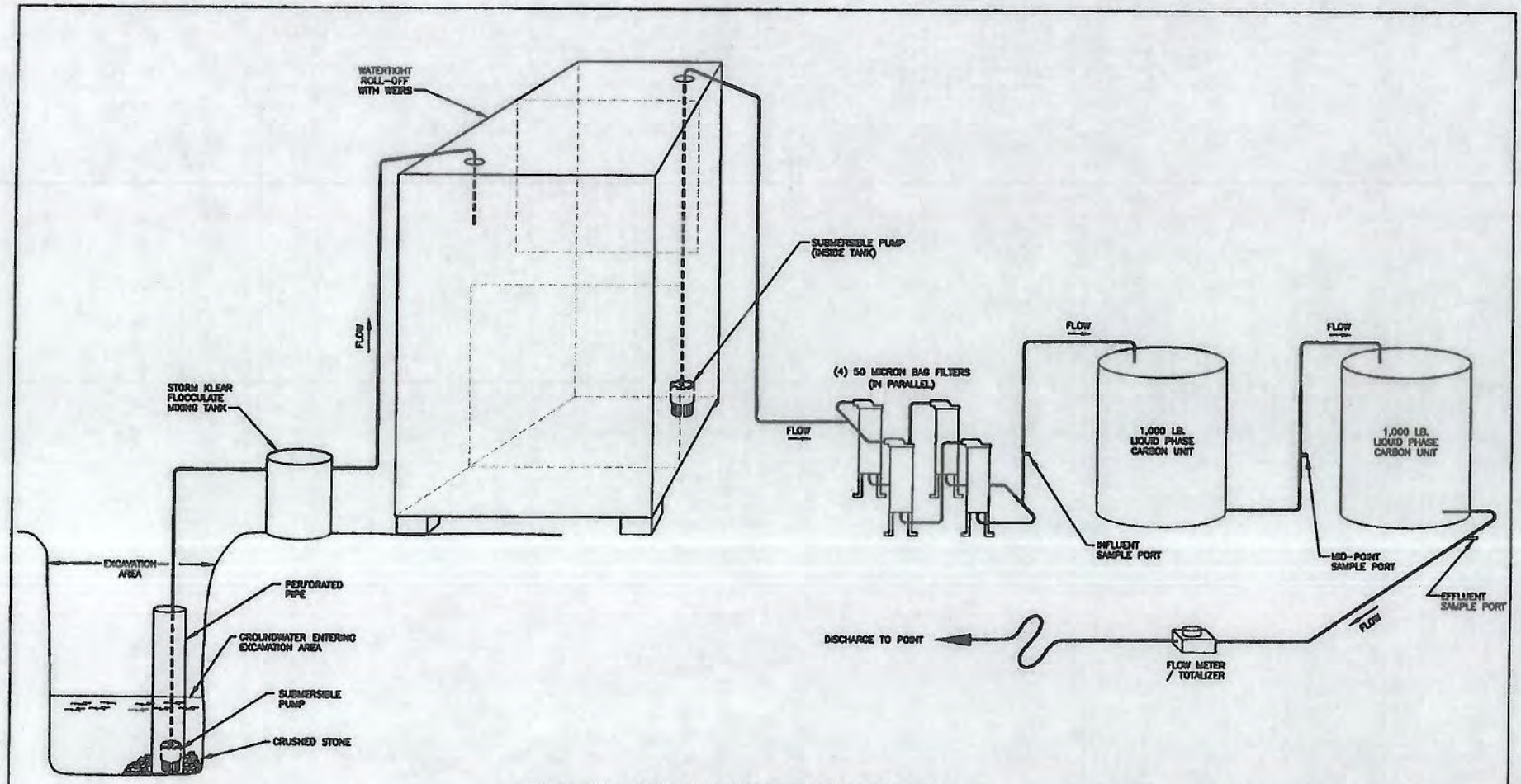
127 HARTWELL ST. W.BOYLSTON, MA.

SCALE: AS SHOWN		DR. BY: K. HAZEL
DATE: 9/14/11	APP. BY: CEG	JOB NO.: RI-0164-11

SITE LAYOUT

AMERICAN BUILDING SERVICES
1057 MAIN STREET
HANSON, MA

FIGURE-2



NOTE: SYSTEM DESIGNED FOR 100 GALLONS PER MINUTE FLOW RATE.

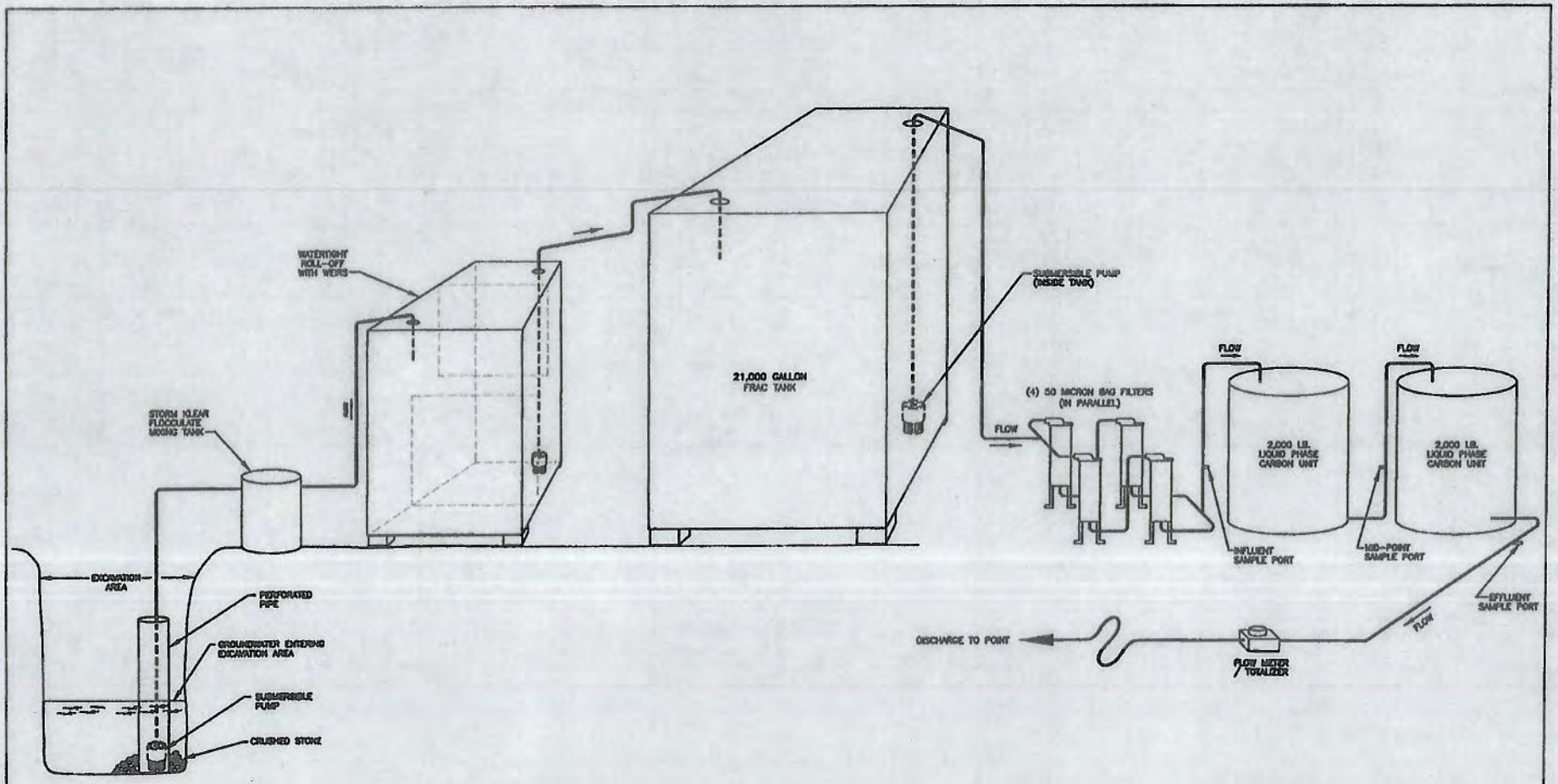
CORPORATE ENVIRONMENTAL ADVISORS, INC.
Assessments – Remediation – Emergency Response
127 HARTWELL ST. W.BOYLSTON, MA.

SCALE: NOT TO SCALE		DR. BY: K. HAZEL
DATE: 9/16/11	APP. BY: CEG	JOB NO.: RI-0164-11

TREATMENT SYSTEM PROCESS & INSTRUMENTATION DIAGRAM (100 GPM SYSTEM)

AMERICAN BUILDING SERVICES
1057 MAIN STREET HANSON, MA

FIGURE 3A



NOTE: SYSTEM DESIGNED FOR 200 GALLONS PER MINUTE FLOW RATE.

CEA CORPORATE ENVIRONMENTAL ADVISORS, INC.

Assessments – Remediation – Emergency Response
127 HARTWELL ST. W.BOYLSTON, MA.

SCALE: NOT TO SCALE		DR. BY: K. HAZEL
DATE: 9/16/11	APP. BY: CEG	JOB NO.: RI-0164-11

TREATMENT SYSTEM PROCESS & INSTRUMENTATION DIAGRAM (200 GPM SYSTEM)

AMERICAN BUILDING SERVICES
1057 MAIN STREET HANSON, MA

FIGURE 3B

MassDEP - Bureau of Waste Site Cleanup

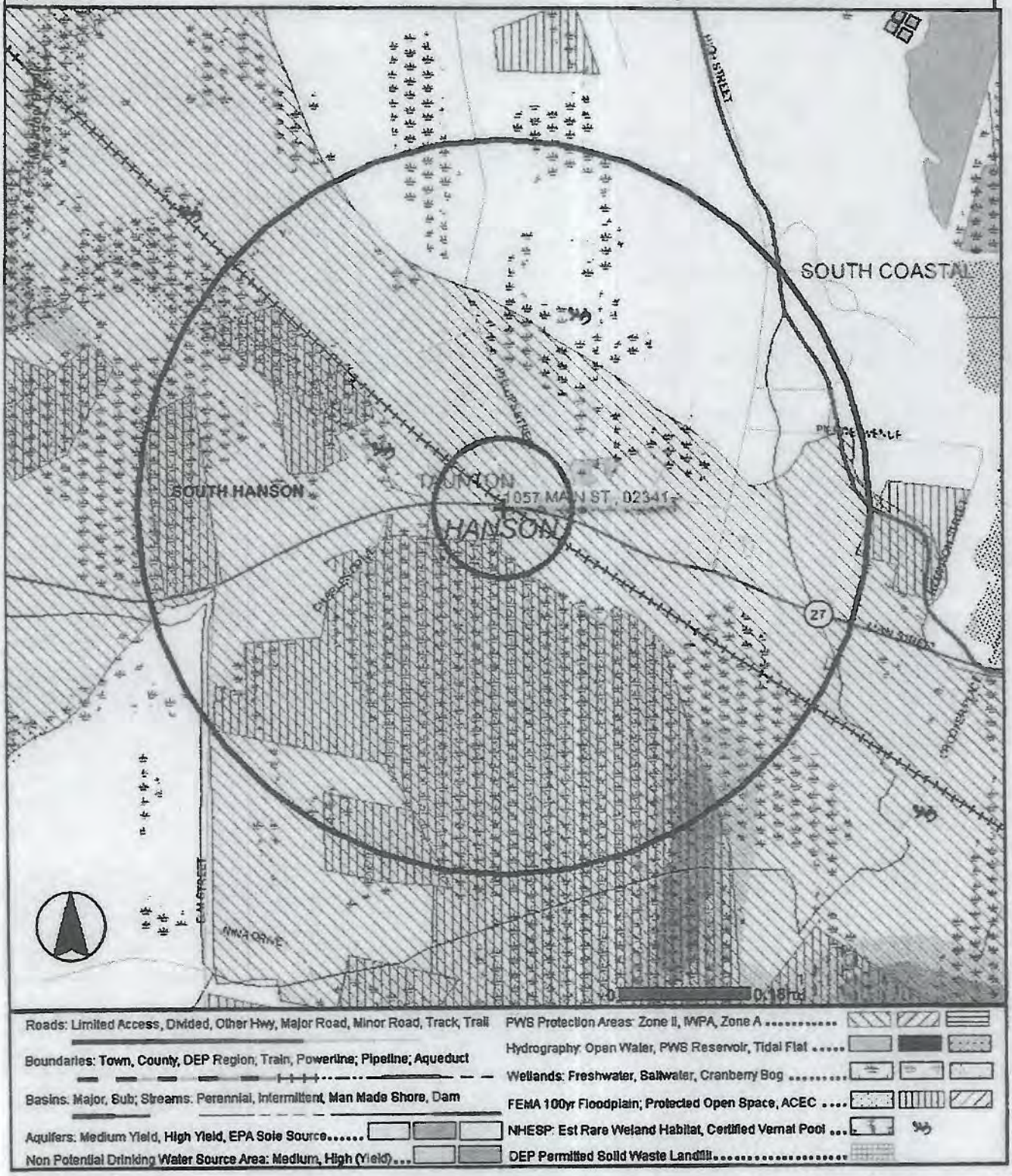
MCP Numerical Ranking System Map: 500 feet & 0.5 Mile Radii

Site Name:
American Builders
1057 Main Street
Hanson, MA
RTN:
NAD83 MA Coordinates:
251226mE, 866062mN

August 22, 2011

The information shown on this map is the best available at the date of printing. For more information please refer to www.mass.gov/mgis/massgis.htm

MassDEP
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region, Train, Powerline; Pipeline; Aqueduct

Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space, ACEC

NHESP: Est Rare Wetland Habitat, Certified Vernal Pool

DEP Permitted Solid Waste Landfill

Report Date:
25-Aug-11 13:18

☐ Final Report
☐ Re-Issued Report
☑ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

CEA, Inc.
1725 Mendon Rd, Suite 208
Cumberland, RI 02864
Attn: Ken McDermott

Project: American Bldg. - Hanson, MA
Project #: RI-0164-11

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB32449-01	Standing Water	Standing Water	27-Jul-11 15:00	28-Jul-11 17:15

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 33 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 4.8 degrees Celsius. The condition of these samples was further noted as refrigerated. The samples were transported on ice to the laboratory facility and the temperature was recorded at 1.8 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

EPA 200.7

Spikes:

1116260-MS1 *Source: SB32449-01*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Silver

Duplicates:

1116260-DUP1 *Source: SB32449-01*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Copper

The Reporting Limit has been raised to account for matrix interference.

Silver

Samples:

SB32449-01 *Standing Water*

Data confirmed with duplicate analysis.

Antimony

The Reporting Limit has been raised to account for matrix interference.

Silver

EPA 200.7/3005A/6010

Samples:

SB32449-01 *Standing Water*

Sample submitted with insufficient time to prepare within the method recommended holding time.

Filtration

EPA 245.1/7470A

Laboratory Control Samples:

1116261 BS

EPA 245.1/7470A

Laboratory Control Samples:

1116261 BS

Mercury percent recovery 156 (85-115) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

Standing Water

Spikes:

1116261-MS1 *Source: SB32449-01*

Analyte out of acceptance range in QC spike but no reportable concentration present in sample.

Mercury

Duplicates:

1114952-DUP1 *Source: SB32449-01*

RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.

Mercury

EPA 360.1

Samples:

SB32449-01 *Standing Water*

This sample was received outside the EPA recommended holding time for the analysis specified.

Dissolved Oxygen

EPA 624

Calibration:

1106031

Analyte quantified by quadratic equation type calibration.

Acetone
Vinyl chloride

This affected the following samples:

1115081-BLK1
1115081-BS1
1115081-BSD1
S105593-ICV1
S106779-CCV1
Standing Water

Hach 8167

Samples:

SB32449-01 *Standing Water*

The Reporting Limit has been raised to account for matrix interference.

Total Residual Chlorine

This sample was received outside the EPA recommended holding time for the analysis specified.

Total Residual Chlorine

SW846 8260C

SW846 8260C

Samples:

S106779-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,1,2-Trichlorotrifluoroethane (Freon 113) (-20.6%)
2,2-Dichloropropane (-26.0%)
Acrylonitrile (-21.2%)
Dichlorodifluoromethane (Freon12) (-26.9%)
Ethyl ether (-22.0%)
Tert-Butanol / butyl alcohol (-20.9%)
trans-1,2-Dichloroethene (-20.7%)

This affected the following samples:

1115081-BLK1
1115081-BS1
1115081-BSD1
Standing Water

SW846 8270D

Laboratory Control Samples:

1114993 BS/BSD

4-Nitrophenol percent recoveries (42/37) are outside individual acceptance criteria (40-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Standing Water

Benzidine percent recoveries (13/14) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Standing Water

Benzoic acid percent recoveries (27/23) are outside individual acceptance criteria (40-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Standing Water

Bis(2-chloroisopropyl)ether percent recoveries (40/37) are outside individual acceptance criteria (40-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Standing Water

N-Nitrosodimethylamine percent recoveries (27/25) are outside individual acceptance criteria (40-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Standing Water

Phenol percent recoveries (36/33) are outside individual acceptance criteria (40-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Standing Water

Pyridine percent recoveries (20/20) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Standing Water

1114993-BS1

Acid surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two acid surrogates.

2,4,6-Tribromophenol

SW846 8270D

Samples:

S106743-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Azobenzene/Diphenyldiazine (-25.9%)
Benzoic acid (-56.9%)
Bis(2-chloroisopropyl)ether (-38.1%)
Di-n-octyl phthalate (-22.6%)
Hexachlorobenzene (22.0%)
N-Nitrosodimethylamine (-71.5%)
Pyridine (-64.6%)

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

2,4-Dinitrophenol (-50.9%)
4,6-Dinitro-2-methylphenol (-38.9%)

This affected the following samples:

1114993-BLK1
1114993-BS1
1114993-BSD1
Standing Water

SB32449-01 *Standing Water*

The Reporting Limit has been raised to account for matrix interference.

The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

2-Fluorophenol
Phenol-d5

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Standing Water SB32449-01	RI-0164-11	Standing Water	27-Jul-11 15:00	28-Jul-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds												
Volatile Organic Compounds by GC/MS Prepared by method SW846 5030 Water MS												
67-64-1	Acetone	40.7		µg/l	10.0	1	EPA 624	01-Aug-11	02-Aug-11	JRO	1115081	
71-43-2	Benzene	BRL		µg/l	1.0	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	BRL		µg/l	1.0	1	"	"	"	"	"	X
75-25-2	Bromoform	BRL		µg/l	1.0	1	"	"	"	"	"	X
74-83-9	Bromomethane	BRL		µg/l	2.0	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	10.9		µg/l	10.0	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL		µg/l	1.0	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"	X
75-00-3	Chloroethane	BRL		µg/l	2.0	1	"	"	"	"	"	X
67-66-3	Chloroform	BRL		µg/l	1.0	1	"	"	"	"	"	X
74-87-3	Chloromethane	BRL		µg/l	2.0	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	BRL		µg/l	1.0	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	BRL		µg/l	1.0	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	BRL		µg/l	1.0	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	1.4		µg/l	1.0	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	BRL		µg/l	10.0	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	1.0	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0	1	"	"	"	"	"	
75-09-2	Methylene chloride	BRL		µg/l	10.0	1	"	"	"	"	"	X
100-42-5	Styrene	BRL		µg/l	1.0	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	X
108-88-3	Toluene	49.9		µg/l	1.0	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"	X
79-01-6	Trichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	BRL		µg/l	1.0	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	4.7		µg/l	2.0	1	"	"	"	"	"	X
95-47-6	o-Xylene	1.7		µg/l	1.0	1	"	"	"	"	"	X
Surrogate recoveries:												
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*108*			*70-130 %*		"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Standing Water SB32449-01	RI-0164-11	Standing Water	27-Jul-11 15:00	28-Jul-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds												
Volatile Organic Compounds Prepared by method SW846 5030 Water MS												
994-05-8	Tert-amyl methyl ether	BRL		µg/l	1.0	1	SW846 8260C	01-Aug-11	02-Aug-11	JRO	1115081	
75-65-0	Tert-Butanol / butyl alcohol	BRL		µg/l	10.0	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	BRL		µg/l	20.0	1	"	"	"	"	"	
Surrogate recoveries:												
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*		"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*		"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*		"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*108*			*70-130 %*		"	"	"	"	"	
Semivolatile Organic Compounds by GCMS												
Semivolatile Organic Compounds by SW846 8270C Prepared by method SW846 3510C			R01									
83-32-9	Acenaphthene	BRL		µg/l	29.4	5	SW846 8270D	29-Jul-11	01-Aug-11	ML	1114983	
208-96-8	Acenaphthylene	BRL		µg/l	29.4	5	"	"	"	"	"	
62-53-3	Aniline	BRL		µg/l	29.4	5	"	"	"	"	"	
120-12-7	Anthracene	BRL		µg/l	29.4	5	"	"	"	"	"	
103-33-3	Azobenzene/Diphenyldiazine	BRL		µg/l	29.4	5	"	"	"	"	"	
92-87-5	Benzidine	BRL		µg/l	29.4	5	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	BRL		µg/l	29.4	5	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	BRL		µg/l	29.4	5	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BRL		µg/l	29.4	5	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BRL		µg/l	29.4	5	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BRL		µg/l	29.4	5	"	"	"	"	"	
65-85-0	Benzoic acid	BRL		µg/l	29.4	5	"	"	"	"	"	
100-51-6	Benzyl alcohol	BRL		µg/l	29.4	5	"	"	"	"	"	
111-91-1	Bis(2-chloroethoxy)methane	BRL		µg/l	29.4	5	"	"	"	"	"	
111-44-4	Bis(2-chloroethyl)ether	BRL		µg/l	29.4	5	"	"	"	"	"	
108-60-1	Bis(2-chloroisopropyl)ether	BRL		µg/l	29.4	5	"	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	BRL		µg/l	29.4	5	"	"	"	"	"	
101-55-3	4-Bromophenyl phenyl ether	BRL		µg/l	29.4	5	"	"	"	"	"	
85-68-7	Butyl benzyl phthalate	BRL		µg/l	29.4	5	"	"	"	"	"	
86-74-8	Carbazole	BRL		µg/l	29.4	5	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	BRL		µg/l	29.4	5	"	"	"	"	"	
106-47-8	4-Chloroaniline	BRL		µg/l	29.4	5	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	BRL		µg/l	29.4	5	"	"	"	"	"	
95-57-8	2-Chlorophenol	BRL		µg/l	29.4	5	"	"	"	"	"	
7005-72-3	4-Chlorophenyl phenyl ether	BRL		µg/l	29.4	5	"	"	"	"	"	
218-01-9	Chrysene	BRL		µg/l	29.4	5	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/l	29.4	5	"	"	"	"	"	
132-64-9	Dibenzofuran	BRL		µg/l	29.4	5	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	29.4	5	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	29.4	5	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	29.4	5	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	BRL		µg/l	29.4	5	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	BRL		µg/l	29.4	5	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Standing Water SB32449-01	RI-0164-11	Standing Water	27-Jul-11 15:00	28-Jul-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS												
Semivolatile Organic Compounds by SW846 8270C Prepared by method SW846 3510C			R01									
84-66-2	Diethyl phthalate	BRL		µg/l	29.4	5	SW846 8270D	29-Jul-11	01-Aug-11	ML	1114993	
131-11-3	Dimethyl phthalate	BRL		µg/l	29.4	5	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	BRL		µg/l	29.4	5	"	"	"	"	"	
84-74-2	Di-n-butyl phthalate	BRL		µg/l	29.4	5	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	BRL		µg/l	29.4	5	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	BRL		µg/l	29.4	5	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	BRL		µg/l	29.4	5	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	BRL		µg/l	29.4	5	"	"	"	"	"	
117-84-0	Di-n-octyl phthalate	BRL		µg/l	29.4	5	"	"	"	"	"	
206-44-0	Fluoranthene	BRL		µg/l	29.4	5	"	"	"	"	"	
86-73-7	Fluorene	BRL		µg/l	29.4	5	"	"	"	"	"	
118-74-1	Hexachlorobenzene	BRL		µg/l	29.4	5	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL		µg/l	29.4	5	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	BRL		µg/l	29.4	5	"	"	"	"	"	
67-72-1	Hexachloroethane	BRL		µg/l	29.4	5	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/l	29.4	5	"	"	"	"	"	
78-59-1	Isophorone	BRL		µg/l	29.4	5	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	BRL		µg/l	29.4	5	"	"	"	"	"	
95-48-7	2-Methylphenol	BRL		µg/l	29.4	5	"	"	"	"	"	
108-39-4, 106-44-5	3 & 4-Methylphenol	BRL		µg/l	58.8	5	"	"	"	"	"	
91-20-3	Naphthalene	BRL		µg/l	29.4	5	"	"	"	"	"	
88-74-4	2-Nitroaniline	BRL		µg/l	29.4	5	"	"	"	"	"	
99-09-2	3-Nitroaniline	BRL		µg/l	29.4	5	"	"	"	"	"	
100-01-6	4-Nitroaniline	BRL		µg/l	118	5	"	"	"	"	"	
98-95-3	Nitrobenzene	BRL		µg/l	29.4	5	"	"	"	"	"	
88-75-5	2-Nitrophenol	BRL		µg/l	29.4	5	"	"	"	"	"	
100-02-7	4-Nitrophenol	BRL		µg/l	118	5	"	"	"	"	"	
62-75-9	N-Nitrosodimethylamine	BRL		µg/l	29.4	5	"	"	"	"	"	
621-64-7	N-Nitrosodi-n-propylamine	BRL		µg/l	29.4	5	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	BRL		µg/l	29.4	5	"	"	"	"	"	
87-86-5	Pentachlorophenol	BRL		µg/l	118	5	"	"	"	"	"	
85-01-8	Phenanthrene	BRL		µg/l	29.4	5	"	"	"	"	"	
108-95-2	Phenol	BRL		µg/l	29.4	5	"	"	"	"	"	
129-00-0	Pyrene	BRL		µg/l	29.4	5	"	"	"	"	"	
110-86-1	Pyridine	BRL		µg/l	29.4	5	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/l	29.4	5	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	BRL		µg/l	29.4	5	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	BRL		µg/l	29.4	5	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	BRL		µg/l	29.4	5	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	BRL		µg/l	29.4	5	"	"	"	"	"	
95-94-3	1,2,4,5-Tetrachlorobenzene	BRL		µg/l	29.4	5	"	"	"	"	"	
Surrogate recoveries:												
321-60-8	*2-Fluorobiphenyl*	*87*			*30-130 %*		"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*10*	S04		*15-110 %*		"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Standing Water SB32449-01	RI-0164-11	Standing Water	27-Jul-11 15:00	28-Jul-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS												
Semivolatile Organic Compounds by SW846 8270C Prepared by method SW846 3510C			R01									
4165-60-0	*Nitrobenzene-d5*	*75*			*30-130 %*		SW846 8270D	29-Jul-11	01-Aug-11	ML	1114993	
4165-62-2	*Phenol-d5*	*14*	SO4		*15-110 %*		"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*83*			*30-130 %*		"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*24*			*15-110 %*		"	"	"	"	"	
Extractable Petroleum Hydrocarbons												
	Oil & Grease	17.5	OG	mg/l	1.00	1	EPA 1664A	29-Jul-11	30-Jul-11	JK	1114921	X
Total Metals by EPA 200/6000 Series Methods												
	Preservation	Field Preserved		N/A		1	EPA 200/6000 methods	29-Jul-11	29-Jul-11	EAZ	1114865	
Total Metals by EPA 200 Series Methods												
7440-22-4	Silver	BRL		mg/l	0.0050	1	EPA 200.7	29-Jul-11	31-Jul-11	EDT	1114951	X
7440-38-2	Arsenic	0.0188		mg/l	0.0040	1	"	"	"	"	"	X
7440-41-7	Beryllium	BRL		mg/l	0.0020	1	"	"	03-Aug-11	"	"	X
7440-43-9	Cadmium	0.0184		mg/l	0.0025	1	"	"	31-Jul-11	"	"	X
7440-47-3	Chromium	0.0832		mg/l	0.0050	1	"	"	"	"	"	X
7440-50-8	Copper	0.206		mg/l	0.0050	1	"	"	"	"	"	X
7439-97-6	Mercury	0.00113		mg/l	0.00030	1	EPA 245.1/7470A	"	01-Aug-11	EDT	1114952	X
7440-02-0	Nickel	0.0580		mg/l	0.0050	1	EPA 200.7	"	31-Jul-11	EDT	1114951	X
7439-92-1	Lead	1.32		mg/l	0.0075	1	"	"	"	"	"	X
7440-36-0	Antimony	0.0164	V11	mg/l	0.0060	1	"	"	"	"	"	X
7782-49-2	Selenium	BRL		mg/l	0.0150	1	"	"	"	"	"	X
7440-28-0	Thallium	BRL		mg/l	0.0050	1	"	"	"	"	"	X
7440-66-6	Zinc	4.74		mg/l	0.0050	1	"	"	"	"	"	X
Soluble Metals by EPA 200/6000 Series Methods												
	Filtration	Lab Filtered	HT1	N/A		1	EPA 200.7/3005A/6010	12-Aug-11 18:30	12-Aug-11 18:30	JS	1116167	
Soluble Metals by EPA 200 Series Methods												
7440-22-4	Silver	BRL	R01	mg/l	0.0060	1	EPA 200.7	15-Aug-11	16-Aug-11	ARF	1116260	X
7440-38-2	Arsenic	BRL		mg/l	0.0040	1	"	"	"	"	"	X
7440-41-7	Beryllium	BRL		mg/l	0.0020	1	"	"	"	"	"	X
7440-43-9	Cadmium	BRL		mg/l	0.0025	1	"	"	"	"	"	X
7440-47-3	Chromium	BRL		mg/l	0.0050	1	"	"	"	"	"	X
7440-50-8	Copper	BRL		mg/l	0.0050	1	"	"	"	"	"	X
7439-97-6	Mercury	BRL		mg/l	0.00020	1	EPA 245.1/7470A	"	18-Aug-11	EDT	1116261	X
7440-02-0	Nickel	BRL		mg/l	0.0050	1	EPA 200.7	"	16-Aug-11	ARF	1116260	X
7439-92-1	Lead	BRL		mg/l	0.0075	1	"	"	"	"	"	X
7440-36-0	Antimony	BRL		mg/l	0.0060	1	"	"	"	"	"	X
7782-49-2	Selenium	BRL		mg/l	0.0150	1	"	"	"	"	"	X
7440-28-0	Thallium	BRL		mg/l	0.005	1	"	"	"	"	"	X
7440-66-6	Zinc	BRL		mg/l	0.0450	1	"	"	"	"	"	X
General Chemistry Parameters												
	Hardness	240		mg/l CaCO3	0.291	1	SM 2340B	29-Jul-11	31-Jul-11	edt	1114951	X
	Nitrate/Nitrite as N	BRL		mg/l	0.0100	1	EPA 353.2	02-Aug-11	02-Aug-11	ELE	1115184	X
7723-14-0	Phosphorus as P	0.410		mg/l	0.0100	1	ASTM D515-88(A)	03-Aug-11	03-Aug-11	TDD	1115351	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Standing Water SB32449-01	RI-0164-11	Standing Water	27-Jul-11 15:00	28-Jul-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters												
	Biochemical Oxygen Demand (5-day)	31.0		mg/l	6.00	1	SM5210B	29-Jul-11 13:41	03-Aug-11 14:05	GMA	1114981	X
57-12-5	Cyanide (total)	0.00634		mg/l	0.00500	1	EPA 335.4 / SW846 9012B	29-Jul-11	29-Jul-11	eemon	1114948	X
	Dissolved Oxygen	BRL	HT2	mg/l	1.00	1	EPA 360.1	28-Jul-11 19:30	28-Jul-11 19:30	TDD	1114927	
	pH	6.68	pH	pH Units		1	ASTM D 1293-99B	28-Jul-11 18:45	28-Jul-11 17:30	BD	1114917	X
7782-50-5	Total Residual Chlorine	BRL	HT2, R01,CIHT	mg/l	1.00	1	Hach 8167	28-Jul-11 19:24	28-Jul-11 19:24	TDD	1114926	X
1-01-0	Total Dissolved Solids	400		mg/l	100	1	SM2540C	02-Aug-11	02-Aug-11	BD	1115190	X
	Total Suspended Solids	380		mg/l	50.0	1	SM2540D	29-Jul-11	29-Jul-11	BD	1115002	X
Subcontracted Analyses												
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT0*												
7664-41-7	Ammonia as Nitrogen	2.4		mg/L	0.4	1	E350.1	04-Aug-11 16:36	04-Aug-11 16:36	MACT0	181977A	
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT0*												
	Nitrogen Tot Kjeldahl	15		mg/L	2.0	1	E351.1	*	*	MACT0	181977B	
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT0*												
84743-03-9	Phenolics	0.142		mg/L	0.015	1	E420.4	04-Aug-11	04-Aug-11	MACT0	182115A	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115081 - SW846 5030 Water MS										
Blank (1115081-BLK1)					Prepared: 01-Aug-11 Analyzed: 02-Aug-11					
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL		µg/l	1.0						
Acetone	BRL		µg/l	10.0						
Acetone	BRL		µg/l	10.0						
Acrylonitrile	BRL		µg/l	0.5						
Benzene	BRL		µg/l	1.0						
Benzene	BRL		µg/l	1.0						
Bromobenzene	BRL		µg/l	1.0						
Bromochloromethane	BRL		µg/l	1.0						
Bromodichloromethane	BRL		µg/l	0.5						
Bromodichloromethane	BRL		µg/l	1.0						
Bromoform	BRL		µg/l	1.0						
Bromoform	BRL		µg/l	1.0						
Bromomethane	BRL		µg/l	2.0						
Bromomethane	BRL		µg/l	2.0						
2-Butanone (MEK)	BRL		µg/l	10.0						
2-Butanone (MEK)	BRL		µg/l	10.0						
n-Butylbenzene	BRL		µg/l	1.0						
sec-Butylbenzene	BRL		µg/l	1.0						
tert-Butylbenzene	BRL		µg/l	1.0						
Carbon disulfide	BRL		µg/l	2.0						
Carbon tetrachloride	BRL		µg/l	1.0						
Carbon tetrachloride	BRL		µg/l	1.0						
Chlorobenzene	BRL		µg/l	1.0						
Chlorobenzene	BRL		µg/l	1.0						
Chloroethane	BRL		µg/l	2.0						
Chloroethane	BRL		µg/l	2.0						
Chloroform	BRL		µg/l	1.0						
Chloroform	BRL		µg/l	1.0						
Chloromethane	BRL		µg/l	2.0						
Chloromethane	BRL		µg/l	2.0						
2-Chlorotoluene	BRL		µg/l	1.0						
4-Chlorotoluene	BRL		µg/l	1.0						
1,2-Dibromo-3-chloropropane	BRL		µg/l	2.0						
Dibromochloromethane	BRL		µg/l	1.0						
Dibromochloromethane	BRL		µg/l	0.5						
1,2-Dibromoethane (EDB)	BRL		µg/l	0.5						
Dibromomethane	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	1.0						
1,3-Dichlorobenzene	BRL		µg/l	1.0						
1,3-Dichlorobenzene	BRL		µg/l	1.0						
1,4-Dichlorobenzene	BRL		µg/l	1.0						
1,4-Dichlorobenzene	BRL		µg/l	1.0						
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
1,1-Dichloroethane	BRL		µg/l	1.0						
1,1-Dichloroethane	BRL		µg/l	1.0						
1,2-Dichloroethane	BRL		µg/l	1.0						
1,2-Dichloroethane	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	1.0						
cis-1,2-Dichloroethene	BRL		µg/l	1.0						
cis-1,2-Dichloroethene	BRL		µg/l	1.0						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115081 - SW846 5030 Water MS										
Blank (1115081-BLK1)					Prepared: 01-Aug-11 Analyzed: 02-Aug-11					
trans-1,2-Dichloroethene	BRL		µg/l	1.0						
trans-1,2-Dichloroethene	BRL		µg/l	1.0						
1,2-Dichloropropane	BRL		µg/l	1.0						
1,2-Dichloropropane	BRL		µg/l	1.0						
1,3-Dichloropropane	BRL		µg/l	1.0						
2,2-Dichloropropane	BRL		µg/l	1.0						
1,1-Dichloropropene	BRL		µg/l	1.0						
cis-1,3-Dichloropropene	BRL		µg/l	1.0						
cis-1,3-Dichloropropene	BRL		µg/l	0.5						
trans-1,3-Dichloropropene	BRL		µg/l	1.0						
trans-1,3-Dichloropropene	BRL		µg/l	0.5						
Ethylbenzene	BRL		µg/l	1.0						
Ethylbenzene	BRL		µg/l	1.0						
Hexachlorobutadiene	BRL		µg/l	0.5						
2-Hexanone (MBK)	BRL		µg/l	10.0						
2-Hexanone (MBK)	BRL		µg/l	10.0						
Isopropylbenzene	BRL		µg/l	1.0						
4-Isopropyltoluene	BRL		µg/l	1.0						
Methyl tert-butyl ether	BRL		µg/l	1.0						
Methyl tert-butyl ether	BRL		µg/l	1.0						
4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0						
4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0						
Methylene chloride	BRL		µg/l	2.0						
Methylene chloride	BRL		µg/l	10.0						
Naphthalene	BRL		µg/l	1.0						
n-Propylbenzene	BRL		µg/l	1.0						
Styrene	BRL		µg/l	1.0						
Styrene	BRL		µg/l	1.0						
1,1,1,2-Tetrachloroethane	BRL		µg/l	1.0						
1,1,2,2-Tetrachloroethane	BRL		µg/l	0.5						
1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0						
Tetrachloroethene	BRL		µg/l	1.0						
Tetrachloroethene	BRL		µg/l	1.0						
Toluene	BRL		µg/l	1.0						
Toluene	BRL		µg/l	1.0						
1,2,3-Trichlorobenzene	BRL		µg/l	1.0						
1,2,4-Trichlorobenzene	BRL		µg/l	1.0						
1,3,5-Trichlorobenzene	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	1.0						
1,1,2-Trichloroethane	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	1.0						
1,1,2-Trichloroethane	BRL		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0						
1,2,3-Trichloropropane	BRL		µg/l	1.0						
1,2,4-Trimethylbenzene	BRL		µg/l	1.0						
1,3,5-Trimethylbenzene	BRL		µg/l	1.0						
Vinyl chloride	BRL		µg/l	1.0						
m,p-Xylene	BRL		µg/l	2.0						
Vinyl chloride	BRL		µg/l	1.0						

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115081 - SW846 5030 Water MS										
Blank (1115081-BLK1)						Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
m,p-Xylene	BRL		µg/l	2.0						
o-Xylene	BRL		µg/l	1.0						
o-Xylene	BRL		µg/l	1.0						
Tetrahydrofuran	BRL		µg/l	2.0						
Ethyl ether	BRL		µg/l	1.0						
Tert-amyl methyl ether	BRL		µg/l	1.0						
Ethyl tert-butyl ether	BRL		µg/l	1.0						
Di-isopropyl ether	BRL		µg/l	1.0						
Tert-Butanol / butyl alcohol	BRL		µg/l	10.0						
1,4-Dioxane	BRL		µg/l	20.0						
trans-1,4-Dichloro-2-butene	BRL		µg/l	5.0						
Ethanol	BRL		µg/l	400						
Surrogate: 4-Bromofluorobenzene	*49.2*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*49.2*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*50.6*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: Toluene-d8	*50.6*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*55.4*		µg/l		*50.0*		*111*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*55.4*		µg/l		*50.0*		*111*	*70-130*		
Surrogate: Dibromofluoromethane	*52.7*		µg/l		*50.0*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*52.7*		µg/l		*50.0*		*105*	*70-130*		
LCS (1115081-BS1)						Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
1,1,2-Trichlorotrifluoroethane (Freon 113)	17.9		µg/l		20.0		90	70-130		
Acetone	17.0		µg/l		20.0		85	70-130		
Acetone	17.0		µg/l		20.0		85	70-130		
Acrylonitrile	17.5		µg/l		20.0		88	70-130		
Benzene	19.5		µg/l		20.0		98	70-130		
Benzene	19.5		µg/l		20.0		98	70-130		
Bromobenzene	19.9		µg/l		20.0		99	70-130		
Bromochloromethane	20.2		µg/l		20.0		101	70-130		
Bromodichloromethane	20.9		µg/l		20.0		104	35-155		
Bromodichloromethane	20.9		µg/l		20.0		104	70-130		
Bromoform	23.1		µg/l		20.0		116	45-169		
Bromoform	23.1		µg/l		20.0		116	70-130		
Bromomethane	23.4		µg/l		20.0		117	1-242		
Bromomethane	23.4		µg/l		20.0		117	70-130		
2-Butanone (MEK)	19.8		µg/l		20.0		99	70-130		
2-Butanone (MEK)	19.8		µg/l		20.0		99	70-130		
n-Butylbenzene	19.8		µg/l		20.0		99	70-130		
sec-Butylbenzene	21.8		µg/l		20.0		109	70-130		
tert-Butylbenzene	22.8		µg/l		20.0		114	70-130		
Carbon disulfide	17.9		µg/l		20.0		90	70-130		
Carbon tetrachloride	21.7		µg/l		20.0		109	70-140		
Carbon tetrachloride	21.7		µg/l		20.0		109	70-130		
Chlorobenzene	18.4		µg/l		20.0		92	70-130		
Chlorobenzene	18.4		µg/l		20.0		92	70-130		
Chloroethane	18.3		µg/l		20.0		91	70-130		
Chloroethane	18.3		µg/l		20.0		91	14-230		
Chloroform	19.3		µg/l		20.0		96	70-130		
Chloroform	19.3		µg/l		20.0		96	51-138		
Chloromethane	21.1		µg/l		20.0		106	1-273		
Chloromethane	21.1		µg/l		20.0		106	70-130		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115081 - SW846 5030 Water MS										
LCS (1115081-BS1)						Prepared: 01-Aug-11	Analyzed: 02-Aug-11			
2-Chlorotoluene	20.6		µg/l		20.0		103	70-130		
4-Chlorotoluene	21.5		µg/l		20.0		108	70-130		
1,2-Dibromo-3-chloropropane	20.6		µg/l		20.0		103	70-130		
Dibromochloromethane	22.1		µg/l		20.0		111	53-149		
Dibromochloromethane	22.1		µg/l		20.0		111	70-130		
1,2-Dibromoethane (EDB)	20.4		µg/l		20.0		102	70-130		
Dibromomethane	19.0		µg/l		20.0		95	70-130		
1,2-Dichlorobenzene	19.3		µg/l		20.0		97	70-130		
1,2-Dichlorobenzene	19.3		µg/l		20.0		97	18-190		
1,3-Dichlorobenzene	20.1		µg/l		20.0		101	59-156		
1,3-Dichlorobenzene	20.1		µg/l		20.0		101	70-130		
1,4-Dichlorobenzene	18.0		µg/l		20.0		90	70-130		
1,4-Dichlorobenzene	18.0		µg/l		20.0		90	18-190		
Dichlorodifluoromethane (Freon12)	17.2		µg/l		20.0		86	70-130		
1,1-Dichloroethane	22.8		µg/l		20.0		114	59-155		
1,1-Dichloroethane	22.8		µg/l		20.0		114	70-130		
1,2-Dichloroethane	20.2		µg/l		20.0		101	70-130		
1,2-Dichloroethane	20.2		µg/l		20.0		101	49-155		
1,1-Dichloroethene	17.9		µg/l		20.0		89	70-130		
1,1-Dichloroethene	17.9		µg/l		20.0		89	70-130		
cis-1,2-Dichloroethene	19.7		µg/l		20.0		99	70-130		
cis-1,2-Dichloroethene	19.7		µg/l		20.0		99	70-130		
trans-1,2-Dichloroethene	17.7		µg/l		20.0		89	54-156		
trans-1,2-Dichloroethene	17.7		µg/l		20.0		88	70-130		
1,2-Dichloropropane	18.4		µg/l		20.0		92	70-130		
1,2-Dichloropropane	18.4		µg/l		20.0		92	1-210		
1,3-Dichloropropane	18.6		µg/l		20.0		93	70-130		
2,2-Dichloropropane	22.1		µg/l		20.0		110	70-130		
1,1-Dichloropropene	20.6		µg/l		20.0		103	70-130		
cis-1,3-Dichloropropene	21.1		µg/l		20.0		106	1-227		
cis-1,3-Dichloropropene	21.1		µg/l		20.0		106	70-130		
trans-1,3-Dichloropropene	22.8		µg/l		20.0		114	17-183		
trans-1,3-Dichloropropene	22.8		µg/l		20.0		114	70-130		
Ethylbenzene	20.1		µg/l		20.0		101	37-162		
Ethylbenzene	20.1		µg/l		20.0		101	70-130		
Hexachlorobutadiene	20.9		µg/l		20.0		104	70-130		
2-Hexanone (MBK)	19.4		µg/l		20.0		97	70-130		
2-Hexanone (MBK)	19.4		µg/l		20.0		97	70-130		
Isopropylbenzene	20.2		µg/l		20.0		101	70-130		
4-Isopropyltoluene	20.0		µg/l		20.0		100	70-130		
Methyl tert-butyl ether	23.2		µg/l		20.0		116	70-130		
Methyl tert-butyl ether	23.2		µg/l		20.0		116	70-130		
4-Methyl-2-pentanone (MIBK)	19.4		µg/l		20.0		97	70-130		
4-Methyl-2-pentanone (MIBK)	19.4		µg/l		20.0		97	70-130		
Methylene chloride	20.8		µg/l		20.0		104	1-221		
Methylene chloride	20.8		µg/l		20.0		104	70-130		
Naphthalene	19.1		µg/l		20.0		95	70-130		
n-Propylbenzene	20.7		µg/l		20.0		104	70-130		
Styrene	21.6		µg/l		20.0		108	70-130		
Styrene	21.6		µg/l		20.0		108	70-130		
1,1,1,2-Tetrachloroethane	21.6		µg/l		20.0		108	70-130		
1,1,2,2-Tetrachloroethane	19.8		µg/l		20.0		99	46-157		

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115081 - SW846 5030 Water MS										
LCS (1115081-BS1)						Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
1,1,2,2-Tetrachloroethane	19.8		µg/l		20.0		99	70-130		
Tetrachloroethene	20.7		µg/l		20.0		103	70-130		
Tetrachloroethene	20.7		µg/l		20.0		103	64-148		
Toluene	19.1		µg/l		20.0		96	70-130		
Toluene	19.1		µg/l		20.0		96	70-130		
1,2,3-Trichlorobenzene	21.5		µg/l		20.0		108	70-130		
1,2,4-Trichlorobenzene	21.0		µg/l		20.0		105	70-130		
1,1,1-Trichloroethane	21.9		µg/l		20.0		109	52-162		
1,3,5-Trichlorobenzene	20.2		µg/l		20.0		101	70-130		
1,1,2-Trichloroethane	19.4		µg/l		20.0		97	52-150		
1,1,1-Trichloroethane	21.9		µg/l		20.0		109	70-130		
Trichloroethene	19.1		µg/l		20.0		96	71-157		
1,1,2-Trichloroethane	19.4		µg/l		20.0		97	70-130		
Trichloroethene	19.1		µg/l		20.0		96	70-130		
Trichlorofluoromethane (Freon 11)	20.0		µg/l		20.0		100	17-181		
Trichlorofluoromethane (Freon 11)	20.0		µg/l		20.0		100	70-130		
1,2,3-Trichloropropane	18.8		µg/l		20.0		94	70-130		
1,2,4-Trimethylbenzene	23.0		µg/l		20.0		115	70-130		
1,3,5-Trimethylbenzene	22.5		µg/l		20.0		112	70-130		
Vinyl chloride	19.8		µg/l		20.0		99	1-251		
Vinyl chloride	19.8		µg/l		20.0		99	70-130		
m,p-Xylene	42.4		µg/l		40.0		106	70-130		
m,p-Xylene	42.4		µg/l		40.0		106	70-130		
o-Xylene	21.4		µg/l		20.0		107	70-130		
o-Xylene	21.4		µg/l		20.0		107	70-130		
Tetrahydrofuran	18.7		µg/l		20.0		93	70-130		
Ethyl ether	17.2		µg/l		20.0		86	70-130		
Tert-amyl methyl ether	20.5		µg/l		20.0		103	70-130		
Ethyl tert-butyl ether	21.0		µg/l		20.0		105	70-130		
Di-isopropyl ether	19.6		µg/l		20.0		98	70-130		
Tert-Butanol / butyl alcohol	181		µg/l		200		91	70-130		
1,4-Dioxane	207		µg/l		200		103	70-130		
trans-1,4-Dichloro-2-butene	17.5		µg/l		20.0		87	70-130		
Ethanol	361		µg/l		400		95	70-130		
Surrogate: 4-Bromofluorobenzene	*51.8*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*51.8*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.6*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.6*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: Dibromofluoromethane	*52.9*		µg/l		*50.0*		*106*	*70-130*		
Surrogate: Dibromofluoromethane	*52.9*		µg/l		*50.0*		*106*	*70-130*		
LCS Dup (1115081-BSD1)						Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
1,1,2-Trichlorotrifluoroethane (Freon 113)	17.4		µg/l		20.0		87	70-130	3	25
Acetone	16.1		µg/l		20.0		80	70-130	5	50
Acetone	16.1		µg/l		20.0		80	70-130	5	30
Acrylonitrile	17.3		µg/l		20.0		86	70-130	2	25
Benzene	18.9		µg/l		20.0		95	70-130	3	30
Benzene	18.9		µg/l		20.0		95	70-130	3	25
Bromobenzene	19.5		µg/l		20.0		98	70-130	2	25
Bromochloromethane	19.9		µg/l		20.0		100	70-130	2	25

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115081 - SW846 5030 Water MS										
LCS Dup (1115081-BSD1)					Prepared: 01-Aug-11 Analyzed: 02-Aug-11					
Bromodichloromethane	20.6		µg/l		20.0		103	70-130	2	25
Bromodichloromethane	20.6		µg/l		20.0		103	35-155	2	30
Bromoform	22.5		µg/l		20.0		113	45-169	3	30
Bromoform	22.5		µg/l		20.0		113	70-130	3	25
Bromomethane	23.5		µg/l		20.0		117	70-130	0.1	50
Bromomethane	23.5		µg/l		20.0		117	1-242	0.1	30
2-Butanone (MEK)	19.8		µg/l		20.0		99	70-130	0.2	50
2-Butanone (MEK)	19.8		µg/l		20.0		99	70-130	0.2	30
n-Butylbenzene	19.1		µg/l		20.0		95	70-130	4	25
sec-Butylbenzene	21.0		µg/l		20.0		105	70-130	4	25
tert-Butylbenzene	22.0		µg/l		20.0		110	70-130	4	25
Carbon disulfide	17.0		µg/l		20.0		85	70-130	6	25
Carbon tetrachloride	20.9		µg/l		20.0		104	70-130	4	25
Carbon tetrachloride	20.9		µg/l		20.0		104	70-140	4	30
Chlorobenzene	17.9		µg/l		20.0		89	70-130	3	25
Chlorobenzene	17.9		µg/l		20.0		89	70-130	3	30
Chloroethane	17.6		µg/l		20.0		88	70-130	4	50
Chloroethane	17.6		µg/l		20.0		88	14-230	4	30
Chloroform	18.7		µg/l		20.0		93	70-130	3	25
Chloroform	18.7		µg/l		20.0		93	51-138	3	30
Chloromethane	20.9		µg/l		20.0		105	1-273	1	30
Chloromethane	20.9		µg/l		20.0		105	70-130	1	25
2-Chlorotoluene	20.2		µg/l		20.0		101	70-130	2	25
4-Chlorotoluene	20.9		µg/l		20.0		104	70-130	3	25
1,2-Dibromo-3-chloropropane	20.4		µg/l		20.0		102	70-130	0.8	25
Dibromochloromethane	21.7		µg/l		20.0		108	70-130	2	50
Dibromochloromethane	21.7		µg/l		20.0		108	53-149	2	30
1,2-Dibromoethane (EDB)	20.0		µg/l		20.0		100	70-130	2	25
Dibromomethane	19.3		µg/l		20.0		96	70-130	1	25
1,2-Dichlorobenzene	18.6		µg/l		20.0		93	18-190	4	30
1,2-Dichlorobenzene	18.6		µg/l		20.0		93	70-130	4	25
1,3-Dichlorobenzene	19.7		µg/l		20.0		98	59-156	2	30
1,3-Dichlorobenzene	19.7		µg/l		20.0		98	70-130	2	25
1,4-Dichlorobenzene	17.5		µg/l		20.0		88	18-190	3	30
1,4-Dichlorobenzene	17.5		µg/l		20.0		88	70-130	3	25
Dichlorodifluoromethane (Freon12)	16.2		µg/l		20.0		81	70-130	6	50
1,1-Dichloroethane	22.2		µg/l		20.0		111	59-155	3	30
1,1-Dichloroethane	22.2		µg/l		20.0		111	70-130	3	25
1,2-Dichloroethane	19.9		µg/l		20.0		100	49-155	2	30
1,2-Dichloroethane	19.9		µg/l		20.0		100	70-130	2	25
1,1-Dichloroethene	17.2		µg/l		20.0		86	70-130	4	25
1,1-Dichloroethene	17.2		µg/l		20.0		86	70-130	4	30
cis-1,2-Dichloroethene	19.1		µg/l		20.0		96	70-130	3	25
cis-1,2-Dichloroethene	19.1		µg/l		20.0		96	70-130	3	30
trans-1,2-Dichloroethene	17.2		µg/l		20.0		86	70-130	3	25
trans-1,2-Dichloroethene	17.2		µg/l		20.0		86	54-156	3	30
1,2-Dichloropropane	18.2		µg/l		20.0		91	1-210	1	30
1,2-Dichloropropane	18.2		µg/l		20.0		91	70-130	1	25
1,3-Dichloropropane	18.4		µg/l		20.0		92	70-130	1	25
2,2-Dichloropropane	20.8		µg/l		20.0		104	70-130	6	25
1,1-Dichloropropene	19.9		µg/l		20.0		99	70-130	3	25
cis-1,3-Dichloropropene	20.7		µg/l		20.0		103	70-130	2	25

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115081 - SW846 5030 Water MS										
LCS Dup (1115081-BSD1)					Prepared: 01-Aug-11 Analyzed: 02-Aug-11					
cis-1,3-Dichloropropene	20.7		µg/l		20.0		103	1-227	2	30
trans-1,3-Dichloropropene	22.2		µg/l		20.0		111	70-130	3	25
trans-1,3-Dichloropropene	22.2		µg/l		20.0		111	17-183	3	30
Ethylbenzene	19.6		µg/l		20.0		98	37-162	3	30
Ethylbenzene	19.6		µg/l		20.0		98	70-130	3	25
Hexachlorobutadiene	19.6		µg/l		20.0		98	70-130	6	50
2-Hexanone (MBK)	19.6		µg/l		20.0		98	70-130	1	25
2-Hexanone (MBK)	19.6		µg/l		20.0		98	70-130	1	30
Isopropylbenzene	19.6		µg/l		20.0		98	70-130	3	25
4-Isopropyltoluene	19.2		µg/l		20.0		96	70-130	4	25
Methyl tert-butyl ether	23.3		µg/l		20.0		116	70-130	0.3	30
Methyl tert-butyl ether	23.3		µg/l		20.0		116	70-130	0.3	25
4-Methyl-2-pentanone (MIBK)	19.7		µg/l		20.0		99	70-130	2	50
4-Methyl-2-pentanone (MIBK)	19.7		µg/l		20.0		99	70-130	2	30
Methylene chloride	20.7		µg/l		20.0		103	70-130	0.4	25
Methylene chloride	20.7		µg/l		20.0		103	1-221	0.4	30
Naphthalene	18.2		µg/l		20.0		91	70-130	5	25
n-Propylbenzene	20.1		µg/l		20.0		101	70-130	3	25
Styrene	21.0		µg/l		20.0		105	70-130	3	25
Styrene	21.0		µg/l		20.0		105	70-130	3	30
1,1,1,2-Tetrachloroethane	20.8		µg/l		20.0		104	70-130	4	25
1,1,2,2-Tetrachloroethene	19.7		µg/l		20.0		98	46-157	0.8	30
1,1,2,2-Tetrachloroethane	19.7		µg/l		20.0		98	70-130	0.8	25
Tetrachloroethene	19.9		µg/l		20.0		99	70-130	4	25
Tetrachloroethene	19.9		µg/l		20.0		99	64-148	4	30
Toluene	18.5		µg/l		20.0		93	70-130	3	25
Toluene	18.5		µg/l		20.0		93	70-130	3	30
1,2,3-Trichlorobenzene	20.6		µg/l		20.0		103	70-130	4	25
1,2,4-Trichlorobenzene	20.1		µg/l		20.0		100	70-130	5	25
1,1,1-Trichloroethane	21.4		µg/l		20.0		107	52-162	2	30
1,3,5-Trichlorobenzene	19.6		µg/l		20.0		98	70-130	3	25
1,1,2-Trichloroethane	19.0		µg/l		20.0		95	52-150	2	30
1,1,1-Trichloroethane	21.4		µg/l		20.0		107	70-130	2	25
1,1,2-Trichloroethane	19.0		µg/l		20.0		95	70-130	2	25
Trichloroethene	18.4		µg/l		20.0		92	71-157	4	30
Trichloroethene	18.4		µg/l		20.0		92	70-130	4	25
Trichlorofluoromethane (Freon 11)	19.2		µg/l		20.0		96	17-181	4	30
Trichlorofluoromethane (Freon 11)	19.2		µg/l		20.0		96	70-130	4	50
1,2,3-Trichloropropane	18.6		µg/l		20.0		93	70-130	1	25
1,2,4-Trimethylbenzene	22.3		µg/l		20.0		112	70-130	3	25
Vinyl chloride	19.4		µg/l		20.0		97	1-251	2	30
1,3,5-Trimethylbenzene	21.9		µg/l		20.0		109	70-130	3	25
m,p-Xylene	40.9		µg/l		40.0		102	70-130	4	30
Vinyl chloride	19.4		µg/l		20.0		97	70-130	2	25
o-Xylene	20.6		µg/l		20.0		103	70-130	4	30
m,p-Xylene	40.9		µg/l		40.0		102	70-130	4	25
o-Xylene	20.6		µg/l		20.0		103	70-130	4	25
Tetrahydrofuran	19.1		µg/l		20.0		96	70-130	2	25
Ethyl ether	16.9		µg/l		20.0		85	70-130	1	50
Tert-amyl methyl ether	20.3		µg/l		20.0		101	70-130	1	25
Ethyl tert-butyl ether	21.0		µg/l		20.0		105	70-130	0.3	25
Di-isopropyl ether	19.3		µg/l		20.0		96	70-130	2	25

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115081 - SW846 5030 Water MS										
LCS Dup (1115081-BSD1)					Prepared: 01-Aug-11 Analyzed: 02-Aug-11					
Tert-Butanol / butyl alcohol	182		µg/l		200		91	70-130	0.6	25
1,4-Dioxane	206		µg/l		200		103	70-130	0.4	25
trans-1,4-Dichloro-2-butene	18.3		µg/l		20.0		91	70-130	4	25
Ethanol	358		µg/l		400		89	70-130	6	30
Surrogate: 4-Bromofluorobenzene	*51.8*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*51.8*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Toluene-d8	*51.2*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.7*		µg/l		*50.0*		*109*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.7*		µg/l		*50.0*		*109*	*70-130*		
Surrogate: Dibromofluoromethane	*53.3*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: Dibromofluoromethane	*53.3*		µg/l		*50.0*		*107*	*70-130*		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1114993 - SW846 3510C										
Blank (1114993-BLK1)					Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
Acenaphthene	BRL		µg/l	5.00						
Acenaphthylene	BRL		µg/l	5.00						
Aniline	BRL		µg/l	5.00						
Anthracene	BRL		µg/l	5.00						
Azobenzene/Diphenyldiazine	BRL		µg/l	5.00						
Benzidine	BRL		µg/l	5.00						
Benzo (a) anthracene	BRL		µg/l	5.00						
Benzo (a) pyrene	BRL		µg/l	5.00						
Benzo (b) fluoranthene	BRL		µg/l	5.00						
Benzo (g,h,i) perylene	BRL		µg/l	5.00						
Benzo (k) fluoranthene	BRL		µg/l	5.00						
Benzoic acid	BRL		µg/l	5.00						
Benzyl alcohol	BRL		µg/l	5.00						
Bis(2-chloroethoxy)methane	BRL		µg/l	5.00						
Bis(2-chloroethyl)ether	BRL		µg/l	5.00						
Bis(2-chloroisopropyl)ether	BRL		µg/l	5.00						
Bis(2-ethylhexyl)phthalate	BRL		µg/l	5.00						
4-Bromophenyl phenyl ether	BRL		µg/l	5.00						
Butyl benzyl phthalate	BRL		µg/l	5.00						
Carbazole	BRL		µg/l	5.00						
4-Chloro-3-methylphenol	BRL		µg/l	5.00						
4-Chloroaniline	BRL		µg/l	5.00						
2-Chloronaphthalene	BRL		µg/l	5.00						
2-Chlorophenol	BRL		µg/l	5.00						
4-Chlorophenyl phenyl ether	BRL		µg/l	5.00						
Chrysene	BRL		µg/l	5.00						
Dibenzo (a,h) anthracene	BRL		µg/l	5.00						
Dibenzofuran	BRL		µg/l	5.00						
1,2-Dichlorobenzene	BRL		µg/l	5.00						
1,3-Dichlorobenzene	BRL		µg/l	5.00						
1,4-Dichlorobenzene	BRL		µg/l	5.00						
3,3'-Dichlorobenzidine	BRL		µg/l	5.00						
2,4-Dichlorophenol	BRL		µg/l	5.00						
Diethyl phthalate	BRL		µg/l	5.00						
Dimethyl phthalate	BRL		µg/l	5.00						
2,4-Dimethylphenol	BRL		µg/l	5.00						
Di-n-butyl phthalate	BRL		µg/l	5.00						
4,6-Dinitro-2-methylphenol	BRL		µg/l	5.00						
2,4-Dinitrophenol	BRL		µg/l	5.00						
2,4-Dinitrotoluene	BRL		µg/l	5.00						
2,6-Dinitrotoluene	BRL		µg/l	5.00						
Di-n-octyl phthalate	BRL		µg/l	5.00						
Fluoranthene	BRL		µg/l	5.00						
Fluorene	BRL		µg/l	5.00						
Hexachlorobenzene	BRL		µg/l	5.00						
Hexachlorobutadiene	BRL		µg/l	5.00						
Hexachlorocyclopentadiene	BRL		µg/l	5.00						
Hexachloroethane	BRL		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	BRL		µg/l	5.00						
Isophorone	BRL		µg/l	5.00						
2-Methylnaphthalene	BRL		µg/l	5.00						
2-Methylphenol	BRL		µg/l	5.00						

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1114993 - SW846 3510C										
Blank (1114993-BLK1)					Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
3 & 4-Methylphenol	BRL		µg/l	10.0						
Naphthalene	BRL		µg/l	5.00						
2-Nitroaniline	BRL		µg/l	5.00						
3-Nitroaniline	BRL		µg/l	5.00						
4-Nitroaniline	BRL		µg/l	20.0						
Nitrobenzene	BRL		µg/l	5.00						
2-Nitrophenol	BRL		µg/l	5.00						
4-Nitrophenol	BRL		µg/l	20.0						
N-Nitrosodimethylamine	BRL		µg/l	5.00						
N-Nitrosodi-n-propylamine	BRL		µg/l	5.00						
N-Nitrosodiphenylamine	BRL		µg/l	5.00						
Pentachlorophenol	BRL		µg/l	20.0						
Phenanthrene	BRL		µg/l	5.00						
Phenol	BRL		µg/l	5.00						
Pyrene	BRL		µg/l	5.00						
Pyridine	BRL		µg/l	5.00						
1-Methylnaphthalene	BRL		µg/l	5.00						
1,2,4-Trichlorobenzene	BRL		µg/l	5.00						
2,4,5-Trichlorophenol	BRL		µg/l	5.00						
2,4,6-Trichlorophenol	BRL		µg/l	5.00						
Pentachloronitrobenzene	BRL		µg/l	5.00						
1,2,4,5-Tetrachlorobenzene	BRL		µg/l	5.00						
Surrogate: 2-Fluorobiphenyl	*38.5*		µg/l		*50.0*		*77*	*30-130*		
Surrogate: 2-Fluorophenol	*23.5*		µg/l		*50.0*		*47*	*15-110*		
Surrogate: Nitrobenzene-d5	*31.7*		µg/l		*50.0*		*63*	*30-130*		
Surrogate: Phenol-d5	*15.9*		µg/l		*50.0*		*32*	*15-110*		
Surrogate: Terphenyl-d14	*41.5*		µg/l		*50.0*		*83*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*52.8*		µg/l		*50.0*		*106*	*15-110*		
LCS (1114993-BS1)					Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
Acenaphthene	38.6		µg/l	5.00	50.0		73	40-130		
Acenaphthylene	35.0		µg/l	5.00	50.0		70	40-130		
Aniline	28.2		µg/l	5.00	50.0		56	40-130		
Anthracene	40.2		µg/l	5.00	50.0		80	40-130		
Azobenzene/Diphenyldiazine	25.6		µg/l	5.00	50.0		51	40-130		
Benzidine	6.74	QC2	µg/l	5.00	50.0		13	40-140		
Benzo (a) anthracene	37.4		µg/l	5.00	50.0		75	40-130		
Benzo (a) pyrene	35.7		µg/l	5.00	50.0		71	40-130		
Benzo (b) fluoranthene	34.5		µg/l	5.00	50.0		69	40-130		
Benzo (g,h,i) perylene	31.5		µg/l	5.00	50.0		63	40-130		
Benzo (k) fluoranthene	38.9		µg/l	5.00	50.0		78	40-130		
Benzoic acid	13.7	QC2	µg/l	5.00	50.0		27	40-130		
Benzyl alcohol	30.3		µg/l	5.00	50.0		61	40-130		
Bis(2-chloroethoxy)methane	24.0		µg/l	5.00	50.0		48	40-130		
Bis(2-chloroethyl)ether	26.2		µg/l	5.00	50.0		52	40-130		
Bis(2-chloroisopropyl)ether	20.1		µg/l	5.00	50.0		40	40-130		
Bis(2-ethylhexyl)phthalate	31.5		µg/l	5.00	50.0		63	40-130		
4-Bromophenyl phenyl ether	39.4		µg/l	5.00	50.0		79	40-130		
Butyl benzyl phthalate	29.1		µg/l	5.00	50.0		58	40-130		
Carbazole	43.6		µg/l	5.00	50.0		87	40-130		
4-Chloro-3-methylphenol	30.1		µg/l	5.00	50.0		60	40-130		
4-Chloroaniline	32.3		µg/l	5.00	50.0		65	40-130		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1114993 - SW846 3510C										
LCS (1114993-BS1)					Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
2-Chloronaphthalene	34.7		µg/l	5.00	50.0		69	40-130		
2-Chlorophenol	32.3		µg/l	5.00	50.0		65	40-130		
4-Chlorophenyl phenyl ether	39.0		µg/l	5.00	50.0		78	40-130		
Chrysene	38.8		µg/l	5.00	50.0		78	40-130		
Dibenzo (a,h) anthracene	31.6		µg/l	5.00	50.0		63	40-130		
Dibenzofuran	36.8		µg/l	5.00	50.0		74	40-130		
1,2-Dichlorobenzene	33.2		µg/l	5.00	50.0		66	40-130		
1,3-Dichlorobenzene	30.5		µg/l	5.00	50.0		61	40-130		
1,4-Dichlorobenzene	31.0		µg/l	5.00	50.0		62	40-130		
3,3'-Dichlorobenzidine	48.1		µg/l	5.00	50.0		96	40-130		
2,4-Dichlorophenol	34.6		µg/l	5.00	50.0		69	40-130		
Diethyl phthalate	33.4		µg/l	5.00	50.0		67	40-130		
Dimethyl phthalate	34.9		µg/l	5.00	50.0		70	40-130		
2,4-Dimethylphenol	28.3		µg/l	5.00	50.0		57	40-130		
Di-n-butyl phthalate	32.9		µg/l	5.00	50.0		66	40-130		
4,6-Dinitro-2-methylphenol	32.7		µg/l	5.00	50.0		65	40-130		
2,4-Dinitrophenol	27.3		µg/l	5.00	50.0		55	40-130		
2,4-Dinitrotoluene	42.4		µg/l	5.00	50.0		85	40-130		
2,6-Dinitrotoluene	40.6		µg/l	5.00	50.0		81	40-130		
Di-n-octyl phthalate	29.3		µg/l	5.00	50.0		59	40-130		
Fluoranthene	37.2		µg/l	5.00	50.0		74	40-130		
Fluorene	36.3		µg/l	5.00	50.0		73	40-130		
Hexachlorobenzene	43.4		µg/l	5.00	50.0		87	40-130		
Hexachlorobutadiene	29.3		µg/l	5.00	50.0		59	40-130		
Hexachlorocyclopentadiene	25.3		µg/l	5.00	50.0		51	40-130		
Hexachloroethane	26.9		µg/l	5.00	50.0		54	40-130		
Indeno (1,2,3-cd) pyrene	30.4		µg/l	5.00	50.0		61	40-130		
Isophorone	23.0		µg/l	5.00	50.0		46	40-130		
2-Methylnaphthalene	32.1		µg/l	5.00	50.0		64	40-130		
2-Methylphenol	31.0		µg/l	5.00	50.0		62	40-130		
3 & 4-Methylphenol	27.5		µg/l	10.0	50.0		55	40-130		
Naphthalene	29.0		µg/l	5.00	50.0		58	40-130		
2-Nitroaniline	38.5		µg/l	5.00	50.0		77	40-130		
3-Nitroaniline	44.1		µg/l	5.00	50.0		88	40-130		
4-Nitroaniline	46.7		µg/l	20.0	50.0		93	40-130		
Nitrobenzene	24.3		µg/l	5.00	50.0		49	40-130		
2-Nitrophenol	33.7		µg/l	5.00	50.0		67	40-130		
4-Nitrophenol	20.8		µg/l	20.0	50.0		42	40-130		
N-Nitrosodimethylamine	13.4	QC2	µg/l	5.00	50.0		27	40-130		
N-Nitrosodi-n-propylamine	24.9		µg/l	5.00	50.0		50	40-130		
N-Nitrosodiphenylamine	39.0		µg/l	5.00	50.0		78	40-130		
Pentachlorophenol	35.6		µg/l	20.0	50.0		71	40-130		
Phenanthrene	35.7		µg/l	5.00	50.0		71	40-130		
Phenol	18.2	QC2	µg/l	5.00	50.0		36	40-130		
Pyrene	36.8		µg/l	5.00	50.0		74	40-130		
Pyridine	10.1	QC2	µg/l	5.00	50.0		20	40-140		
1-Methylnaphthalene	34.4		µg/l	5.00	50.0		69	40-140		
1,2,4-Trichlorobenzene	31.0		µg/l	5.00	50.0		62	40-130		
2,4,5-Trichlorophenol	39.0		µg/l	5.00	50.0		78	40-130		
2,4,6-Trichlorophenol	38.6		µg/l	5.00	50.0		77	40-130		
Pentachloronitrobenzene	41.2		µg/l	5.00	50.0		82	40-140		
1,2,4,5-Tetrachlorobenzene	42.6		µg/l	5.00	50.0		85	40-140		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1114993 - SW846 3510C										
LCS (1114993-BS1)						Prepared: 29-Jul-11 Analyzed: 01-Aug-11				
Surrogate: 2-Fluorobiphenyl	*39.6*		µg/l		*50.0*		*79*	*30-130*		
Surrogate: 2-Fluorophenol	*26.4*		µg/l		*50.0*		*53*	*15-110*		
Surrogate: Nitrobenzene-d5	*30.1*		µg/l		*50.0*		*60*	*30-130*		
Surrogate: Phenol-d5	*18.9*		µg/l		*50.0*		*38*	*15-110*		
Surrogate: Terphenyl-d14	*47.0*		µg/l		*50.0*		*94*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*57.8*	SAC	µg/l		*50.0*		*116*	*15-110*		
LCS Dup (1114993-BSD1)						Prepared: 29-Jul-11 Analyzed: 01-Aug-11				
Acenaphthene	33.3		µg/l	5.00	50.0		67	40-130	10	20
Acenaphthylene	31.8		µg/l	5.00	50.0		64	40-130	10	20
Aniline	27.6		µg/l	5.00	50.0		55	40-130	2	20
Anthracene	37.2		µg/l	5.00	50.0		74	40-130	8	20
Azobenzene/Diphenyldiazine	23.3		µg/l	5.00	50.0		47	40-130	9	20
Benzidine	6.98	QC2	µg/l	5.00	50.0		14	40-140	3	20
Benzo (a) anthracene	34.7		µg/l	5.00	50.0		69	40-130	8	20
Benzo (a) pyrene	33.0		µg/l	5.00	50.0		66	40-130	8	20
Benzo (b) fluoranthene	30.8		µg/l	5.00	50.0		62	40-130	11	20
Benzo (g,h,i) perylene	29.6		µg/l	5.00	50.0		59	40-130	6	20
Benzo (k) fluoranthene	37.9		µg/l	5.00	50.0		76	40-130	3	20
Benzoic acid	11.6	QC2	µg/l	5.00	50.0		23	40-130	16	20
Benzyl alcohol	27.5		µg/l	5.00	50.0		55	40-130	10	20
Bis(2-chloroethoxy)methane	22.3		µg/l	5.00	50.0		45	40-130	7	20
Bis(2-chloroethyl)ether	24.0		µg/l	5.00	50.0		48	40-130	9	20
Bis(2-chloroisopropyl)ether	18.6	QM9	µg/l	5.00	50.0		37	40-130	8	20
Bis(2-ethylhexyl)phthalate	29.4		µg/l	5.00	50.0		59	40-130	7	20
4-Bromophenyl phenyl ether	35.5		µg/l	5.00	50.0		71	40-130	11	20
Butyl benzyl phthalate	27.2		µg/l	5.00	50.0		54	40-130	7	20
Carbazole	40.4		µg/l	5.00	50.0		81	40-130	8	20
4-Chloro-3-methylphenol	27.8		µg/l	5.00	50.0		56	40-130	8	20
4-Chloroaniline	30.8		µg/l	5.00	50.0		62	40-130	5	20
2-Chloronaphthalene	31.3		µg/l	5.00	50.0		63	40-130	10	20
2-Chlorophenol	29.4		µg/l	5.00	50.0		59	40-130	10	20
4-Chlorophenyl phenyl ether	35.2		µg/l	5.00	50.0		70	40-130	10	20
Chrysene	35.8		µg/l	5.00	50.0		72	40-130	8	20
Dibenzo (a,h) anthracene	29.6		µg/l	5.00	50.0		59	40-130	6	20
Dibenzofuran	33.5		µg/l	5.00	50.0		67	40-130	9	20
1,2-Dichlorobenzene	30.2		µg/l	5.00	50.0		60	40-130	9	20
1,3-Dichlorobenzene	27.5		µg/l	5.00	50.0		55	40-130	10	20
1,4-Dichlorobenzene	27.8		µg/l	5.00	50.0		56	40-130	11	20
3,3'-Dichlorobenzidine	44.6		µg/l	5.00	50.0		89	40-130	8	20
2,4-Dichlorophenol	31.8		µg/l	5.00	50.0		64	40-130	9	20
Diethyl phthalate	30.7		µg/l	5.00	50.0		61	40-130	8	20
Dimethyl phthalate	32.3		µg/l	5.00	50.0		65	40-130	8	20
2,4-Dimethylphenol	26.5		µg/l	5.00	50.0		53	40-130	7	20
Di-n-butyl phthalate	31.0		µg/l	5.00	50.0		62	40-130	6	20
4,6-Dinitro-2-methylphenol	30.7		µg/l	5.00	50.0		61	40-130	6	20
2,4-Dinitrophenol	26.0		µg/l	5.00	50.0		52	40-130	5	20
2,4-Dinitrotoluene	39.0		µg/l	5.00	50.0		78	40-130	8	20
2,6-Dinitrotoluene	37.3		µg/l	5.00	50.0		75	40-130	8	20
Di-n-octyl phthalate	27.4		µg/l	5.00	50.0		55	40-130	6	20
Fluoranthene	34.6		µg/l	5.00	50.0		69	40-130	7	20
Fluorene	33.4		µg/l	5.00	50.0		67	40-130	8	20

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1114993 - SW846 3510C										
LCS Dup (1114993-BSD1)					Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
Hexachlorobenzene	39.5		µg/l	5.00	50.0		79	40-130	9	20
Hexachlorobutadiene	26.5		µg/l	5.00	50.0		53	40-130	10	20
Hexachlorocyclopentadiene	24.0		µg/l	5.00	50.0		48	40-130	5	20
Hexachloroethane	24.2		µg/l	5.00	50.0		48	40-130	10	20
Indeno (1,2,3-cd) pyrene	28.1		µg/l	5.00	50.0		56	40-130	8	20
Isophorone	21.5		µg/l	5.00	50.0		43	40-130	7	20
2-Methylnaphthalene	29.2		µg/l	5.00	50.0		58	40-130	9	20
2-Methylphenol	28.0		µg/l	5.00	50.0		56	40-130	10	20
3 & 4-Methylphenol	24.8		µg/l	10.0	50.0		50	40-130	10	20
Naphthalene	26.3		µg/l	5.00	50.0		53	40-130	10	20
2-Nitroaniline	35.3		µg/l	5.00	50.0		71	40-130	9	20
3-Nitroaniline	40.4		µg/l	5.00	50.0		81	40-130	9	20
4-Nitroaniline	42.8		µg/l	20.0	50.0		86	40-130	9	20
Nitrobenzene	22.6		µg/l	5.00	50.0		45	40-130	7	20
2-Nitrophenol	31.0		µg/l	5.00	50.0		62	40-130	8	20
4-Nitrophenol	18.3	QM9	µg/l	20.0	50.0		37	40-130	13	20
N-Nitrosodimethylamine	12.4	QC2	µg/l	5.00	50.0		25	40-130	8	20
N-Nitrosodi-n-propylamine	22.4		µg/l	5.00	50.0		45	40-130	11	20
N-Nitrosodiphenylamine	36.1		µg/l	5.00	50.0		72	40-130	8	20
Pentachlorophenol	32.8		µg/l	20.0	50.0		66	40-130	8	20
Phenanthrene	32.9		µg/l	5.00	50.0		66	40-130	8	20
Phenol	16.3	QC2	µg/l	5.00	50.0		33	40-130	11	20
Pyrene	34.2		µg/l	5.00	50.0		68	40-130	7	20
Pyridine	10.0	QC2	µg/l	5.00	50.0		20	40-140	0.3	20
1,2,4-Trichlorobenzene	28.0		µg/l	5.00	50.0		56	40-130	10	20
1-Methylnaphthalene	30.9		µg/l	5.00	50.0		62	40-140	11	20
2,4,5-Trichlorophenol	34.9		µg/l	5.00	50.0		70	40-130	11	20
2,4,6-Trichlorophenol	35.1		µg/l	5.00	50.0		70	40-130	9	20
Pentachloronitrobenzene	38.0		µg/l	5.00	50.0		76	40-140	8	20
1,2,4,5-Tetrachlorobenzene	38.4		µg/l	5.00	50.0		77	40-140	11	20
Surrogate: 2-Fluorobiphenyl	*35.6*		µg/l		*50.0*		*71*	*30-130*		
Surrogate: 2-Fluorophenol	*23.6*		µg/l		*50.0*		*47*	*15-110*		
Surrogate: Nitrobenzene-d5	*27.7*		µg/l		*50.0*		*55*	*30-130*		
Surrogate: Phenol-d5	*16.3*		µg/l		*50.0*		*33*	*15-110*		
Surrogate: Terphenyl-d14	*43.1*		µg/l		*50.0*		*86*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*52.3*		µg/l		*50.0*		*105*	*15-110*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1114921 - SW846 3510C										
Blank (1114921-BLK1)					Prepared: 29-Jul-11 Analyzed: 30-Jul-11					
Oil & Grease	BRL		mg/l	1.00						
LCS (1114921-BS1)					Prepared: 29-Jul-11 Analyzed: 30-Jul-11					
Oil & Grease	43.4		mg/l		50.4		86	83-101		

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1114951 - EPA 200 Series										
Blank (1114951-BLK1)					Prepared: 29-Jul-11 Analyzed: 30-Jul-11					
Nickel	BRL		mg/l	0.0050						
Lead	BRL		mg/l	0.0075						
Antimony	BRL		mg/l	0.0080						
Selenium	BRL		mg/l	0.0150						
Thallium	BRL		mg/l	0.0050						
Zinc	BRL		mg/l	0.0050						
Arsenic	BRL		mg/l	0.0040						
Beryllium	BRL		mg/l	0.0020						
Cadmium	BRL		mg/l	0.0025						
Chromium	BRL		mg/l	0.0050						
Copper	BRL		mg/l	0.0050						
Silver	BRL		mg/l	0.0050						
LCS (1114951-BS1)					Prepared: 29-Jul-11 Analyzed: 30-Jul-11					
Selenium	1.20		mg/l	0.0150	1.25		96	85-115		
Zinc	1.34		mg/l	0.0050	1.25		108	85-115		
Thallium	1.28		mg/l	0.0050	1.25		102	85-115		
Antimony	1.21		mg/l	0.0080	1.25		97	85-115		
Nickel	1.26		mg/l	0.0050	1.25		100	85-115		
Lead	1.26		mg/l	0.0075	1.25		100	85-115		
Silver	1.30		mg/l	0.0050	1.25		104	85-115		
Copper	1.28		mg/l	0.0050	1.25		103	85-115		
Chromium	1.31		mg/l	0.0050	1.25		105	85-115		
Cadmium	1.34		mg/l	0.0025	1.25		108	85-115		
Beryllium	1.39		mg/l	0.0020	1.25		111	85-115		
Arsenic	1.22		mg/l	0.0040	1.25		98	85-115		
Duplicate (1114951-DUP1)			Source: SB32449-01		Prepared: 29-Jul-11 Analyzed: 31-Jul-11					
Nickel	0.0540		mg/l	0.0050		0.0580			7	20
Lead	1.22		mg/l	0.0075		1.32			7.50	20
Antimony	0.0134		mg/l	0.0080		0.0164			19	20
Selenium	BRL		mg/l	0.0150		0.0043				20
Zinc	4.72		mg/l	0.0050		4.74			0.4	20
Thallium	BRL		mg/l	0.0050		BRL				20
Silver	BRL		mg/l	0.0050		0.0020				20
Copper	0.178		mg/l	0.0050		0.206			15	20
Chromium	0.0736		mg/l	0.0050		0.0832			12	20
Arsenic	0.0162		mg/l	0.0040		0.0188			14	20
Beryllium	0.0013	J	mg/l	0.0020		0.0012			7	20
Cadmium	0.0166		mg/l	0.0025		0.0184			10	20
Batch 1114952 - EPA200/SW7000 Series										
Blank (1114952-BLK1)					Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
Mercury	BRL		mg/l	0.00030						
LCS (1114952-BS1)					Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
Mercury	0.00451		mg/l	0.00030	0.00500		90	85-115		
Duplicate (1114952-DUP1)			Source: SB32449-01		Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
Mercury	0.00139	QR9	mg/l	0.00030		0.00113			21	20
Matrix Spike (1114952-MS1)			Source: SB32449-01		Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
Mercury	0.00577		mg/l	0.00030	0.00500	0.00113	93	80-120		
Post Spike (1114952-PS1)			Source: SB32449-01		Prepared: 29-Jul-11 Analyzed: 01-Aug-11					
Mercury	0.00665		mg/l	0.00030	0.00500	0.00113	110	85-115		
Batch 1115146 - EPA 200 Series										

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115146 - EPA 200 Series										
Blank (1115146-BLK1)						Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
Antimony	BRL		mg/l	0.0060						
LCS (1115146-BS1)						Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
Antimony	1.35		mg/l	0.0060	1.25		108	85-115		
Duplicate (1115146-DUP1)			Source: SB32449-01RE1			Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
Antimony	0.0170		mg/l	0.0060		0.0161			6	20
Matrix Spike (1115146-MS1)			Source: SB32449-01RE1			Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
Antimony	1.28		mg/l	0.0060	1.25	0.0161	101	70-130		
Post Spike (1115146-PS1)			Source: SB32449-01RE1			Prepared: 01-Aug-11 Analyzed: 02-Aug-11				
Antimony	1.41		mg/l	0.0060	1.25	0.0161	112	85-115		

Soluble Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1116260 - EPA 200 Series										
Blank (1116260-BLK1)					Prepared: 15-Aug-11 Analyzed: 16-Aug-11					
Zinc	BRL		mg/l	0.0450						
Thallium	BRL		mg/l	0.005						
Antimony	BRL		mg/l	0.0060						
Nickel	BRL		mg/l	0.0050						
Lead	BRL		mg/l	0.0075						
Selenium	BRL		mg/l	0.0150						
Cadmium	BRL		mg/l	0.0025						
Arsenic	BRL		mg/l	0.0040						
Beryllium	BRL		mg/l	0.0020						
Chromium	BRL		mg/l	0.0050						
Copper	BRL		mg/l	0.0050						
Silver	BRL		mg/l	0.0050						
LCS (1116260-BS1)					Prepared: 15-Aug-11 Analyzed: 16-Aug-11					
Nickel	1.31		mg/l	0.0050	1.25		105	85-115		
Lead	1.27		mg/l	0.0075	1.25		102	85-115		
Antimony	1.32		mg/l	0.0060	1.25		106	85-115		
Selenium	1.30		mg/l	0.0150	1.25		104	85-115		
Thallium	1.40		mg/l	0.005	1.25		112	85-115		
Zinc	1.28		mg/l	0.0450	1.25		102	85-115		
Copper	1.34		mg/l	0.0050	1.25		107	85-115		
Silver	1.27		mg/l	0.0050	1.25		102	85-115		
Arsenic	1.30		mg/l	0.0040	1.25		104	85-115		
Beryllium	1.33		mg/l	0.0020	1.25		106	85-115		
Chromium	1.24		mg/l	0.0050	1.25		100	85-115		
Cadmium	1.32		mg/l	0.0025	1.25		106	85-115		
Duplicate (1116260-DUP1)			Source: SB32449-01		Prepared: 15-Aug-11 Analyzed: 16-Aug-11					
Selenium	BRL		mg/l	0.0150		BRL				20
Zinc	0.0358	J	mg/l	0.0450		0.0400			11	20
Nickel	0.0042	J	mg/l	0.0050		0.0046			9	20
Lead	0.0065	J	mg/l	0.0075		0.0068			5	20
Thallium	BRL		mg/l	0.005		BRL				20
Antimony	BRL		mg/l	0.0060		BRL				20
Chromium	BRL		mg/l	0.0050		BRL				20
Copper	0.0024	J,QR8	mg/l	0.0050		0.0035			37	20
Beryllium	BRL		mg/l	0.0020		BRL				20
Cadmium	BRL		mg/l	0.0025		0.0005				20
Silver	BRL	R01	mg/l	0.0060		0.0052				20
Arsenic	BRL		mg/l	0.0040		BRL				20
Matrix Spike (1116260-MS1)			Source: SB32449-01		Prepared: 15-Aug-11 Analyzed: 16-Aug-11					
Lead	1.25		mg/l	0.0075	1.25	0.0068	99	70-130		
Nickel	1.29		mg/l	0.0050	1.25	0.0046	103	70-130		
Selenium	1.32		mg/l	0.0150	1.25	BRL	105	70-130		
Zinc	1.27		mg/l	0.0450	1.25	0.0400	98	70-130		
Thallium	1.40		mg/l	0.005	1.25	BRL	112	70-130		
Antimony	1.37		mg/l	0.0060	1.25	BRL	109	70-130		
Silver	0.811	QM7	mg/l	0.0050	1.25	0.0052	64	70-130		
Arsenic	1.34		mg/l	0.0040	1.25	BRL	107	70-130		
Cadmium	1.29		mg/l	0.0025	1.25	0.0005	103	70-130		
Chromium	1.24		mg/l	0.0050	1.25	BRL	99	70-130		
Copper	1.37		mg/l	0.0050	1.25	0.0035	109	70-130		
Beryllium	1.31		mg/l	0.0020	1.25	BRL	105	70-130		

Soluble Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1116260 - EPA 200 Series										
Post Spike (1116260-PS1)			Source: SB32449-01			Prepared: 15-Aug-11 Analyzed: 16-Aug-11				
Zinc	1.28		mg/l	0.0450	1.25	0.0400	100	85-115		
Selenium	1.32		mg/l	0.0150	1.25	BRL	106	85-115		
Nickel	1.30		mg/l	0.0050	1.25	0.0046	103	85-115		
Lead	1.26		mg/l	0.0075	1.25	0.0068	100	85-115		
Thallium	1.41		mg/l	0.005	1.25	BRL	113	85-115		
Antimony	1.37		mg/l	0.0060	1.25	BRL	109	85-115		
Arsenic	1.34		mg/l	0.0040	1.25	BRL	107	85-115		
Copper	1.37		mg/l	0.0050	1.25	0.0035	109	85-115		
Cadmium	1.30		mg/l	0.0025	1.25	0.0005	104	85-115		
Beryllium	1.34		mg/l	0.0020	1.25	BRL	107	85-115		
Chromium	1.25		mg/l	0.0050	1.25	BRL	100	85-115		
Batch 1116261 - EPA200/SW7000 Series										
Blank (1116261-BLK1)						Prepared: 15-Aug-11 Analyzed: 18-Aug-11				
Mercury	BRL		mg/l	0.00140						
LCS (1116261-BS1)						Prepared: 15-Aug-11 Analyzed: 18-Aug-11				
Mercury	0.00778	QC2	mg/l	0.00140	0.00500		156	85-115		
Duplicate (1116261-DUP1)			Source: SB32449-01			Prepared: 15-Aug-11 Analyzed: 18-Aug-11				
Mercury	BRL		mg/l	0.00140		BRL				20
Matrix Spike (1116261-MS1)			Source: SB32449-01			Prepared: 15-Aug-11 Analyzed: 18-Aug-11				
Mercury	0.00610	QC2	mg/l	0.00140	0.00500	BRL	122	80-120		
Post Spike (1116261-PS1)			Source: SB32449-01			Prepared: 15-Aug-11 Analyzed: 18-Aug-11				
Mercury	0.00610	QC2	mg/l	0.00140	0.00500	BRL	122	85-115		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1114917 - General Preparation										
Reference (1114917-SRM1)						Prepared & Analyzed: 28-Jul-11				
pH	6.04		pH Units		6.00		101	97.5-102.5		
Reference (1114917-SRM2)						Prepared & Analyzed: 28-Jul-11				
pH	5.99		pH Units		6.00		100	97.5-102.5		
Batch 1114926 - General Preparation										
Blank (1114926-BLK1)						Prepared & Analyzed: 28-Jul-11				
Total Residual Chlorine	BRL		mg/l	0.020						
LCS (1114926-BS1)						Prepared & Analyzed: 28-Jul-11				
Total Residual Chlorine	0.052		mg/l	0.020	0.0500		104	90-110		
Reference (1114926-SRM1)						Prepared & Analyzed: 28-Jul-11				
Total Residual Chlorine	0.156		mg/l	0.020	0.146		107	85-115		
Batch 1114948 - General Preparation										
Blank (1114948-BLK1)						Prepared & Analyzed: 29-Jul-11				
Cyanide (total)	BRL		mg/l	0.00500						
Blank (1114948-BLK2)						Prepared & Analyzed: 29-Jul-11				
Cyanide (total)	BRL		mg/l	0.00500						
LCS (1114948-BS1)						Prepared & Analyzed: 29-Jul-11				
Cyanide (total)	0.316		mg/l	0.00500	0.300		105	90-110		
LCS (1114948-BS2)						Prepared & Analyzed: 29-Jul-11				
Cyanide (total)	0.309		mg/l	0.00500	0.300		103	90-110		
Reference (1114948-SRM1)						Prepared & Analyzed: 29-Jul-11				
Cyanide (total)	0.448		mg/l	0.00500	0.449		100	75-125		
Batch 1114951 - EPA 200 Series										
Blank (1114951-BLK1)						Prepared: 29-Jul-11 Analyzed: 30-Jul-11				
Hardness	BRL		mg/l CaCO3	0.291						
LCS (1114951-BS1)						Prepared: 29-Jul-11 Analyzed: 30-Jul-11				
Hardness	21.9		mg/l CaCO3	0.291	20.8		105	85-115		
Duplicate (1114951-DUP1)			Source: SB32449-01			Prepared: 29-Jul-11 Analyzed: 31-Jul-11				
Hardness	238		mg/l CaCO3	0.291		240			1	20
Batch 1114981 - General Preparation										
Blank (1114981-BLK1)						Prepared: 29-Jul-11 Analyzed: 03-Aug-11				
Biochemical Oxygen Demand (5-day)	BRL		mg/l	3.00						
Blank (1114981-BLK2)						Prepared: 29-Jul-11 Analyzed: 03-Aug-11				
Biochemical Oxygen Demand (5-day)	BRL		mg/l	3.00						
LCS (1114981-BS1)						Prepared: 29-Jul-11 Analyzed: 03-Aug-11				
Biochemical Oxygen Demand (5-day)	185		mg/l	50.0	198		93	85-115		
Reference (1114981-SRM1)						Prepared: 29-Jul-11 Analyzed: 03-Aug-11				
Biochemical Oxygen Demand (5-day)	99.0		mg/l	60.0	121		82	73-107		
Reference (1114981-SRM2)						Prepared: 29-Jul-11 Analyzed: 03-Aug-11				
Biochemical Oxygen Demand (5-day)	103		mg/l	60.0	121		85	73-107		
Batch 1115002 - General Preparation										
Blank (1115002-BLK1)						Prepared & Analyzed: 29-Jul-11				
Total Suspended Solids	BRL		mg/l	5.00						
LCS (1115002-BS1)						Prepared & Analyzed: 29-Jul-11				
Total Suspended Solids	84.0		mg/l	20.0	82.0		102	90-110		
Batch 1115184 - General Preparation										
Blank (1115184-BLK1)						Prepared & Analyzed: 02-Aug-11				
Nitrate/Nitrite as N	BRL		mg/l	0.0100						
LCS (1115184-BS1)						Prepared & Analyzed: 02-Aug-11				

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1115184 - General Preparation										
LCS (1115184-BS1)						Prepared & Analyzed: 02-Aug-11				
Nitrate/Nitrite as N	0.517		mg/l	0.0100	0.500		103	90-110		
Reference (1115184-SRM1)						Prepared & Analyzed: 02-Aug-11				
Nitrate/Nitrite as N	5.17		mg/l	0.100	5.08		102	90-110		
Batch 1115190 - General Preparation										
Blank (1115190-BLK1)						Prepared & Analyzed: 02-Aug-11				
Total Dissolved Solids	BRL		mg/l	5.00						
LCS (1115190-BS1)						Prepared & Analyzed: 02-Aug-11				
Total Dissolved Solids	464		mg/l	10.0	470		99	90-110		
Batch 1115351 - General Preparation										
Blank (1115351-BLK1)						Prepared & Analyzed: 03-Aug-11				
Phosphorus as P	BRL		mg/l	0.0100						
LCS (1115351-BS1)						Prepared & Analyzed: 03-Aug-11				
Phosphorus as P	0.194		mg/l	0.0100	0.200		97	90-110		
Reference (1115351-SRM1)						Prepared & Analyzed: 03-Aug-11				
Phosphorus as P	0.452		mg/l	0.0100	0.400		113	93-116		

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 181977A - 181977										
BLK (BA59110 BLK)						Prepared: 03-Aug-11 Analyzed: 04-Aug-11				
Ammonia as Nitrogen	BDL		mg/L	0.02				-		
DUP (BA59110 DUP)						Prepared: 03-Aug-11 Analyzed: 04-Aug-11				
Ammonia as Nitrogen	ND		mg/L				0.23	-	4.4	
LCS (BA59110 LCS)						Prepared: 03-Aug-11 Analyzed: 04-Aug-11				
Ammonia as Nitrogen	ND		mg/L				102.00	70-130		
MS (BA59110 MS)						Prepared: 03-Aug-11 Analyzed: 04-Aug-11				
Ammonia as Nitrogen	ND		mg/L				110.00	70-130		
Batch 181977B - 181977										
BLK (BA59110BLK)						Prepared: 03-Aug-11 Analyzed: 04-Aug-11				
Nitrogen Tot Kjeldahl	BDL		mg/L	0.10				-		
DUP (BA59110DUP)						Prepared: 03-Aug-11 Analyzed: 04-Aug-11				
Nitrogen Tot Kjeldahl	ND		mg/L				2.20	-	8.7	
LCS (BA59110LCS)						Prepared: 03-Aug-11 Analyzed: 04-Aug-11				
Nitrogen Tot Kjeldahl	ND		mg/L				108.00	70-130		
MS (BA59110MS)						Prepared: 03-Aug-11 Analyzed: 04-Aug-11				
Nitrogen Tot Kjeldahl	ND		mg/L				104.50	70-130		
Batch 182115A - 182115										
BLK (BA60327BLK)						Prepared & Analyzed: 04-Aug-11				
Phenolics	BDL		mg/L					-		
DUP RPD (BA60327DUP RPD)						Prepared & Analyzed: 04-Aug-11				
Phenolics	ND		mg/L				24.5	-		
LCS (BA60327LCS)						Prepared & Analyzed: 04-Aug-11				
Phenolics	ND		mg/L				91.0	70-130		
MS (BA60327MS)						Prepared & Analyzed: 04-Aug-11				
Phenolics	ND		mg/L				118	70-130		

Notes and Definitions

HT1	Sample submitted with insufficient time to prepare within the method recommended holding time.
HT2	This sample was received outside the EPA recommended holding time for the analysis specified.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
QR9	RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
R01	The Reporting Limit has been raised to account for matrix interference.
S04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
SAC	Acid surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining two acid surrogates.
V11	Data confirmed with duplicate analysis.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
ClHT	The method for residual chlorine indicates that samples should be analyzed immediately. 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous residual chlorine samples not analyzed in the field are considered out of hold time at the time of sample receipt.
OG	The required Matrix Spike and Matrix Spike Duplicate (MS/MSD) for Oil & Grease method 1664A can only be analyzed when the client has submitted sufficient sample volume. An extra liter per MS/MSD is required to fulfill the method QC criteria. Please refer to Chain of Custody and QC Summary (MS/MSD) of the Laboratory Report to verify ample sample volume was submitted to fulfill the requirement.
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.