



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

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

CERTIFIED MAIL

February 1, 2011

Michael J. Dziura
Environmental Engineer
Corporate Environmental Advisors, Inc.
127 Hartwell Street, Suite 2
West Boylston, MA 01583

Re: Authorization to discharge under the Remediation General Permit (RGP) –
MAG910000. Former ATCO Plastics, Inc., site located at 31 West Bacon Street,
Plainville, MA 02762, Norfolk County; Authorization # MAG910243- Reissuance

Dear Mr. Dziura:

Based on the review of a Notice of Intent (NOI) submitted on behalf of RPS Realty Trust by your firm Corporate Environmental Advisors, 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 for 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 check list 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>.

Also, please note that in addition to the pollutants that you have marked believed present, the list includes pollutants 1, 4 Dichlorobenzene, Total Phthalates, Pentachlorophenol, and the Group I and Group II Polycyclic Aromatic Hydrocarbons (PAHs). These additional pollutants were listed because the minimum levels (MLs) reported in your laboratory reports exceeded the MLs for Method 8270D required by the RGP. For information on MLs, please see Appendix VI of the RGP.

In addition, please note that the metals trivalent chromium, lead, silver, zinc and iron included on the list are dilution dependent pollutants and subject to limitations based on selected dilution ranges and technology-based ceiling limitations for facilities located in Massachusetts. For each parameter the reported dilution factor 6 for this site is within a dilution range greater than five to ten ($>5-10$), established in the RGP. (See the RGP Appendix IV for Massachusetts facilities). Therefore, the limits for trivalent chromium of 244ug/L, lead of 6.5ug/L, silver of 6.0ug/L, zinc of 333ug/L and iron of 5,000ug/L, are required to achieve permit compliance at your site.

Finally, please note the list 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. Recertification's 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. This project reportedly will terminate on January 1, 2015. 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

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

NPDES Permit Number:	MAG910243 – Reissuance
Date Permit Issued:	January, 2011
Facility/Site Name:	Former ATCO Plastics, Inc.
Facility/Site Address:	31 West Bacon St., Plainville, MA 02762, Norfolk County Email address of owner:ATCO@GIS.net; Phone n:508-654-9900
Legal Name of Operator:	Corporate Environmental Advisors, Inc.
Operator contact name, title, and Address:	127 Hartwell Street, Suite 2, West Boylston 01583 Email MDziura@cea-inc.com; Telephone n:508-835-8812
Estimated Date of Completion:	January 1, 2015
Category and Sub-Category:	Category II-Non Petroleum Site Remediation. Sub-category B. VOC Sites with additional contamination
Receiving Water:	Ten Mile River

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

<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing **, Me#60.2/ML 5ug/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 5ug/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
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

	<u>Parameter</u>	<u>Effluent Limit/Method#/ML</u> (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
	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/ ML5ug/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/ML5ug/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
✓	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

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

		<u>Total Recoverable Metal Limit @ H ¹⁰ = 50 mg/l CaCO3 for discharges in Massachusetts (ug/l)</u> ¹¹			
	<u>Metal parameter</u>	<u>Freshwater</u>	<u>Saltwater</u>		
	39. Antimony	5.6/10mL			
	40. Arsenic **	10/20mL	36/20mL		
	41. Cadmium **	0.2/10ml	8.9/10mL		
✓	42. Chromium III (trivalent) **	244/15mL	100/15mL		
	43. Chromium VI (hexavalent) **	11.4/10mL	50.3/10mL		
	44. Copper **	5.2/15mL	3.7/15mL		

	Metal parameter	Total Recoverable Metal Limit @ H¹⁰ = 50 mg/l CaCO₃ for discharges in Massachusetts (ug/l) ¹¹			
		Freshwater	Saltwater		
✓	45. Lead **	6.5/20mL	8.5/20mL		
	46. Mercury **	0.9/0.2mL	1.1/0.2mL		
	47. Nickel **	29/20mL	8.2/20mL		
	48. Selenium **	5/20mL	71/20mL		
✓	49. Silver	6/10mL	2.2/10mL		
✓	50. Zinc **	333/15mL	85.6/15mL		
✓	51. Iron	5,000/20mL			

	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.

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

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

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

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

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

¹⁴ Temperature sampling per Method 170.1

December 7, 2010

U.S. Environmental Protection Agency
5 Post Office Square – Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912
Attn.: Remediation General Permit NOI Processing

RE: RGP Notice of Intent (NOI)
Former ATCO Plastics Inc.
31 West Bacon Street
Plainville, MA
MassDEP Release Tracking No. 4-0708
RGP Permit # MAG910243

Via email (NPDES.Generalpermits@epa.gov) and USPS

To Whom It May Concern:

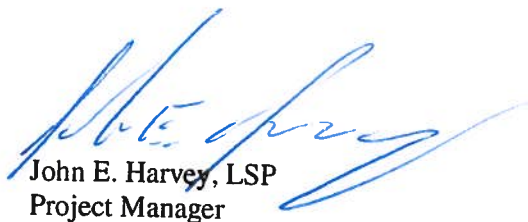
On behalf of RPS Realty Trust, Corporate Environmental Advisors, Inc. (CEA) is submitting this Notice of Intent (NOI) for the above-referenced site. The NOI is being submitted to continue coverage under the new Remediation General Permit (RGP). A groundwater extraction and treatment system has been installed on the subject property and is operating to remediate a chlorinated volatile organic compound (VOC) release. The system extracts and treats groundwater and the treated water is discharged to the storm drain system under U.S. EPA RGP number MAG910243, issued on July 27, 2006. On April 14, 2009, EPA approved the dilution rate change from 0-5 to 5-10 for total recoverable metals limitation based on the ongoing discharge flow rate of treated groundwater to Ten Mile River.

If you have any questions, please feel free to contact the undersigned at 508-835-8822.

Sincerely,
Corporate Environmental Advisors, Inc.



Michael J. Dziura, P.E.
Sr. Environmental Engineer



John E. Harvey, LSP
Project Manager

Encl: NOI Forms
Figure 1 – System Flow Diagram
Laboratory Analytical Reports

Pc: Mr. Ralph Schlenker – RPS Realty Trust, 31 West Bacon Street, Plainville, MA 02762
MassDEP SERO
CEA File No.: 6108-06

ADDRESS Hartwell Business Park
127 Hartwell Street, West Boylston, MA 01583

TEL 508 835 8822 | 800 358 7960

FAX 508 835 8812

WEB www.cea-inc.com

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 ATCO Plastics, Inc		Facility/site mailing address:	
Location of facility/site : longitude: 71, 20, 29 latitude: 42, 00, 8.5	Facility SIC code(s):	Street: 31 West Bacon Street	
b) Name of facility/site owner : RPS Realty Trust		Town: Plainville	
Email address of facility/site owner: ATCO@GIS.net	State: MA	Zip: 02762	County: Norfolk
Telephone no. of facility/site owner : 508-654-9900	Owner is (check one): 1. Federal ☐ 2. State/Tribal ☐ 3. Private ☒ 4. Other ☐ if so, describe:		
Fax no. of facility/site owner : NA			
Address of owner (if different from site):			
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator :	Operator telephone no: 508-835-8822		
Corporate Environmental Advisors, Inc.	Operator fax no.: 508-835-8812	Operator email: MDziura@cea-inc.com	
Operator contact name and title: Michael J. Dziura, PE, Sr. Environmental Engineer			
Address of operator (if different from owner):	Street: 127 Hartwell Street, Suite 2		
Town: West 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:

MassDEP, BWSC, SERO, 20 Riverside drive, Lakeville, MA 02347

508-946-2700

f) Is the site/facility covered by any other EPA permit, including:

1. Multi-Sector General Permit? Y ☐ N ☒,
if Y, number:
2. Final Dewatering General Permit? Y ☐ N ☒,
if Y, number:
3. EPA Construction General Permit? Y ☐ N ☒,
if Y, number:
4. Individual NPDES permit? Y ☐ N ☒,
if Y, number:
5. any other water quality related individual or general permit? Y ☐ N ☒, if Y, number:

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

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

<u>Activity Category</u>	<u>Activity Sub-Category</u>
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☐ 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) ☐
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:			
A groundwater pump and treat system is currently operating to extract, treat VOC impacted groundwater, prior to discharge to a catch basin that discharges to the Ten Mile River.			
b) Provide the following information about each discharge:			
1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)?		
1	Max. flow 0.0557 Is maximum flow a design value ? Y ☐ N ☒ Average flow (include units) 0.03342 CFS Is average flow a design value or estimate? estimate		
3) Latitude and longitude of each discharge within 100 feet:			
pt.1: lat.	42, 00, 7.5	long.	71, 20, 22
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 on - going end Jan 1, 2015			
d) Please attach a line drawing or flow schematic showing water flow through the facility including:			
1. sources of intake water. 2. contributing flow from the operation. 3. treatment units. and 4. discharge points and receiving waters(s).			

3. Contaminant information.

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

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
1. Total Suspended Solids (TSS)		☒	☐	1	grab	SM2540D	5,000	<5,000			
2. Total Residual Chlorine (TRC)		☒	☐	1	grab	Hach 8167	20	<20			
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	grab	1664	1,000	<1,000			
4. Cyanide (CN)	57125	☒	☐	1	grab	9012A	5	<5			
5. Benzene (B)	71432	☒	☐	1	grab	8260B	0.5	<0.5			
6. Toluene (T)	108883	☒	☐	1	grab	8260B	0.5	<0.5			
7. Ethylbenzene (E)	100414	☒	☐	1	grab	8260B	0.5	<0.5			
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	1	grab	8260B	1.5	<1.5			
9. Total BTEX ²	n/a	☒	☐	1	grab	8260B	3.0	<3.0			
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) ³	106934	☒	☐	1	grab	504.1	0.01	<0.01			
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☒	☐	1	grab	8260B	0.5	<0.5			
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☒	☐	1	grab	8260B	10	<10			

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

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

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

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
13. tert-Amyl Methyl Ether (TAME)	9940508	☒	☐	1	grab	8260B	0.5	<0.5			
14. Naphthalene	91203	☒	☐	1	grab	8260B	0.5	<0.5			
15. Carbon Tetrachloride	56235	☒	☐	1	grab	8260B	0.5	<0.5			
16. 1,2 Dichlorobenzene (o-DCB)	95501	☒	☐	1	grab	8260B	0.5	<0.5			
17. 1,3 Dichlorobenzene (m-DCB)	541731	☒	☐	1	grab	8260B	0.5	<0.5			
18. 1,4 Dichlorobenzene (p-DCB)	106467	☒	☐	1	grab	8260B	0.5	<0.5			
18a. Total dichlorobenzene		☒	☐	1	grab	8260B	1.5	<1.5			
19. 1,1 Dichloroethane (DCA)	75343	☐	☒	1	grab	8260B	0.5	0.9	0.0001		
20. 1,2 Dichloroethane (DCA)	107062	☒	☐	1	grab	8260B	0.5	<0.5			
21. 1,1 Dichloroethene (DCE)	75354	☐	☒	1	grab	8260B	0.5	1.1	0.0001		
22. cis-1,2 Dichloroethene (DCE)	156592	☐	☒	1	grab	8260B	0.5	7.7	0.001		
23. Methylene Chloride	75092	☒	☐	1	grab	8260B	1.0	<1			
24. Tetrachloroethene (PCE)	127184	☐	☒	1	grab	8260B	0.5	5.0	0.0007		
25. 1,1,1 Trichloro-ethane (TCA)	71556	☐	☒	1	grab	8260B	0.5	3.0	0.0004		
26. 1,1,2 Trichloro-ethane (TCA)	79005	☒	☐	1	grab	8260B	0.5	<0.5			
27. Trichloroethene (TCE)	79016	☐	☒	1	grab	8260B	0.5	56.0	0.0076		

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
28. Vinyl Chloride (Chloroethene)	75014	☒	☐	1	grab	8260B	0.5	<0.5			
29. Acetone	67641	☒	☐	1	grab	8260B	10.0	<10			
30. 1,4 Dioxane	123911	☒	☐	1	grab	8260B	20.0	<20			
31. Total Phenols	108952	☒	☐	1	grab	8260C/D	5.21	<5.21			
32. Pentachlorophenol (PCP)	87865	☒	☐	1	grab	8270C/D	20.8	<20.8			
33. Total Phthalates (Phthalate esters) ⁴		☒	☐	1	grab	8270C/D	5.21	<5.21			
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	grab	8270C/D	5.21	<5.21			
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	grab	8270C/D	5.21	<5.21			
a. Benzo(a) Anthracene	56553	☒	☐	1	grab	8270C/D	5.21	<5.21			
b. Benzo(a) Pyrene	50328	☒	☐	1	grab	8270C/D	5.21	<5.21			
c. Benzo(b)Fluoranthene	205992	☒	☐	1	grab	8270C/D	5.21	<5.21			
d. Benzo(k)Fluoranthene	207089	☒	☐	1	grab	8270C/D	5.21	<5.21			
e. Chrysene	21801	☒	☐	1	grab	8270C/D	5.21	<5.21			
f. Dibenzo(a,h)anthracene	53703	☒	☐	1	grab	8270C/D	5.21	<5.21			
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	1	grab	8270C/D	5.21	<5.21			
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	grab	8270C/D	5.21	<5.21			

⁴ The sum of individual phthalate compounds.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
h. Acenaphthene	83329	☒	☐	1	grab	8270C/D	5.21	<5.21			
i. Acenaphthylene	208968	☒	☐	1	grab	8270C/D	5.21	<5.21			
j. Anthracene	120127	☒	☐	1	grab	8270C/D	5.21	<5.21			
k. Benzo(ghi) Perylene	191242	☒	☐	1	grab	8270C/D	5.21	<5.21			
l. Fluoranthene	206440	☒	☐	1	grab	8270C/D	5.21	<5.21			
m. Fluorene	86737	☒	☐	1	grab	8270C/D	5.21	<5.21			
n. Naphthalene	91203	☒	☐	1	grab	8270C/D	5.21	<5.21			
o. Phenanthrene	85018	☒	☐	1	grab	8270C/D	5.21	<5.21			
p. Pyrene	129000	☒	☐	1	grab	8270C/D	5.21	<5.21			
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	1	grab	60B	0.065	<0.065			
38. Chloride	16887006	☐	☒	1	grab	300.0	10,000	135,000	18.4		
39. Antimony	7440360	☒	☐	1	grab	200.7	6	<6			
40. Arsenic	7440382	☒	☐	1	grab	200.7	4	<4			
41. Cadmium	7440439	☒	☐	1	grab	20.8	0.2	<0.2			
42. Chromium III (trivalent)	16065831	☐	☒	1	grab	200.7	5	8	0.0011		
43. Chromium VI (hexavalent)	18540299	☒	☐	1	grab	7196A	5	<5			
44. Copper	7440508	☒	☐	1	grab	200.7	5	<5			
45. Lead	7439921	☐	☒	1	grab	200.8	0.2	0.3	0.00004		
46. Mercury	7439976	☒	☐	1	grab	200.7	0.2	<0.2			
47. Nickel	7440020	☒	☐	1	grab	200.7	5	<5			
48. Selenium	7782492	☒	☐	1	grab	200.8	0.2	<0.2			
49. Silver	7440224	☐	☒	1	grab	200.8	0.2	0.2	0.00003		
50. Zinc	7440666	☐	☒	1	grab	200.7	5	43.7	0.006		
51. Iron	7439896	☐	☒	1	grab	200.7	15	96.2	0.013		
Other (describe):		☐	☐								

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

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

<i>Step 1:</i> Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y ☐ N ☒	If yes, which metals?
<i>Step 2:</i> For any metals which exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? 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:

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:

VOC impacted groundwater is pumped from 3 recovery wells with treatment through a settling tank, bag filters, a shallow tray air stripper, and liquid phase granular activated carbon. Water is then discharged into a catch basin which discharges to the Ten Mile River.

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):			

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

Average flow rate of discharge gpm Maximum flow rate of treatment system gpm

Design flow rate of treatment system gpm

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

None

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

a) Identify the discharge pathway:

Direct to
receiving
water ☐

Within facility
(sewer) ☐

Storm
drain ☒

Wetlands ☐

Other (describe):

Ten Mile River

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

Discharge to catch basin which discharges into the Ten Mile River.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:

1. For multiple discharges, number the discharges sequentially.

2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water

The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

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

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water cfs

Please attach any calculation sheets used to support stream flow and dilution calculations.

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

Algae, fecal coliform, turbidity, and phosphorus.

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 ☐

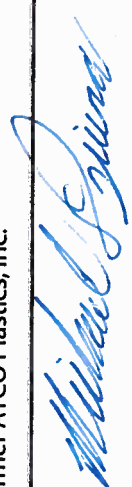
f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

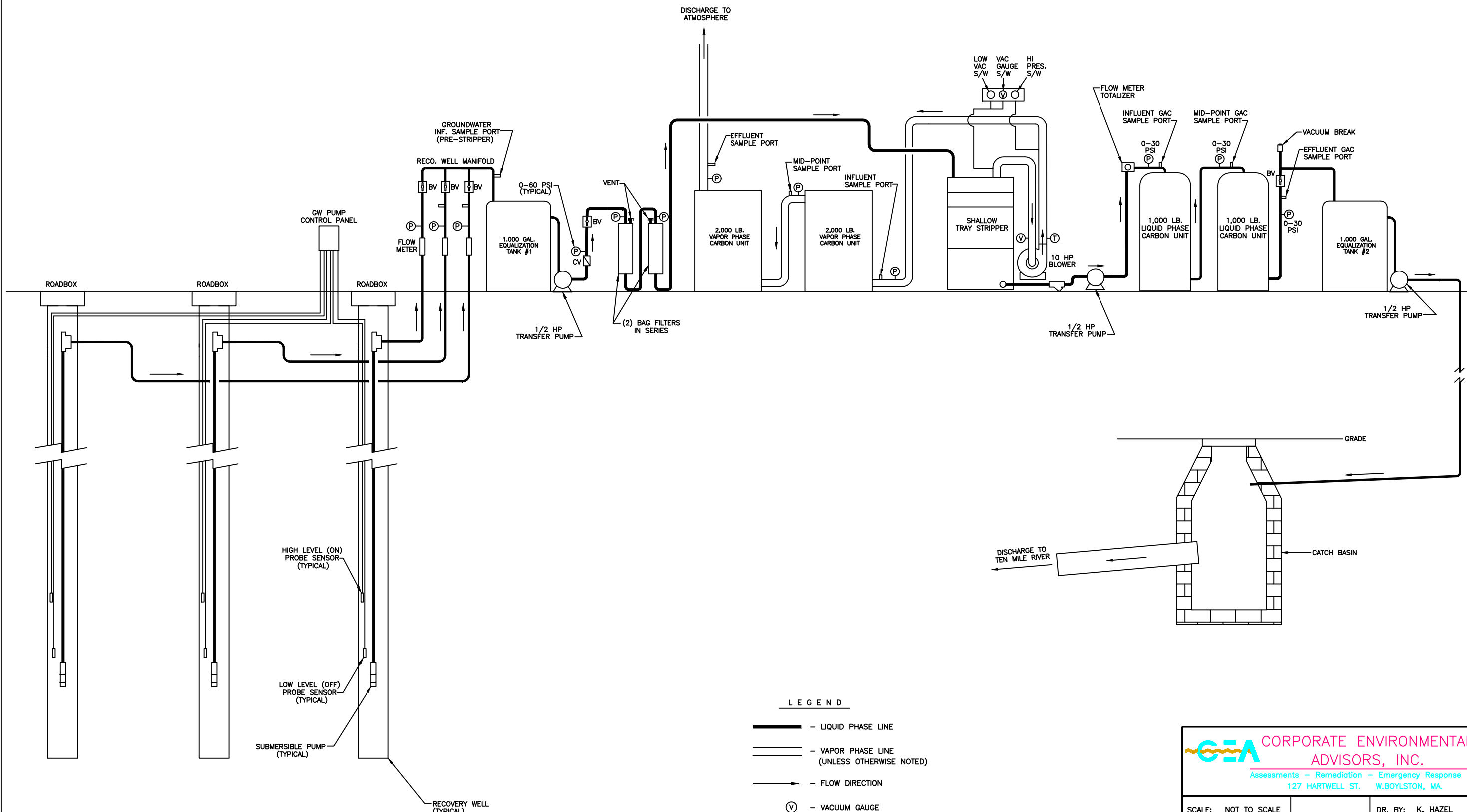
7. Supplemental information.

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

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 ATCO Plastics, Inc.
Operator signature:	
Printed Name & Title:	Michael J. Dziura, PE, Sr. Environmental Engineer
Date:	12-7-10





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

SCALE:	NOT TO SCALE	DR. BY:	K. HAZEL
DATE:	9/7/10	APP. BY:	JH
		JOB NO.:	6108-06

SYSTEM FLOW DIAGRAM	
FORMER ATCO PLASTICS 31 WEST BACON STREET PLAINVILLE, MA	FIGURE-1

Report Date:
01-Sep-10 15:03



SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

- ☒ Final Report
☐ Re-Issued Report
☐ Revised Report

CEA, Inc.
127 Hartwell Street, Suite 2
West Boylston, MA 01583
Attn: John Harvey

Project: Former ATCO Plastics Inc - Plainville, MA
Project #: 6108-06

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB17163-01	Influent	Ground Water	24-Aug-10 09:00	24-Aug-10 17:00
SB17163-02	Midpoint	Ground Water	24-Aug-10 09:30	24-Aug-10 17:00
SB17163-03	Effluent	Ground Water	24-Aug-10 10:00	24-Aug-10 17:00

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
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

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 42 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).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 5.8 degrees Celsius. 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 200.8**Samples:**

SB17163-01 *Influent*

Data confirmed with duplicate analysis.

Lead

SB17163-03 *Effluent*

Data confirmed with duplicate analysis.

Lead

EPA 335.4 / SW846 9012A**Laboratory Control Samples:**

1018465 SRM

Cyanide (total) percent recovery 164 (62.7-136.6) 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:

Influent

SW846 8260B/C**Calibration:**

1007015

Analyte quantified by quadratic equation type calibration.

1,2,3-Trichlorobenzene

1,2,4-Trichlorobenzene

Naphthalene

This affected the following samples:

1018241-BLK1

1018241-BS1

1018241-BSD1

1018241-MS1

1018241-MSD1

Influent

S006951-ICV1

S007945-CCV1

1008028

Calibration:

1008028

Analyte quantified by quadratic equation type calibration.

trans-1,3-Dichloropropene

This affected the following samples:

1018353-BLK1
1018353-BS1
1018353-BSD1
S007908-ICV1
S007992-CCV1

S007908-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

Methyl tert-butyl ether (164%)

This affected the following samples:

1018353-BLK1
1018353-BS1
1018353-BSD1
Influent
S007992-CCV1

Laboratory Control Samples:

1018241 BS/BSD

Tert-Butanol / butyl alcohol percent recoveries (71/68) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Influent

Spikes:

1018241-MS1 *Source: SB17163-01*

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

Bromomethane
Carbon disulfide
Chloromethane
Dichlorodifluoromethane (Freon12)
Tert-Butanol / butyl alcohol
Vinyl chloride

1018241-MSD1 *Source: SB17163-01*

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

Bromomethane
Carbon disulfide
Chloromethane
Dichlorodifluoromethane (Freon12)
Vinyl chloride

Samples:

S007945-CCV1

SW846 8260B/C**Samples:**

S007945-CCV1

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

Methyl tert-butyl ether (-23.6%)

Tert-Butanol / butyl alcohol (-29.2%)

This affected the following samples:

1018241-BLK1

1018241-BS1

1018241-BSD1

1018241-MS1

1018241-MSD1

Influent

S007992-CCV1

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

1,1,1,2-Tetrachloroethane (20.8%)

Chloromethane (-29.8%)

This affected the following samples:

1018353-BLK1

1018353-BS1

1018353-BSD1

SB17163-01

Influent

The concentration indicated for this analyte is an estimated value. This value is considered an estimate (CLP E-flag).

Trichloroethene

SW846 8270C/D**Calibration:**

0902012

Analyte quantified by quadratic equation type calibration.

4,6-Dinitro-2-methylphenol

Bis(2-chloroisopropyl)ether

Hexachlorocyclopentadiene

1006048

Analyte quantified by quadratic equation type calibration.

2,4-Dinitrophenol

2-Nitrophenol

Benzidine

This affected the following samples:

1018111-BLK1

1018111-BS1

1018111-BSD1

Influent

S005845-ICV1

S007964-CCV1

S005845-ICV1

Calibration:

S005845-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

Benzidine (255%)

This affected the following samples:

1018111-BLK1

1018111-BS1

1018111-BSD1

Influent

S007964-CCV1

S008087-CCV1

Laboratory Control Samples:

1018111 BS/BSD

4-Nitrophenol percent recoveries (34/30) 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:

Influent

Benzoic acid 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:

Influent

N-Nitrosodimethylamine percent recoveries (40/35) 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:

Influent

Phenol percent recoveries (25/22) 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:

Influent

Pyridine percent recoveries (39/35) 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:

Influent

1018111 BSD

1,2,4,5-Tetrachlorobenzene RPD 21% (20%) is outside individual acceptance criteria, but within overall method allowances.

1,2,4-Trichlorobenzene RPD 21% (20%) is outside individual acceptance criteria, but within overall method allowances.

1,2-Dichlorobenzene RPD 27% (20%) is outside individual acceptance criteria, but within overall method allowances.

1,3-Dichlorobenzene RPD 25% (20%) is outside individual acceptance criteria, but within overall method allowances.

1,4-Dichlorobenzene RPD 24% (20%) is outside individual acceptance criteria, but within overall method allowances.

1-Methylnaphthalene RPD 21% (20%) is outside individual acceptance criteria, but within overall method allowances.

2-Methylnaphthalene RPD 22% (20%) is outside individual acceptance criteria, but within overall method allowances.

Hexachlorobutadiene RPD 24% (20%) is outside individual acceptance criteria, but within overall method allowances.

Laboratory Control Samples:

1018111 BSD

Hexachlorocyclopentadiene RPD 28% (20%) is outside individual acceptance criteria, but within overall method allowances.

Hexachloroethane RPD 24% (20%) is outside individual acceptance criteria, but within overall method allowances.

Naphthalene RPD 23% (20%) is outside individual acceptance criteria, but within overall method allowances.

Samples:

S007964-CCV1

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

3,3'-Dichlorobenzidine (43.0%)
4-Chloroaniline (-23.7%)
4-Chlorophenyl phenyl ether (28.3%)
Aniline (-42.9%)
Chrysene (22.1%)
Diethyl phthalate (33.5%)
Hexachlorobutadiene (37.0%)
N-Nitrosodimethylamine (-20.3%)
N-Nitrosodiphenylamine (28.0%)
Pentachloronitrobenzene (37.6%)
Pyridine (-23.1%)

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

2,4-Dinitrophenol (32.7%)
4,6-Dinitro-2-methylphenol (37.4%)
Benzidine (-57.7%)
Hexachlorocyclopentadiene (-23.5%)

This affected the following samples:

1018111-BLK1
1018111-BS1
1018111-BSD1

Sample Identification**Influent**

SB17163-01

Client Project #

6108-06

Matrix

Ground Water

Collection Date/Time

24-Aug-10 09:00

Received

24-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic CompoundsPrepared by method SW846 5030 Water MS

67-64-1	Acetone	BRL		µg/l	10.0	1	SW846 8260B/C	26-Aug-10	26-Aug-10	ek	1018241	
71-43-2	Benzene	BRL		µg/l	0.5	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL		µg/l	1.0	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL		µg/l	0.5	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	0.5	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	0.5	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	0.5	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	0.9		µg/l	0.5	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		µg/l	0.5	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	1.2		µg/l	0.5	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	7.1		µg/l	0.5	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL		µg/l	0.5	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	0.5	1	"	"	"	"	"	
75-09-2	Methylene chloride	BRL		µg/l	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL		µg/l	0.5	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	4.9		µg/l	0.5	1	"	"	"	"	"	
108-88-3	Toluene	BRL		µg/l	0.5	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	2.7		µg/l	0.5	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	0.5	1	"	"	"	"	"	
79-01-6	Trichloroethene	58.9	E	µg/l	0.5	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL		µg/l	0.5	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	BRL		µg/l	1.0	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL		µg/l	0.5	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL		µg/l	0.5	1	"	"	"	"	"	
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	88			70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	106			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	99			70-130 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	103			70-130 %		"	"	"	"	"	

Re-analysis of Volatile Organic CompoundsPrepared by method SW846 5030 Water MS

67-64-1	Acetone	BRL		µg/l	10.0	1	SW846 8260B/C	27-Aug-10	28-Aug-10	JLG	1018353	
71-43-2	Benzene	BRL		µg/l	0.5	1	"	"	"	"	"	
74-97-5	Bromochloromethane	BRL		µg/l	1.0	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL		µg/l	0.5	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	0.5	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	0.5	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	0.5	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	0.9		µg/l	0.5	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		µg/l	0.5	1	"	"	"	"	"	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification**Influent**

SB17163-01

Client Project #

6108-06

Matrix

Ground Water

Collection Date/Time

24-Aug-10 09:00

Received

24-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic CompoundsPrepared by method SW846 5030 Water MSRe-analysis of Volatile Organic CompoundsPrepared by method SW846 5030 Water MS

75-35-4	1,1-Dichloroethene	1.1		µg/l	0.5	1	SW846 8260B/C	27-Aug-10	28-Aug-10	JLG	1018353	
156-59-2	cis-1,2-Dichloroethene	7.7		µg/l	0.5	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL		µg/l	0.5	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	0.5	1	"	"	"	"	"	
75-09-2	Methylene chloride	BRL		µg/l	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL		µg/l	0.5	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	5.0		µg/l	0.5	1	"	"	"	"	"	
108-88-3	Toluene	BRL		µg/l	0.5	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	3.0		µg/l	0.5	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	0.5	1	"	"	"	"	"	
79-01-6	Trichloroethene	56.0		µg/l	0.5	1	"	"	"	"	"	
75-01-4	Vinyl chloride	BRL		µg/l	0.5	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	BRL		µg/l	1.0	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL		µg/l	0.5	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL		µg/l	0.5	1	"	"	"	"	"	
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	97			70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	101			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	98			70-130 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	102			70-130 %		"	"	"	"	"	

Microextractable Organic Compounds

106-93-4	1,2-Dibromoethane (EDB)	BRL		µg/l	0.0100	1	EPA 504.1	30-Aug-10	30-Aug-10	TG	1018470	
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Semivolatile Organic Compounds by GCMSSemivolatile Organic Compounds by SW846 8270CPrepared by method SW846 3510CRe-analysis of Semivolatile Organic Compounds by SW846 8270CPrepared by method SW846 3510C

83-32-9	Acenaphthene	BRL		µg/l	5.21	1	SW846 8270C/D	25-Aug-10	31-Aug-10	SM	1018111	
208-96-8	Acenaphthylene	BRL		µg/l	5.21	1	"	"	"	"	"	
62-53-3	Aniline	BRL		µg/l	5.21	1	"	"	"	"	"	
120-12-7	Anthracene	BRL		µg/l	5.21	1	"	"	"	"	"	
103-33-3	Azobenzene/Diphenyldiazine	BRL		µg/l	5.21	1	"	"	"	"	"	
92-87-5	Benzidine	BRL		µg/l	5.21	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	BRL		µg/l	5.21	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	BRL		µg/l	5.21	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BRL		µg/l	5.21	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BRL		µg/l	5.21	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BRL		µg/l	5.21	1	"	"	"	"	"	
65-85-0	Benzoic acid	BRL		µg/l	5.21	1	"	"	"	"	"	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification**Influent**

SB17163-01

Client Project #

6108-06

Matrix

Ground Water

Collection Date/Time

24-Aug-10 09:00

Received

24-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS												
<u>Semivolatile Organic Compounds by SW846 8270C</u>												
<u>Prepared by method SW846 3510C</u>												
<u>Re-analysis of Semivolatile Organic Compounds by SW846 8270C</u>												
<u>Prepared by method SW846 3510C</u>												
100-51-6	Benzyl alcohol	BRL		µg/l	5.21	1	SW846 8270C/D	25-Aug-10	31-Aug-10	SM	1018111	
111-91-1	Bis(2-chloroethoxy)methane	BRL		µg/l	5.21	1	"	"	"	"	"	
111-44-4	Bis(2-chloroethyl)ether	BRL		µg/l	5.21	1	"	"	"	"	"	
108-60-1	Bis(2-chloroisopropyl)ether	BRL		µg/l	5.21	1	"	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	BRL		µg/l	5.21	1	"	"	"	"	"	
101-55-3	4-Bromophenyl phenyl ether	BRL		µg/l	5.21	1	"	"	"	"	"	
85-68-7	Butyl benzyl phthalate	BRL		µg/l	5.21	1	"	"	"	"	"	
86-74-8	Carbazole	BRL		µg/l	5.21	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	BRL		µg/l	5.21	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	BRL		µg/l	5.21	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	BRL		µg/l	5.21	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	BRL		µg/l	5.21	1	"	"	"	"	"	
7005-72-3	4-Chlorophenyl phenyl ether	BRL		µg/l	5.21	1	"	"	"	"	"	
218-01-9	Chrysene	BRL		µg/l	5.21	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/l	5.21	1	"	"	"	"	"	
132-64-9	Dibenzofuran	BRL		µg/l	5.21	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	5.21	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	5.21	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	5.21	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	BRL		µg/l	5.21	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	BRL		µg/l	5.21	1	"	"	"	"	"	
84-66-2	Diethyl phthalate	BRL		µg/l	5.21	1	"	"	"	"	"	
131-11-3	Dimethyl phthalate	BRL		µg/l	5.21	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	BRL		µg/l	5.21	1	"	"	"	"	"	
84-74-2	Di-n-butyl phthalate	BRL		µg/l	5.21	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	BRL		µg/l	5.21	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	BRL		µg/l	5.21	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	BRL		µg/l	5.21	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	BRL		µg/l	5.21	1	"	"	"	"	"	
117-84-0	Di-n-octyl phthalate	BRL		µg/l	5.21	1	"	"	"	"	"	
206-44-0	Fluoranthene	BRL		µg/l	5.21	1	"	"	"	"	"	
86-73-7	Fluorene	BRL		µg/l	5.21	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	BRL		µg/l	5.21	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL		µg/l	5.21	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	BRL		µg/l	5.21	1	"	"	"	"	"	
67-72-1	Hexachloroethane	BRL		µg/l	5.21	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/l	5.21	1	"	"	"	"	"	
78-59-1	Isophorone	BRL		µg/l	5.21	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	BRL		µg/l	5.21	1	"	"	"	"	"	
95-48-7	2-Methylphenol	BRL		µg/l	5.21	1	"	"	"	"	"	
108-39-4, 106-44-5	3 & 4-Methylphenol	BRL		µg/l	10.4	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL		µg/l	5.21	1	"	"	"	"	"	

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* Reportable Detection Limit

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Sample Identification**Influent**

SB17163-01

Client Project #

6108-06

Matrix

Ground Water

Collection Date/Time

24-Aug-10 09:00

Received

24-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMSSemivolatile Organic Compounds by SW846 8270CPrepared by method SW846 3510CRe-analysis of Semivolatile Organic Compounds by SW846 8270CPrepared by method SW846 3510C

88-74-4	2-Nitroaniline	BRL		µg/l	5.21	1	SW846 8270C/D	25-Aug-10	31-Aug-10	SM	1018111	
99-09-2	3-Nitroaniline	BRL		µg/l	5.21	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	BRL		µg/l	20.8	1	"	"	"	"	"	
98-95-3	Nitrobenzene	BRL		µg/l	5.21	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	BRL		µg/l	5.21	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	BRL		µg/l	20.8	1	"	"	"	"	"	
62-75-9	N-Nitrosodimethylamine	BRL		µg/l	5.21	1	"	"	"	"	"	
621-64-7	N-Nitrosodi-n-propylamine	BRL		µg/l	5.21	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	BRL		µg/l	5.21	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	BRL		µg/l	20.8	1	"	"	"	"	"	
85-01-8	Phenanthrene	BRL		µg/l	5.21	1	"	"	"	"	"	
108-95-2	Phenol	BRL		µg/l	5.21	1	"	"	"	"	"	
129-00-0	Pyrene	BRL		µg/l	5.21	1	"	"	"	"	"	
110-86-1	Pyridine	BRL		µg/l	5.21	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/l	5.21	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	BRL		µg/l	5.21	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	BRL		µg/l	5.21	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	BRL		µg/l	5.21	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	BRL		µg/l	5.21	1	"	"	"	"	"	
95-94-3	1,2,4,5-Tetrachlorobenzene	BRL		µg/l	5.21	1	"	"	"	"	"	

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	46			30-130 %		"	"	"	"	"	
367-12-4	2-Fluorophenol	34			15-110 %		"	"	"	"	"	
4165-60-0	Nitrobenzene-d5	45			30-130 %		"	"	"	"	"	
4165-62-2	Phenol-d5	22			15-110 %		"	"	"	"	"	
1718-51-0	Terphenyl-d14	60			30-130 %		"	"	"	"	"	
118-79-6	2,4,6-Tribromophenol	68			15-110 %		"	"	"	"	"	

Semivolatile Organic Compounds by GCPolychlorinated Biphenyls by EPA 608Prepared by method SW846 3510C

12674-11-2	Aroclor-1016	BRL		µg/l	0.0650	1	EPA 608	27-Aug-10	27-Aug-10	IMR	1018319	X
11104-28-2	Aroclor-1221	BRL		µg/l	0.0650	1	"	"	"	"	"	X
11141-16-5	Aroclor-1232	BRL		µg/l	0.0650	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	BRL		µg/l	0.0650	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	BRL		µg/l	0.0650	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	BRL		µg/l	0.0650	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	BRL		µg/l	0.0650	1	"	"	"	"	"	X
37324-23-5	Aroclor-1262	BRL		µg/l	0.0650	1	"	"	"	"	"	
11100-14-4	Aroclor-1268	BRL		µg/l	0.0650	1	"	"	"	"	"	

Surrogate recoveries:

10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	77			30-150 %		"	"	"	"	"	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	65			30-150 %		"	"	"	"	"	

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Sample Identification**Influent**

SB17163-01

Client Project #

6108-06

Matrix

Ground Water

Collection Date/Time

24-Aug-10 09:00

Received

24-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GC												
<u>Polychlorinated Biphenyls by EPA 608</u>												
<u>Prepared by method SW846 3510C</u>												
2051-24-3	Decachlorobiphenyl (Sr)	57			30-150 %		EPA 608	27-Aug-10	27-Aug-10	IMR	1018319	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	60			30-150 %		"	"	"	"	"	
Extractable Petroleum Hydrocarbons												
	Non-polar material (SGT-HEM)	BRL		mg/l	1.0	1	EPA 1664 Rev. A	27-Aug-10	31-Aug-10	JK	1018317	
Total Metals by EPA 200 Series Methods												
7440-22-4	Silver	BRL		mg/l	0.0050	1	EPA 200.7	27-Aug-10	30-Aug-10	JB	1018351	X
7440-38-2	Arsenic	BRL		mg/l	0.0040	1	"	"	30-Aug-10	"	"	X
7440-43-9	Cadmium	BRL		mg/l	0.0025	1	"	"	30-Aug-10	"	"	X
7440-47-3	Chromium	0.0080		mg/l	0.0050	1	"	"	"	"	"	X
7440-50-8	Copper	BRL		mg/l	0.0050	1	"	"	30-Aug-10	"	"	X
7439-89-6	Iron	0.0962		mg/l	0.0150	1	"	"	30-Aug-10	"	"	X
7439-97-6	Mercury	BRL		mg/l	0.00020	1	EPA 245.1/7470A	"	30-Aug-10	ARF	1018358	X
7440-02-0	Nickel	BRL		mg/l	0.0050	1	EPA 200.7	"	30-Aug-10	JB	1018351	X
7439-92-1	Lead	0.0003	V11	mg/l	0.0002	1	EPA 200.8	"	31-Aug-10	TBG	1018354	X
7440-36-0	Antimony	BRL		mg/l	0.0060	1	EPA 200.7	"	30-Aug-10	JB	1018351	X
7782-49-2	Selenium	BRL		mg/l	0.0150	1	"	"	"	"	"	X
7440-66-6	Zinc	0.0437		mg/l	0.0050	1	"	"	"	"	"	X
General Chemistry Parameters												
16065-83-1	Trivalent Chromium	0.0080		mg/l	0.0050	1	Calculation	27-Aug-10	30-Aug-10	JB	1018351	
18540-29-9	Hexavalent Chromium	BRL		mg/l	0.005	1	SW846 7196A/SM3500CrD	24-Aug-10 18:55	24-Aug-10 18:55	TDD	1018092	
57-12-5	Cyanide (total)	BRL		mg/l	0.00500	1	EPA 335.4 / SW846 9012A	30-Aug-10	30-Aug-10	eem	1018465	X
7782-50-5	Total Residual Chlorine	BRL	CIHT	mg/l	0.020	1	Hach 8167	24-Aug-10 18:57	24-Aug-10 18:57	TDD	1018093	X
	Total Suspended Solids	BRL		mg/l	5.00	1	SM2540D	25-Aug-10	25-Aug-10	SJL	1018179	X

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification

Midpoint	<u>Client Project #</u>	<u>Matrix</u>	<u>Collection Date/Time</u>	<u>Received</u>
SB17163-02	6108-06	Ground Water	24-Aug-10 09:30	24-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Halocarbons by SW846 8260BPrepared by method SW846 5030 Water MS

156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	1.0	1	SW846 8260B/C	26-Aug-10	26-Aug-10	ek	1018241	
127-18-4	Tetrachloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	89			70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	105			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	99			70-130 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	105			70-130 %		"	"	"	"	"	

Sample Identification**Effluent**

SB17163-03

Client Project #

6108-06

Matrix

Ground Water

Collection Date/Time

24-Aug-10 10:00

Received

24-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Halocarbons by SW846 8260BPrepared by method SW846 5030 Water MS

156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	1.0	1	SW846 8260B/C	26-Aug-10	26-Aug-10	ek	1018241	
127-18-4	Tetrachloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"	
79-01-6	Trichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"	

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	87			70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	105			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	100			70-130 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	105			70-130 %		"	"	"	"	"	

Total Metals by EPA 200 Series Methods

7440-50-8	Copper	BRL		mg/l	0.0050	1	EPA 200.7	27-Aug-10	30-Aug-10	JB	1018351	X
7439-89-6	Iron	0.0268		mg/l	0.0150	1	"	"	30-Aug-10	"	"	X
7440-02-0	Nickel	0.0098		mg/l	0.0050	1	"	"	"	"	"	X
7439-92-1	Lead	0.0021	V11	mg/l	0.0002	1	EPA 200.8	"	31-Aug-10	TBG	1018354	X
7440-66-6	Zinc	0.0353		mg/l	0.0050	1	EPA 200.7	"	30-Aug-10	JB	1018351	X

General Chemistry Parameters

7782-50-5	Total Residual Chlorine	BRL	CIHT	mg/l	0.020	1	Hach 8167	24-Aug-10 18:57	24-Aug-10 18:57	TDD	1018093	X
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>Blank (1018241-BLK1)</u>	<u>Prepared & Analyzed: 26-Aug-10</u>									
Acetone	BRL		µg/l	10.0						
Acrylonitrile	BRL		µg/l	1.0						
Benzene	BRL		µg/l	0.5						
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						
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	5.0						
Carbon tetrachloride	BRL		µg/l	0.5						
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	1.0						
Dibromomethane	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	0.5						
1,3-Dichlorobenzene	BRL		µg/l	1.0						
1,3-Dichlorobenzene	BRL		µg/l	0.5						
1,4-Dichlorobenzene	BRL		µg/l	1.0						
1,4-Dichlorobenzene	BRL		µg/l	0.5						
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
1,1-Dichloroethane	BRL		µg/l	1.0						
1,1-Dichloroethane	BRL		µg/l	0.5						
1,2-Dichloroethane	BRL		µg/l	0.5						
1,2-Dichloroethane	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	0.5						
cis-1,2-Dichloroethene	BRL		µg/l	1.0						
cis-1,2-Dichloroethene	BRL		µg/l	0.5						
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						

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* Reportable Detection Limit

BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>Blank (1018241-BLK1)</u>	<u>Prepared & Analyzed: 26-Aug-10</u>									
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	0.5						
cis-1,3-Dichloropropene	BRL		µg/l	1.0						
trans-1,3-Dichloropropene	BRL		µg/l	0.5						
trans-1,3-Dichloropropene	BRL		µg/l	1.0						
Ethylbenzene	BRL		µg/l	0.5						
Hexachlorobutadiene	BRL		µg/l	1.0						
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	0.5						
4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0						
Methylene chloride	BRL		µg/l	1.0						
Methylene chloride	BRL		µg/l	2.0						
Naphthalene	BRL		µg/l	0.5						
n-Propylbenzene	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	1.0						
1,1,2,2-Tetrachloroethane	BRL		µg/l	0.5						
Tetrachloroethene	BRL		µg/l	0.5						
Tetrachloroethene	BRL		µg/l	1.0						
Toluene	BRL		µg/l	0.5						
1,2,3-Trichlorobenzene	BRL		µg/l	1.0						
1,2,4-Trichlorobenzene	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	1.0						
1,3,5-Trichlorobenzene	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	0.5						
1,1,2-Trichloroethane	BRL		µg/l	0.5						
1,1,2-Trichloroethane	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	0.5						
Trichlorofluoromethane (Freon 11)	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	0.5						
Vinyl chloride	BRL		µg/l	1.0						
m,p-Xylene	BRL		µg/l	1.0						
o-Xylene	BRL		µg/l	0.5						
Tetrahydrofuran	BRL		µg/l	10.0						
Ethyl ether	BRL		µg/l	1.0						
Tert-amyl methyl ether	BRL		µg/l	0.5						
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						
trans-1,4-Dichloro-2-butene	BRL		µg/l	5.0						
Ethanol	BRL		µg/l	500						

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* Reportable Detection Limit

BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>Blank (1018241-BLK1)</u>					<u>Prepared & Analyzed: 26-Aug-10</u>					
1,4-Dioxane	BRL		µg/l	20.0						
Surrogate: 4-Bromofluorobenzene	43.8		µg/l		50.0		88	70-130		
Surrogate: 4-Bromofluorobenzene	43.8		µg/l		50.0		88	70-130		
Surrogate: Toluene-d8	52.6		µg/l		50.0		105	70-130		
Surrogate: Toluene-d8	52.6		µg/l		50.0		105	70-130		
Surrogate: 1,2-Dichloroethane-d4	49.4		µg/l		50.0		99	70-130		
Surrogate: 1,2-Dichloroethane-d4	49.4		µg/l		50.0		99	70-130		
Surrogate: Dibromofluoromethane	52.4		µg/l		50.0		105	70-130		
Surrogate: Dibromofluoromethane	52.4		µg/l		50.0		105	70-130		
<u>LCS (1018241-BS1)</u>					<u>Prepared & Analyzed: 26-Aug-10</u>					
Acetone	16.2		µg/l		20.0		81	31.7-144		
Acrylonitrile	17.8		µg/l		20.0		89	70-130		
Benzene	20.5		µg/l		20.0		102	70-130		
Bromobenzene	18.7		µg/l		20.0		94	70-130		
Bromochloromethane	19.1		µg/l		20.0		95	70-130		
Bromodichloromethane	18.1		µg/l		20.0		90	70-130		
Bromodichloromethane	18.1		µg/l		20.0		90	70-130		
Bromoform	17.0		µg/l		20.0		85	70-130		
Bromoform	17.0		µg/l		20.0		85	70-130		
Bromomethane	19.5		µg/l		20.0		98	43-158		
Bromomethane	19.5		µg/l		20.0		98	70-130		
2-Butanone (MEK)	17.0		µg/l		20.0		85	54.5-137		
n-Butylbenzene	22.1		µg/l		20.0		110	70-130		
sec-Butylbenzene	19.8		µg/l		20.0		99	70-130		
tert-Butylbenzene	21.1		µg/l		20.0		105	70-130		
Carbon disulfide	19.2		µg/l		20.0		96	70-130		
Carbon tetrachloride	18.3		µg/l		20.0		92	70-130		
Carbon tetrachloride	18.3		µg/l		20.0		92	70-130		
Chlorobenzene	20.1		µg/l		20.0		101	70-130		
Chlorobenzene	20.1		µg/l		20.0		101	70-130		
Chloroethane	19.8		µg/l		20.0		99	70-130		
Chloroethane	19.8		µg/l		20.0		99	60.1-131		
Chloroform	19.0		µg/l		20.0		95	70-130		
Chloroform	19.0		µg/l		20.0		95	70-130		
Chloromethane	19.6		µg/l		20.0		98	70-130		
Chloromethane	19.6		µg/l		20.0		98	70-130		
2-Chlorotoluene	20.8		µg/l		20.0		104	70-130		
4-Chlorotoluene	20.3		µg/l		20.0		102	70-130		
1,2-Dibromo-3-chloropropane	17.5		µg/l		20.0		87	70-130		
Dibromochloromethane	18.3		µg/l		20.0		92	66.2-145		
Dibromochloromethane	18.3		µg/l		20.0		92	70-130		
1,2-Dibromoethane (EDB)	18.3		µg/l		20.0		91	70-130		
Dibromomethane	19.2		µg/l		20.0		96	70-130		
1,2-Dichlorobenzene	20.3		µg/l		20.0		101	70-130		
1,2-Dichlorobenzene	20.3		µg/l		20.0		101	70-130		
1,3-Dichlorobenzene	19.4		µg/l		20.0		97	70-130		
1,3-Dichlorobenzene	19.4		µg/l		20.0		97	70-130		
1,4-Dichlorobenzene	20.0		µg/l		20.0		100	70-130		
1,4-Dichlorobenzene	20.0		µg/l		20.0		100	70-130		
Dichlorodifluoromethane (Freon12)	20.2		µg/l		20.0		101	70-130		
Dichlorodifluoromethane (Freon12)	20.2		µg/l		20.0		101	46.9-168		

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>LCS (1018241-BS1)</u>	<u>Prepared & Analyzed: 26-Aug-10</u>									
1,1-Dichloroethane	17.7		µg/l		20.0		88	70-130		
1,1-Dichloroethane	17.7		µg/l		20.0		88	70-130		
1,2-Dichloroethane	18.7		µg/l		20.0		94	70-130		
1,2-Dichloroethane	18.7		µg/l		20.0		94	70-130		
1,1-Dichloroethene	19.4		µg/l		20.0		97	70-130		
1,1-Dichloroethene	19.4		µg/l		20.0		97	70-130		
cis-1,2-Dichloroethene	20.4		µg/l		20.0		102	70-130		
cis-1,2-Dichloroethene	20.4		µg/l		20.0		102	70-130		
trans-1,2-Dichloroethene	19.1		µg/l		20.0		96	70-130		
trans-1,2-Dichloroethene	19.1		µg/l		20.0		96	70-130		
1,2-Dichloropropane	19.7		µg/l		20.0		98	70-130		
1,2-Dichloropropane	19.7		µg/l		20.0		98	70-130		
1,3-Dichloropropane	19.3		µg/l		20.0		97	70-130		
2,2-Dichloropropane	17.7		µg/l		20.0		88	70-130		
1,1-Dichloropropene	19.2		µg/l		20.0		96	70-130		
cis-1,3-Dichloropropene	17.8		µg/l		20.0		89	70-130		
cis-1,3-Dichloropropene	17.8		µg/l		20.0		89	70-130		
trans-1,3-Dichloropropene	18.0		µg/l		20.0		90	70-130		
trans-1,3-Dichloropropene	18.0		µg/l		20.0		90	70-130		
Ethylbenzene	20.3		µg/l		20.0		101	70-130		
Hexachlorobutadiene	19.9		µg/l		20.0		99	70-135		
2-Hexanone (MBK)	18.2		µg/l		20.0		91	70-130		
Isopropylbenzene	19.9		µg/l		20.0		100	70-130		
4-Isopropyltoluene	21.9		µg/l		20.0		109	70-130		
Methyl tert-butyl ether	15.3		µg/l		20.0		76	70-130		
4-Methyl-2-pentanone (MIBK)	18.4		µg/l		20.0		92	57.6-130		
Methylene chloride	19.4		µg/l		20.0		97	70-130		
Methylene chloride	19.4		µg/l		20.0		97	70-130		
Naphthalene	16.3		µg/l		20.0		82	70-130		
n-Propylbenzene	20.9		µg/l		20.0		105	70-130		
Styrene	21.0		µg/l		20.0		105	70-130		
1,1,1,2-Tetrachloroethane	18.4		µg/l		20.0		92	70-130		
1,1,2,2-Tetrachloroethane	20.5		µg/l		20.0		103	70-130		
1,1,2,2-Tetrachloroethane	20.5		µg/l		20.0		103	70-130		
Tetrachloroethene	18.2		µg/l		20.0		91	70-130		
Tetrachloroethene	18.2		µg/l		20.0		91	70-130		
Toluene	20.4		µg/l		20.0		102	70-130		
1,2,3-Trichlorobenzene	18.8		µg/l		20.0		94	70-130		
1,2,4-Trichlorobenzene	17.7		µg/l		20.0		89	70-130		
1,1,1-Trichloroethane	17.5		µg/l		20.0		88	70-130		
1,1,1-Trichloroethane	17.5		µg/l		20.0		88	70-130		
1,3,5-Trichlorobenzene	20.8		µg/l		20.0		104	70-130		
1,1,2-Trichloroethane	20.4		µg/l		20.0		102	70-130		
1,1,2-Trichloroethane	20.4		µg/l		20.0		102	70-130		
Trichloroethene	18.9		µg/l		20.0		94	70-130		
Trichloroethene	18.9		µg/l		20.0		94	70-130		
Trichlorofluoromethane (Freon 11)	19.2		µg/l		20.0		96	64.9-147		
Trichlorofluoromethane (Freon 11)	19.2		µg/l		20.0		96	70-130		
1,2,3-Trichloropropane	19.5		µg/l		20.0		98	70-130		
1,2,4-Trimethylbenzene	19.1		µg/l		20.0		95	70-130		
1,3,5-Trimethylbenzene	21.3		µg/l		20.0		107	70-130		
Vinyl chloride	20.2		µg/l		20.0		101	70-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>LCS (1018241-BS1)</u>					<u>Prepared & Analyzed: 26-Aug-10</u>					
Vinyl chloride	20.2		µg/l		20.0		101	70-130		
m,p-Xylene	43.9		µg/l		40.0		110	70-130		
o-Xylene	21.5		µg/l		20.0		108	70-130		
Tetrahydrofuran	19.2		µg/l		20.0		96	70-130		
Ethyl ether	19.2		µg/l		20.0		96	70-130		
Tert-amyl methyl ether	16.2		µg/l		20.0		81	70-130		
Ethyl tert-butyl ether	16.9		µg/l		20.0		84	70-130		
Di-isopropyl ether	18.4		µg/l		20.0		92	70-130		
Tert-Butanol / butyl alcohol	142		µg/l		200		71	70-130		
trans-1,4-Dichloro-2-butene	16.1		µg/l		20.0		80	70-130		
Ethanol	346		µg/l		400		86	70-130		
1,4-Dioxane	164		µg/l		200		82	53.8-137		
Surrogate: 4-Bromofluorobenzene	49.4		µg/l		50.0		99	70-130		
Surrogate: 4-Bromofluorobenzene	49.4		µg/l		50.0		99	70-130		
Surrogate: Toluene-d8	52.3		µg/l		50.0		105	70-130		
Surrogate: Toluene-d8	52.3		µg/l		50.0		105	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.4		µg/l		50.0		93	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.4		µg/l		50.0		93	70-130		
Surrogate: Dibromofluoromethane	50.3		µg/l		50.0		101	70-130		
Surrogate: Dibromofluoromethane	50.3		µg/l		50.0		101	70-130		
<u>LCS Dup (1018241-BS1)</u>					<u>Prepared & Analyzed: 26-Aug-10</u>					
Acetone	16.8		µg/l		20.0		84	31.7-144	4	50
Acrylonitrile	17.4		µg/l		20.0		87	70-130	2	25
Benzene	20.0		µg/l		20.0		100	70-130	2	25
Bromobenzene	18.3		µg/l		20.0		91	70-130	2	25
Bromochloromethane	19.1		µg/l		20.0		96	70-130	0.3	25
Bromodichloromethane	17.5		µg/l		20.0		87	70-130	3	25
Bromodichloromethane	17.5		µg/l		20.0		87	70-130	3	25
Bromoform	17.4		µg/l		20.0		87	70-130	2	25
Bromoform	17.4		µg/l		20.0		87	70-130	2	25
Bromomethane	19.2		µg/l		20.0		96	70-130	1	50
Bromomethane	19.2		µg/l		20.0		96	43-158	1	50
2-Butanone (MEK)	16.6		µg/l		20.0		83	54.5-137	2	50
n-Butylbenzene	21.5		µg/l		20.0		108	70-130	3	25
sec-Butylbenzene	18.4		µg/l		20.0		92	70-130	7	25
tert-Butylbenzene	20.0		µg/l		20.0		100	70-130	5	25
Carbon disulfide	18.6		µg/l		20.0		93	70-130	3	25
Carbon tetrachloride	18.0		µg/l		20.0		90	70-130	2	25
Carbon tetrachloride	18.0		µg/l		20.0		90	70-130	2	25
Chlorobenzene	19.2		µg/l		20.0		96	70-130	5	25
Chlorobenzene	19.2		µg/l		20.0		96	70-130	5	25
Chloroethane	20.3		µg/l		20.0		101	60.1-131	2	50
Chloroethane	20.3		µg/l		20.0		101	70-130	2	50
Chloroform	18.4		µg/l		20.0		92	70-130	3	25
Chloroform	18.4		µg/l		20.0		92	70-130	3	25
Chloromethane	19.6		µg/l		20.0		98	70-130	0.1	25
Chloromethane	19.6		µg/l		20.0		98	70-130	0.1	25
2-Chlorotoluene	19.4		µg/l		20.0		97	70-130	7	25
4-Chlorotoluene	19.3		µg/l		20.0		97	70-130	5	25
1,2-Dibromo-3-chloropropane	16.2		µg/l		20.0		81	70-130	7	25
Dibromochloromethane	18.2		µg/l		20.0		91	70-130	0.8	50

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>LCS Dup (1018241-BSD1)</u>	<u>Prepared & Analyzed: 26-Aug-10</u>									
Dibromochloromethane	18.2		µg/l		20.0		91	66.2-145	0.8	50
1,2-Dibromoethane (EDB)	18.2		µg/l		20.0		91	70-130	0.6	25
Dibromomethane	18.8		µg/l		20.0		94	70-130	2	25
1,2-Dichlorobenzene	19.9		µg/l		20.0		100	70-130	2	25
1,2-Dichlorobenzene	19.9		µg/l		20.0		100	70-130	2	25
1,3-Dichlorobenzene	18.7		µg/l		20.0		93	70-130	4	25
1,3-Dichlorobenzene	18.7		µg/l		20.0		93	70-130	4	25
1,4-Dichlorobenzene	19.2		µg/l		20.0		96	70-130	4	25
1,4-Dichlorobenzene	19.2		µg/l		20.0		96	70-130	4	25
Dichlorodifluoromethane (Freon12)	19.2		µg/l		20.0		96	70-130	5	50
Dichlorodifluoromethane (Freon12)	19.2		µg/l		20.0		96	46.9-168	5	50
1,1-Dichloroethane	17.8		µg/l		20.0		89	70-130	0.5	25
1,1-Dichloroethane	17.8		µg/l		20.0		89	70-130	0.5	25
1,2-Dichloroethane	18.2		µg/l		20.0		91	70-130	3	25
1,2-Dichloroethane	18.2		µg/l		20.0		91	70-130	3	25
1,1-Dichloroethene	18.9		µg/l		20.0		94	70-130	3	25
1,1-Dichloroethene	18.9		µg/l		20.0		94	70-130	3	25
cis-1,2-Dichloroethene	19.8		µg/l		20.0		99	70-130	3	25
cis-1,2-Dichloroethene	19.8		µg/l		20.0		99	70-130	3	25
trans-1,2-Dichloroethene	19.1		µg/l		20.0		96	70-130	0.05	25
trans-1,2-Dichloroethene	19.1		µg/l		20.0		96	70-130	0.05	25
1,2-Dichloropropane	19.7		µg/l		20.0		98	70-130	0.2	25
1,2-Dichloropropane	19.7		µg/l		20.0		98	70-130	0.2	25
1,3-Dichloropropane	19.1		µg/l		20.0		95	70-130	1	25
2,2-Dichloropropane	17.3		µg/l		20.0		86	70-130	3	25
1,1-Dichloropropene	18.7		µg/l		20.0		93	70-130	3	25
cis-1,3-Dichloropropene	17.9		µg/l		20.0		89	70-130	0.3	25
cis-1,3-Dichloropropene	17.9		µg/l		20.0		89	70-130	0.3	25
trans-1,3-Dichloropropene	17.4		µg/l		20.0		87	70-130	3	25
trans-1,3-Dichloropropene	17.4		µg/l		20.0		87	70-130	3	25
Ethylbenzene	19.4		µg/l		20.0		97	70-130	4	25
Hexachlorobutadiene	18.6		µg/l		20.0		93	70-135	7	50
2-Hexanone (MBK)	18.0		µg/l		20.0		90	70-130	1	25
Isopropylbenzene	18.9		µg/l		20.0		94	70-130	5	25
4-Isopropyltoluene	21.0		µg/l		20.0		105	70-130	4	25
Methyl tert-butyl ether	15.2		µg/l		20.0		76	70-130	0.9	25
4-Methyl-2-pentanone (MIBK)	18.3		µg/l		20.0		92	57.6-130	0.05	50
Methylene chloride	18.7		µg/l		20.0		94	70-130	3	25
Methylene chloride	18.7		µg/l		20.0		94	70-130	3	25
Naphthalene	16.3		µg/l		20.0		82	70-130	0.1	25
n-Propylbenzene	20.0		µg/l		20.0		100	70-130	4	25
Styrene	19.9		µg/l		20.0		99	70-130	6	25
1,1,1,2-Tetrachloroethane	17.8		µg/l		20.0		89	70-130	3	25
1,1,2,2-Tetrachloroethane	20.0		µg/l		20.0		100	70-130	3	25
1,1,2,2-Tetrachloroethane	20.0		µg/l		20.0		100	70-130	3	25
Tetrachloroethene	18.1		µg/l		20.0		90	70-130	0.8	25
Tetrachloroethene	18.1		µg/l		20.0		90	70-130	0.8	25
Toluene	20.1		µg/l		20.0		100	70-130	1	25
1,2,3-Trichlorobenzene	18.7		µg/l		20.0		94	70-130	0.5	25
1,2,4-Trichlorobenzene	17.4		µg/l		20.0		87	70-130	2	25
1,1,1-Trichloroethane	17.5		µg/l		20.0		88	70-130	0	25
1,3,5-Trichlorobenzene	19.8		µg/l		20.0		99	70-130	5	25

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>LCS Dup (1018241-BSD1)</u>					<u>Prepared & Analyzed: 26-Aug-10</u>					
1,1,1-Trichloroethane	17.5		µg/l		20.0		88	70-130	0	25
1,1,2-Trichloroethane	19.8		µg/l		20.0		99	70-130	3	25
1,1,2-Trichloroethane	19.8		µg/l		20.0		99	70-130	3	25
Trichloroethene	18.7		µg/l		20.0		93	70-130	1	25
Trichloroethene	18.7		µg/l		20.0		93	70-130	1	25
Trichlorofluoromethane (Freon 11)	18.4		µg/l		20.0		92	70-130	5	50
Trichlorofluoromethane (Freon 11)	18.4		µg/l		20.0		92	64.9-147	5	50
1,2,3-Trichloropropane	18.8		µg/l		20.0		94	70-130	4	25
1,2,4-Trimethylbenzene	17.9		µg/l		20.0		90	70-130	6	25
1,3,5-Trimethylbenzene	20.3		µg/l		20.0		102	70-130	5	25
Vinyl chloride	19.9		µg/l		20.0		100	70-130	1	25
Vinyl chloride	19.9		µg/l		20.0		100	70-130	1	25
m,p-Xylene	40.9		µg/l		40.0		102	70-130	7	25
o-Xylene	20.7		µg/l		20.0		103	70-130	4	25
Tetrahydrofuran	17.2		µg/l		20.0		86	70-130	11	25
Ethyl ether	19.1		µg/l		20.0		95	70-130	0.6	50
Tert-amyl methyl ether	16.2		µg/l		20.0		81	70-130	0.06	25
Ethyl tert-butyl ether	17.0		µg/l		20.0		85	70-130	0.9	25
Di-isopropyl ether	18.5		µg/l		20.0		92	70-130	0.5	25
Tert-Butanol / butyl alcohol	136	QM9	µg/l		200		68	70-130	4	25
trans-1,4-Dichloro-2-butene	15.1		µg/l		20.0		75	70-130	7	25
Ethanol	349		µg/l		400		87	70-130	1	30
1,4-Dioxane	165		µg/l		200		82	53.8-137	0.6	25
Surrogate: 4-Bromofluorobenzene	48.9		µg/l		50.0		98	70-130		
Surrogate: 4-Bromofluorobenzene	48.9		µg/l		50.0		98	70-130		
Surrogate: Toluene-d8	52.6		µg/l		50.0		105	70-130		
Surrogate: Toluene-d8	52.6		µg/l		50.0		105	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.6		µg/l		50.0		93	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.6		µg/l		50.0		93	70-130		
Surrogate: Dibromofluoromethane	50.7		µg/l		50.0		101	70-130		
Surrogate: Dibromofluoromethane	50.7		µg/l		50.0		101	70-130		
<u>Matrix Spike (1018241-MS1)</u>					<u>Source: SB17163-01</u>		<u>Prepared & Analyzed: 26-Aug-10</u>			
Acetone	16.6		µg/l		20.0	0.1	82	70-130		
Acrylonitrile	16.2		µg/l		20.0	BRL	81	70-130		
Benzene	17.9		µg/l		20.0	BRL	90	70-130		
Bromobenzene	17.8		µg/l		20.0	BRL	89	70-130		
Bromochloromethane	16.2		µg/l		20.0	BRL	81	70-130		
Bromodichloromethane	17.3		µg/l		20.0	BRL	87	70-130		
Bromoform	17.0		µg/l		20.0	BRL	85	70-130		
Bromomethane	12.8	QM7	µg/l		20.0	BRL	64	70-130		
2-Butanone (MEK)	17.0		µg/l		20.0	BRL	85	70-130		
n-Butylbenzene	22.5		µg/l		20.0	BRL	112	70-130		
sec-Butylbenzene	18.8		µg/l		20.0	BRL	94	70-130		
tert-Butylbenzene	20.0		µg/l		20.0	BRL	100	70-130		
Carbon disulfide	9.1	QM7	µg/l		20.0	BRL	46	70-130		
Carbon tetrachloride	15.8		µg/l		20.0	BRL	79	70-130		
Chlorobenzene	18.9		µg/l		20.0	BRL	94	70-130		
Chloroethane	14.6		µg/l		20.0	BRL	73	70-130		
Chloroform	17.8		µg/l		20.0	0.06	89	70-130		
Chloromethane	11.2	QM7	µg/l		20.0	BRL	56	70-130		
2-Chlorotoluene	19.7		µg/l		20.0	BRL	99	70-130		

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>Matrix Spike (1018241-MS1)</u>				<u>Source: SB17163-01</u>				<u>Prepared & Analyzed: 26-Aug-10</u>		
4-Chlorotoluene	19.3		µg/l		20.0	BRL	96	70-130		
1,2-Dibromo-3-chloropropane	17.2		µg/l		20.0	BRL	86	70-130		
Dibromochloromethane	17.5		µg/l		20.0	BRL	88	70-130		
1,2-Dibromoethane (EDB)	17.8		µg/l		20.0	BRL	89	70-130		
Dibromomethane	17.3		µg/l		20.0	BRL	87	70-130		
1,2-Dichlorobenzene	19.6		µg/l		20.0	BRL	98	70-130		
1,3-Dichlorobenzene	18.9		µg/l		20.0	BRL	94	70-130		
1,4-Dichlorobenzene	19.1		µg/l		20.0	BRL	96	70-130		
Dichlorodifluoromethane (Freon12)	10.8	QM7	µg/l		20.0	BRL	54	70-130		
1,1-Dichloroethane	16.6		µg/l		20.0	0.09	83	70-130		
1,2-Dichloroethane	17.5		µg/l		20.0	BRL	87	70-130		
1,1-Dichloroethene	15.4		µg/l		20.0	0.1	76	70-130		
cis-1,2-Dichloroethene	18.8		µg/l		20.0	0.7	90	70-130		
trans-1,2-Dichloroethene	16.3		µg/l		20.0	BRL	81	70-130		
1,2-Dichloropropane	18.9		µg/l		20.0	BRL	95	70-130		
1,3-Dichloropropane	18.6		µg/l		20.0	BRL	93	70-130		
2,2-Dichloropropane	17.2		µg/l		20.0	BRL	86	70-130		
1,1-Dichloropropene	15.6		µg/l		20.0	BRL	78	70-130		
cis-1,3-Dichloropropene	16.9		µg/l		20.0	BRL	85	70-130		
trans-1,3-Dichloropropene	16.9		µg/l		20.0	BRL	85	70-130		
Ethylbenzene	18.9		µg/l		20.0	BRL	94	70-130		
Hexachlorobutadiene	20.0		µg/l		20.0	BRL	100	70-130		
2-Hexanone (MBK)	18.1		µg/l		20.0	BRL	90	70-130		
Isopropylbenzene	19.1		µg/l		20.0	BRL	96	70-130		
4-Isopropyltoluene	20.9		µg/l		20.0	BRL	104	70-130		
Methyl tert-butyl ether	14.4		µg/l		20.0	BRL	72	70-130		
4-Methyl-2-pentanone (MIBK)	18.3		µg/l		20.0	BRL	92	70-130		
Methylene chloride	16.4		µg/l		20.0	BRL	82	70-130		
Naphthalene	16.2		µg/l		20.0	BRL	81	70-130		
n-Propylbenzene	19.8		µg/l		20.0	BRL	99	70-130		
Styrene	19.7		µg/l		20.0	BRL	98	70-130		
1,1,1,2-Tetrachloroethane	17.5		µg/l		20.0	BRL	87	70-130		
1,1,2,2-Tetrachloroethane	20.4		µg/l		20.0	BRL	102	70-130		
Tetrachloroethene	16.7		µg/l		20.0	0.5	81	70-130		
Toluene	18.6		µg/l		20.0	BRL	93	70-130		
1,2,3-Trichlorobenzene	18.7		µg/l		20.0	BRL	93	70-130		
1,2,4-Trichlorobenzene	17.9		µg/l		20.0	BRL	89	70-130		
1,3,5-Trichlorobenzene	20.5		µg/l		20.0	BRL	103	70-130		
1,1,1-Trichloroethane	16.1		µg/l		20.0	0.3	79	70-130		
1,1,2-Trichloroethane	19.3		µg/l		20.0	BRL	97	70-130		
Trichloroethene	22.2		µg/l		20.0	5.9	81	70-130		
Trichlorofluoromethane (Freon 11)	15.0		µg/l		20.0	BRL	75	70-130		
1,2,3-Trichloropropane	19.0		µg/l		20.0	BRL	95	70-130		
1,2,4-Trimethylbenzene	18.2		µg/l		20.0	BRL	91	70-130		
1,3,5-Trimethylbenzene	20.4		µg/l		20.0	BRL	102	70-130		
Vinyl chloride	13.0	QM7	µg/l		20.0	0.03	65	70-130		
m,p-Xylene	39.9		µg/l		40.0	BRL	100	70-130		
o-Xylene	20.8		µg/l		20.0	BRL	104	70-130		
Tetrahydrofuran	16.2		µg/l		20.0	BRL	81	70-130		
Ethyl ether	16.0		µg/l		20.0	BRL	80	70-130		
Tert-amyl methyl ether	15.2		µg/l		20.0	BRL	76	70-130		
Ethyl tert-butyl ether	15.8		µg/l		20.0	BRL	79	70-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>Matrix Spike (1018241-MS1)</u>			<u>Source: SB17163-01</u>			<u>Prepared & Analyzed: 26-Aug-10</u>				
Di-isopropyl ether	17.5		µg/l		20.0	BRL	88	70-130		
Tert-Butanol / butyl alcohol	136	QM7	µg/l		200	BRL	68	70-130		
trans-1,4-Dichloro-2-butene	16.9		µg/l		20.0	BRL	85	70-130		
Ethanol	348		µg/l		400	BRL	87	70-130		
1,4-Dioxane	163		µg/l		200	BRL	82	70-130		
Surrogate: 4-Bromofluorobenzene	49.4		µg/l		50.0		99	70-130		
Surrogate: Toluene-d8	52.5		µg/l		50.0		105	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.2		µg/l		50.0		92	70-130		
Surrogate: Dibromofluoromethane	50.7		µg/l		50.0		101	70-130		
<u>Matrix Spike Dup (1018241-MSD1)</u>			<u>Source: SB17163-01</u>			<u>Prepared & Analyzed: 26-Aug-10</u>				
Acetone	16.1		µg/l		20.0	0.1	80	70-130	3	30
Acrylonitrile	16.9		µg/l		20.0	BRL	85	70-130	4	30
Benzene	17.6		µg/l		20.0	BRL	88	70-130	2	30
Bromobenzene	17.6		µg/l		20.0	BRL	88	70-130	1	30
Bromochloromethane	16.6		µg/l		20.0	BRL	83	70-130	3	30
Bromodichloromethane	17.0		µg/l		20.0	BRL	85	70-130	2	30
Bromoform	16.5		µg/l		20.0	BRL	82	70-130	3	30
Bromomethane	13.8	QM7	µg/l		20.0	BRL	69	70-130	8	30
2-Butanone (MEK)	17.1		µg/l		20.0	BRL	86	70-130	0.4	30
n-Butylbenzene	21.7		µg/l		20.0	BRL	109	70-130	3	30
sec-Butylbenzene	18.2		µg/l		20.0	BRL	91	70-130	3	30
tert-Butylbenzene	19.6		µg/l		20.0	BRL	98	70-130	2	30
Carbon disulfide	8.9	QM7	µg/l		20.0	BRL	45	70-130	2	30
Carbon tetrachloride	15.7		µg/l		20.0	BRL	78	70-130	1	30
Chlorobenzene	18.4		µg/l		20.0	BRL	92	70-130	3	30
Chloroethane	14.7		µg/l		20.0	BRL	74	70-130	0.6	30
Chloroform	17.4		µg/l		20.0	0.06	87	70-130	3	30
Chloromethane	11.2	QM7	µg/l		20.0	BRL	56	70-130	0.8	30
2-Chlorotoluene	18.9		µg/l		20.0	BRL	94	70-130	4	30
4-Chlorotoluene	19.2		µg/l		20.0	BRL	96	70-130	0.6	30
1,2-Dibromo-3-chloropropane	15.3		µg/l		20.0	BRL	76	70-130	12	30
Dibromochloromethane	17.8		µg/l		20.0	BRL	89	70-130	2	30
1,2-Dibromoethane (EDB)	17.6		µg/l		20.0	BRL	88	70-130	1	30
Dibromomethane	17.6		µg/l		20.0	BRL	88	70-130	2	30
1,2-Dichlorobenzene	18.9		µg/l		20.0	BRL	95	70-130	3	30
1,3-Dichlorobenzene	18.5		µg/l		20.0	BRL	92	70-130	2	30
1,4-Dichlorobenzene	18.9		µg/l		20.0	BRL	95	70-130	0.9	30
Dichlorodifluoromethane (Freon12)	11.0	QM7	µg/l		20.0	BRL	55	70-130	2	30
1,1-Dichloroethane	16.2		µg/l		20.0	0.09	81	70-130	3	30
1,2-Dichloroethane	16.9		µg/l		20.0	BRL	85	70-130	3	30
1,1-Dichloroethene	14.9		µg/l		20.0	0.1	74	70-130	3	30
cis-1,2-Dichloroethene	18.6		µg/l		20.0	0.7	89	70-130	1	30
trans-1,2-Dichloroethene	15.6		µg/l		20.0	BRL	78	70-130	4	30
1,2-Dichloropropane	18.6		µg/l		20.0	BRL	93	70-130	1	30
1,3-Dichloropropane	18.5		µg/l		20.0	BRL	92	70-130	0.8	30
2,2-Dichloropropane	17.0		µg/l		20.0	BRL	85	70-130	0.9	30
1,1-Dichloropropene	15.7		µg/l		20.0	BRL	79	70-130	0.5	30
cis-1,3-Dichloropropene	16.8		µg/l		20.0	BRL	84	70-130	1	30
trans-1,3-Dichloropropene	17.2		µg/l		20.0	BRL	86	70-130	2	30
Ethylbenzene	18.3		µg/l		20.0	BRL	91	70-130	3	30
Hexachlorobutadiene	19.8		µg/l		20.0	BRL	99	70-130	1	30

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018241 - SW846 5030 Water MS										
<u>Matrix Spike Dup (1018241-MSD1)</u>				<u>Source: SB17163-01</u>				<u>Prepared & Analyzed: 26-Aug-10</u>		
2-Hexanone (MBK)	18.1		µg/l		20.0	BRL	90	70-130	0.2	30
Isopropylbenzene	18.4		µg/l		20.0	BRL	92	70-130	4	30
4-Isopropyltoluene	20.2		µg/l		20.0	BRL	101	70-130	3	30
Methyl tert-butyl ether	14.6		µg/l		20.0	BRL	73	70-130	2	30
4-Methyl-2-pentanone (MIBK)	18.8		µg/l		20.0	BRL	94	70-130	2	30
Methylene chloride	16.4		µg/l		20.0	BRL	82	70-130	0.1	30
Naphthalene	16.9		µg/l		20.0	BRL	84	70-130	4	30
n-Propylbenzene	19.4		µg/l		20.0	BRL	97	70-130	2	30
Styrene	19.1		µg/l		20.0	BRL	96	70-130	3	30
1,1,1,2-Tetrachloroethane	17.2		µg/l		20.0	BRL	86	70-130	1	30
1,1,2,2-Tetrachloroethane	20.1		µg/l		20.0	BRL	101	70-130	1	30
Tetrachloroethene	16.5		µg/l		20.0	0.5	80	70-130	1	30
Toluene	18.4		µg/l		20.0	BRL	92	70-130	1	30
1,2,3-Trichlorobenzene	18.6		µg/l		20.0	BRL	93	70-130	0.5	30
1,2,4-Trichlorobenzene	17.9		µg/l		20.0	BRL	90	70-130	0.2	30
1,3,5-Trichlorobenzene	20.3		µg/l		20.0	BRL	102	70-130	1	30
1,1,1-Trichloroethane	15.7		µg/l		20.0	0.3	77	70-130	3	30
1,1,2-Trichloroethane	19.2		µg/l		20.0	BRL	96	70-130	0.6	30
Trichloroethene	21.8		µg/l		20.0	5.9	79	70-130	2	30
Trichlorofluoromethane (Freon 11)	14.5		µg/l		20.0	BRL	73	70-130	3	30
1,2,3-Trichloropropane	19.2		µg/l		20.0	BRL	96	70-130	1	30
1,2,4-Trimethylbenzene	17.6		µg/l		20.0	BRL	88	70-130	3	30
1,3,5-Trimethylbenzene	19.9		µg/l		20.0	BRL	100	70-130	2	30
Vinyl chloride	12.9	QM7	µg/l		20.0	0.03	64	70-130	0.5	30
m,p-Xylene	38.9		µg/l		40.0	BRL	97	70-130	3	30
o-Xylene	19.9		µg/l		20.0	BRL	100	70-130	4	30
Tetrahydrofuran	17.6		µg/l		20.0	BRL	88	70-130	8	30
Ethyl ether	16.2		µg/l		20.0	BRL	81	70-130	1	30
Tert-amyl methyl ether	15.4		µg/l		20.0	BRL	77	70-130	1	30
Ethyl tert-butyl ether	16.1		µg/l		20.0	BRL	80	70-130	2	30
Di-isopropyl ether	17.5		µg/l		20.0	BRL	87	70-130	0.3	30
Tert-Butanol / butyl alcohol	140		µg/l		200	BRL	70	70-130	3	30
trans-1,4-Dichloro-2-butene	17.0		µg/l		20.0	BRL	85	70-130	0.3	30
Ethanol	375		µg/l		400	BRL	94	70-130	8	30
1,4-Dioxane	181		µg/l		200	BRL	91	70-130	10	30
Surrogate: 4-Bromofluorobenzene	49.1		µg/l		50.0		98	70-130		
Surrogate: Toluene-d8	53.1		µg/l		50.0		106	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.5		µg/l		50.0		93	70-130		
Surrogate: Dibromofluoromethane	50.6		µg/l		50.0		101	70-130		
Batch 1018353 - SW846 5030 Water MS										
<u>Blank (1018353-BLK1)</u>								<u>Prepared & Analyzed: 27-Aug-10</u>		
Acetone	BRL		µg/l	10.0						
Acrylonitrile	BRL		µg/l	1.0						
Benzene	BRL		µg/l	0.5						
Bromobenzene	BRL		µg/l	1.0						
Bromochloromethane	BRL		µg/l	1.0						
Bromodichloromethane	BRL		µg/l	1.0						
Bromoform	BRL		µg/l	1.0						
Bromomethane	BRL		µg/l	2.0						
2-Butanone (MEK)	BRL		µg/l	10.0						
n-Butylbenzene	BRL		µg/l	1.0						

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018353 - SW846 5030 Water MS										
<u>Blank (1018353-BLK1)</u>	<u>Prepared & Analyzed: 27-Aug-10</u>									
sec-Butylbenzene	BRL		µg/l	1.0						
tert-Butylbenzene	BRL		µg/l	1.0						
Carbon disulfide	BRL		µg/l	5.0						
Carbon tetrachloride	BRL		µg/l	0.5						
Chlorobenzene	BRL		µg/l	1.0						
Chloroethane	BRL		µg/l	2.0						
Chloroform	BRL		µg/l	1.0						
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						
1,2-Dibromoethane (EDB)	BRL		µg/l	1.0						
Dibromomethane	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	0.5						
1,3-Dichlorobenzene	BRL		µg/l	0.5						
1,4-Dichlorobenzene	BRL		µg/l	0.5						
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
1,1-Dichloroethane	BRL		µg/l	0.5						
1,2-Dichloroethane	BRL		µg/l	0.5						
1,1-Dichloroethene	BRL		µg/l	0.5						
cis-1,2-Dichloroethene	BRL		µg/l	0.5						
trans-1,2-Dichloroethene	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						
trans-1,3-Dichloropropene	BRL		µg/l	1.0						
Ethylbenzene	BRL		µg/l	0.5						
Hexachlorobutadiene	BRL		µg/l	1.0						
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	0.5						
4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0						
Methylene chloride	BRL		µg/l	1.0						
Naphthalene	BRL		µg/l	0.5						
n-Propylbenzene	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	1.0						
Tetrachloroethene	BRL		µg/l	0.5						
Toluene	BRL		µg/l	0.5						
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	0.5						
1,1,2-Trichloroethane	BRL		µg/l	0.5						
Trichloroethene	BRL		µg/l	0.5						
Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0						
1,2,3-Trichloropropane	BRL		µg/l	1.0						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018353 - SW846 5030 Water MS										
<u>Blank (1018353-BLK1)</u>					<u>Prepared & Analyzed: 27-Aug-10</u>					
1,2,4-Trimethylbenzene	BRL		µg/l	1.0						
1,3,5-Trimethylbenzene	BRL		µg/l	1.0						
Vinyl chloride	BRL		µg/l	0.5						
m,p-Xylene	BRL		µg/l	1.0						
o-Xylene	BRL		µg/l	0.5						
Tetrahydrofuran	BRL		µg/l	10.0						
Ethyl ether	BRL		µg/l	1.0						
Tert-amyl methyl ether	BRL		µg/l	0.5						
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						
trans-1,4-Dichloro-2-butene	BRL		µg/l	5.0						
Ethanol	BRL		µg/l	500						
1,4-Dioxane	BRL		µg/l	20.0						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>48.1</i>		<i>µg/l</i>		<i>50.0</i>		<i>96</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>50.6</i>		<i>µg/l</i>		<i>50.0</i>		<i>101</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>49.8</i>		<i>µg/l</i>		<i>50.0</i>		<i>100</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>51.2</i>		<i>µg/l</i>		<i>50.0</i>		<i>102</i>	<i>70-130</i>		
<u>LCS (1018353-BS1)</u>					<u>Prepared & Analyzed: 27-Aug-10</u>					
Acetone	22.6		µg/l		20.0		113	31.7-144		
Acrylonitrile	23.1		µg/l		20.0		115	70-130		
Benzene	21.5		µg/l		20.0		107	70-130		
Bromobenzene	23.5		µg/l		20.0		117	70-130		
Bromochloromethane	22.0		µg/l		20.0		110	70-130		
Bromodichloromethane	21.5		µg/l		20.0		107	70-130		
Bromoform	20.1		µg/l		20.0		101	70-130		
Bromomethane	19.5		µg/l		20.0		97	43-158		
2-Butanone (MEK)	18.4		µg/l		20.0		92	54.5-137		
n-Butylbenzene	18.7		µg/l		20.0		93	70-130		
sec-Butylbenzene	21.6		µg/l		20.0		108	70-130		
tert-Butylbenzene	21.9		µg/l		20.0		109	70-130		
Carbon disulfide	22.0		µg/l		20.0		110	70-130		
Carbon tetrachloride	19.6		µg/l		20.0		98	70-130		
Chlorobenzene	22.1		µg/l		20.0		111	70-130		
Chloroethane	21.4		µg/l		20.0		107	60.1-131		
Chloroform	19.1		µg/l		20.0		95	70-130		
Chloromethane	17.5		µg/l		20.0		88	70-130		
2-Chlorotoluene	21.7		µg/l		20.0		108	70-130		
4-Chlorotoluene	23.9		µg/l		20.0		120	70-130		
1,2-Dibromo-3-chloropropane	16.6		µg/l		20.0		83	70-130		
Dibromochloromethane	20.1		µg/l		20.0		101	66.2-145		
1,2-Dibromoethane (EDB)	20.9		µg/l		20.0		105	70-130		
Dibromomethane	21.3		µg/l		20.0		106	70-130		
1,2-Dichlorobenzene	22.1		µg/l		20.0		111	70-130		
1,3-Dichlorobenzene	24.8		µg/l		20.0		124	70-130		
1,4-Dichlorobenzene	21.1		µg/l		20.0		106	70-130		
Dichlorodifluoromethane (Freon12)	20.2		µg/l		20.0		101	46.9-168		
1,1-Dichloroethane	20.6		µg/l		20.0		103	70-130		
1,2-Dichloroethane	20.2		µg/l		20.0		101	70-130		
1,1-Dichloroethene	20.2		µg/l		20.0		101	70-130		
cis-1,2-Dichloroethene	22.0		µg/l		20.0		110	70-130		

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018353 - SW846 5030 Water MS										
<u>LCS (1018353-BS1)</u>					<u>Prepared & Analyzed: 27-Aug-10</u>					
trans-1,2-Dichloroethene	22.4		µg/l		20.0		112	70-130		
1,2-Dichloropropane	20.7		µg/l		20.0		104	70-130		
1,3-Dichloropropane	20.4		µg/l		20.0		102	70-130		
2,2-Dichloropropane	20.5		µg/l		20.0		102	70-130		
1,1-Dichloropropene	20.8		µg/l		20.0		104	70-130		
cis-1,3-Dichloropropene	21.5		µg/l		20.0		108	70-130		
trans-1,3-Dichloropropene	20.0		µg/l		20.0		100	70-130		
Ethylbenzene	23.2		µg/l		20.0		116	70-130		
Hexachlorobutadiene	23.1		µg/l		20.0		115	70-135		
2-Hexanone (MBK)	17.1		µg/l		20.0		86	70-130		
Isopropylbenzene	23.6		µg/l		20.0		118	70-130		
4-Isopropyltoluene	22.5		µg/l		20.0		112	70-130		
Methyl tert-butyl ether	20.7		µg/l		20.0		103	70-130		
4-Methyl-2-pentanone (MIBK)	16.7		µg/l		20.0		84	57.6-130		
Methylene chloride	20.1		µg/l		20.0		100	70-130		
Naphthalene	19.0		µg/l		20.0		95	70-130		
n-Propylbenzene	20.6		µg/l		20.0		103	70-130		
Styrene	21.0		µg/l		20.0		105	70-130		
1,1,1,2-Tetrachloroethane	24.2		µg/l		20.0		121	70-130		
1,1,2,2-Tetrachloroethane	20.0		µg/l		20.0		100	70-130		
Tetrachloroethene	19.5		µg/l		20.0		98	70-130		
Toluene	21.3		µg/l		20.0		106	70-130		
1,2,3-Trichlorobenzene	19.9		µg/l		20.0		99	70-130		
1,2,4-Trichlorobenzene	19.3		µg/l		20.0		97	70-130		
1,1,1-Trichloroethane	21.8		µg/l		20.0		109	70-130		
1,3,5-Trichlorobenzene	22.6		µg/l		20.0		113	70-130		
1,1,2-Trichloroethane	20.7		µg/l		20.0		104	70-130		
Trichloroethene	20.7		µg/l		20.0		104	70-130		
Trichlorofluoromethane (Freon 11)	20.8		µg/l		20.0		104	64.9-147		
1,2,3-Trichloropropane	21.8		µg/l		20.0		109	70-130		
1,2,4-Trimethylbenzene	21.3		µg/l		20.0		107	70-130		
1,3,5-Trimethylbenzene	20.9		µg/l		20.0		105	70-130		
Vinyl chloride	22.8		µg/l		20.0		114	70-130		
m,p-Xylene	48.3		µg/l		40.0		121	70-130		
o-Xylene	24.6		µg/l		20.0		123	70-130		
Tetrahydrofuran	19.0		µg/l		20.0		95	70-130		
Ethyl ether	20.6		µg/l		20.0		103	70-130		
Tert-amyl methyl ether	18.2		µg/l		20.0		91	70-130		
Ethyl tert-butyl ether	21.5		µg/l		20.0		107	70-130		
Di-isopropyl ether	21.1		µg/l		20.0		105	70-130		
Tert-Butanol / butyl alcohol	201		µg/l		200		101	70-130		
trans-1,4-Dichloro-2-butene	17.9		µg/l		20.0		90	70-130		
Ethanol	388		µg/l		400		97	70-130		
1,4-Dioxane	193		µg/l		200		97	53.8-137		
Surrogate: 4-Bromofluorobenzene	52.4		µg/l		50.0		105	70-130		
Surrogate: Toluene-d8	49.6		µg/l		50.0		99	70-130		
Surrogate: 1,2-Dichloroethane-d4	48.4		µg/l		50.0		97	70-130		
Surrogate: Dibromofluoromethane	49.7		µg/l		50.0		99	70-130		
<u>LCS Dup (1018353-BSD1)</u>					<u>Prepared & Analyzed: 27-Aug-10</u>					
Acetone	19.3		µg/l		20.0		97	31.7-144	15	50
Acrylonitrile	20.7		µg/l		20.0		104	70-130	11	25

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018353 - SW846 5030 Water MS										
<u>LCS Dup (1018353-BSD1)</u>	<u>Prepared & Analyzed: 27-Aug-10</u>									
Benzene	20.1		µg/l		20.0		101	70-130	7	25
Bromobenzene	21.8		µg/l		20.0		109	70-130	8	25
Bromochloromethane	20.6		µg/l		20.0		103	70-130	6	25
Bromodichloromethane	20.5		µg/l		20.0		102	70-130	5	25
Bromoform	18.6		µg/l		20.0		93	70-130	8	25
Bromomethane	18.0		µg/l		20.0		90	43-158	8	50
2-Butanone (MEK)	17.5		µg/l		20.0		87	54.5-137	5	50
n-Butylbenzene	17.5		µg/l		20.0		88	70-130	6	25
sec-Butylbenzene	20.0		µg/l		20.0		100	70-130	7	25
tert-Butylbenzene	20.2		µg/l		20.0		101	70-130	8	25
Carbon disulfide	20.6		µg/l		20.0		103	70-130	7	25
Carbon tetrachloride	18.2		µg/l		20.0		91	70-130	7	25
Chlorobenzene	21.4		µg/l		20.0		107	70-130	4	25
Chloroethane	20.2		µg/l		20.0		101	60.1-131	6	50
Chloroform	17.4		µg/l		20.0		87	70-130	9	25
Chloromethane	15.8		µg/l		20.0		79	70-130	10	25
2-Chlorotoluene	20.3		µg/l		20.0		102	70-130	6	25
4-Chlorotoluene	22.4		µg/l		20.0		112	70-130	7	25
1,2-Dibromo-3-chloropropane	17.9		µg/l		20.0		89	70-130	7	25
Dibromochloromethane	19.0		µg/l		20.0		95	66.2-145	6	50
1,2-Dibromoethane (EDB)	20.6		µg/l		20.0		103	70-130	2	25
Dibromomethane	20.5		µg/l		20.0		102	70-130	4	25
1,2-Dichlorobenzene	21.0		µg/l		20.0		105	70-130	5	25
1,3-Dichlorobenzene	23.7		µg/l		20.0		118	70-130	5	25
1,4-Dichlorobenzene	20.4		µg/l		20.0		102	70-130	4	25
Dichlorodifluoromethane (Freon12)	19.5		µg/l		20.0		98	46.9-168	3	50
1,1-Dichloroethane	19.5		µg/l		20.0		98	70-130	6	25
1,2-Dichloroethane	18.8		µg/l		20.0		94	70-130	7	25
1,1-Dichloroethene	19.2		µg/l		20.0		96	70-130	5	25
cis-1,2-Dichloroethene	20.2		µg/l		20.0		101	70-130	9	25
trans-1,2-Dichloroethene	21.2		µg/l		20.0		106	70-130	5	25
1,2-Dichloropropane	19.7		µg/l		20.0		98	70-130	5	25
1,3-Dichloropropane	19.7		µg/l		20.0		99	70-130	3	25
2,2-Dichloropropane	19.0		µg/l		20.0		95	70-130	8	25
1,1-Dichloropropene	19.4		µg/l		20.0		97	70-130	7	25
cis-1,3-Dichloropropene	19.9		µg/l		20.0		100	70-130	8	25
trans-1,3-Dichloropropene	18.6		µg/l		20.0		93	70-130	7	25
Ethylbenzene	22.0		µg/l		20.0		110	70-130	5	25
Hexachlorobutadiene	21.4		µg/l		20.0		107	70-135	7	50
2-Hexanone (MBK)	16.5		µg/l		20.0		82	70-130	4	25
Isopropylbenzene	21.9		µg/l		20.0		109	70-130	7	25
4-Isopropyltoluene	21.2		µg/l		20.0		106	70-130	6	25
Methyl tert-butyl ether	19.5		µg/l		20.0		98	70-130	6	25
4-Methyl-2-pentanone (MIBK)	16.8		µg/l		20.0		84	57.6-130	0.2	50
Methylene chloride	18.9		µg/l		20.0		95	70-130	6	25
Naphthalene	17.8		µg/l		20.0		89	70-130	6	25
n-Propylbenzene	19.1		µg/l		20.0		96	70-130	7	25
Styrene	19.8		µg/l		20.0		99	70-130	6	25
1,1,1,2-Tetrachloroethane	22.6		µg/l		20.0		113	70-130	7	25
1,1,2,2-Tetrachloroethane	19.0		µg/l		20.0		95	70-130	6	25
Tetrachloroethene	17.8		µg/l		20.0		89	70-130	9	25
Toluene	20.0		µg/l		20.0		100	70-130	6	25

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018353 - SW846 5030 Water MS										
<u>LCS Dup (1018353-BSD1)</u>					<u>Prepared & Analyzed: 27-Aug-10</u>					
1,2,3-Trichlorobenzene	19.8		µg/l		20.0		99	70-130	0.6	25
1,2,4-Trichlorobenzene	18.2		µg/l		20.0		91	70-130	6	25
1,1,1-Trichloroethane	19.8		µg/l		20.0		99	70-130	10	25
1,3,5-Trichlorobenzene	21.0		µg/l		20.0		105	70-130	7	25
1,1,2-Trichloroethane	20.4		µg/l		20.0		102	70-130	2	25
Trichloroethene	19.6		µg/l		20.0		98	70-130	5	25
Trichlorofluoromethane (Freon 11)	19.5		µg/l		20.0		98	64.9-147	6	50
1,2,3-Trichloropropane	20.9		µg/l		20.0		104	70-130	4	25
1,2,4-Trimethylbenzene	19.9		µg/l		20.0		100	70-130	7	25
1,3,5-Trimethylbenzene	19.7		µg/l		20.0		99	70-130	6	25
Vinyl chloride	20.8		µg/l		20.0		104	70-130	9	25
m,p-Xylene	46.0		µg/l		40.0		115	70-130	5	25
o-Xylene	23.6		µg/l		20.0		118	70-130	4	25
Tetrahydrofuran	18.7		µg/l		20.0		94	70-130	1	25
Ethyl ether	20.0		µg/l		20.0		100	70-130	3	50
Tert-amyl methyl ether	17.3		µg/l		20.0		86	70-130	5	25
Ethyl tert-butyl ether	20.3		µg/l		20.0		102	70-130	6	25
Di-isopropyl ether	19.9		µg/l		20.0		100	70-130	6	25
Tert-Butanol / butyl alcohol	202		µg/l		200		101	70-130	0.5	25
trans-1,4-Dichloro-2-butene	17.2		µg/l		20.0		86	70-130	4	25
Ethanol	383		µg/l		400		96	70-130	1	30
1,4-Dioxane	183		µg/l		200		91	53.8-137	6	25
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>51.5</i>		<i>µg/l</i>		<i>50.0</i>		<i>103</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>49.3</i>		<i>µg/l</i>		<i>50.0</i>		<i>99</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>46.8</i>		<i>µg/l</i>		<i>50.0</i>		<i>94</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>49.8</i>		<i>µg/l</i>		<i>50.0</i>		<i>100</i>	<i>70-130</i>		

Microextractable Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018470 - General Preparation SVOC										
<u>Blank (1018470-BLK1)</u>					<u>Prepared & Analyzed: 30-Aug-10</u>					
1,2-Dibromoethane (EDB)	BRL		µg/l	0.0100						
<u>LCS (1018470-BS1)</u>					<u>Prepared & Analyzed: 30-Aug-10</u>					
1,2-Dibromoethane (EDB)	0.195		µg/l	0.0100	0.200		97	50-150		
<u>LCS Dup (1018470-BSD1)</u>					<u>Prepared & Analyzed: 30-Aug-10</u>					
1,2-Dibromoethane (EDB)	0.223		µg/l	0.0100	0.200		112	50-150	13	50

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018111 - SW846 3510C										
<u>Blank (1018111-BLK1)</u>	<u>Prepared: 25-Aug-10 Analyzed: 26-Aug-10</u>									
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						

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* Reportable Detection Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018111 - SW846 3510C										
<u>Blank (1018111-BLK1)</u>					<u>Prepared: 25-Aug-10 Analyzed: 26-Aug-10</u>					
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						
<i>Surrogate: 2-Fluorobiphenyl</i>	12.6		µg/l		25.0		50	30-130		
<i>Surrogate: 2-Fluorophenol</i>	9.29		µg/l		25.0		37	15-110		
<i>Surrogate: Nitrobenzene-d5</i>	12.5		µg/l		25.0		50	30-130		
<i>Surrogate: Phenol-d5</i>	6.17		µg/l		25.0		25	15-110		
<i>Surrogate: Terphenyl-dl4</i>	14.4		µg/l		25.0		58	30-130		
<i>Surrogate: 2,4,6-Tribromophenol</i>	17.8		µg/l		25.0		71	15-110		
<u>LCS (1018111-BS1)</u>					<u>Prepared: 25-Aug-10 Analyzed: 26-Aug-10</u>					
Acenaphthene	33.7		µg/l	5.00	50.0		67	40-130		
Acenaphthylene	32.2		µg/l	5.00	50.0		64	40-130		
Aniline	37.2		µg/l	5.00	50.0		74	40-130		
Anthracene	32.2		µg/l	5.00	50.0		64	40-130		
Azobenzene/Diphenyldiazine	33.3		µg/l	5.00	50.0		67	40-130		
Benzidine	43.4		µg/l	5.00	50.0		87	40-140		
Benzo (a) anthracene	31.5		µg/l	5.00	50.0		63	40-130		
Benzo (a) pyrene	33.7		µg/l	5.00	50.0		67	40-130		
Benzo (b) fluoranthene	31.7		µg/l	5.00	50.0		63	40-130		
Benzo (g,h,i) perylene	27.9		µg/l	5.00	50.0		56	40-130		
Benzo (k) fluoranthene	37.8		µg/l	5.00	50.0		76	40-130		
Benzoic acid	13.4	QC2	µg/l	5.00	50.0		27	40-130		
Benzyl alcohol	25.8		µg/l	5.00	50.0		52	40-130		
Bis(2-chloroethoxy)methane	24.1		µg/l	5.00	50.0		48	40-130		
Bis(2-chloroethyl)ether	25.2		µg/l	5.00	50.0		50	40-130		
Bis(2-chloroisopropyl)ether	28.0		µg/l	5.00	50.0		56	40-130		
Bis(2-ethylhexyl)phthalate	33.2		µg/l	5.00	50.0		66	40-130		
4-Bromophenyl phenyl ether	38.4		µg/l	5.00	50.0		77	40-130		
Butyl benzyl phthalate	31.2		µg/l	5.00	50.0		62	40-130		
Carbazole	36.0		µg/l	5.00	50.0		72	40-130		
4-Chloro-3-methylphenol	29.0		µg/l	5.00	50.0		58	40-130		
4-Chloroaniline	36.2		µg/l	5.00	50.0		72	40-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018111 - SW846 3510C										
LCS (1018111-BS1)	Prepared: 25-Aug-10 Analyzed: 26-Aug-10									
2-Chloronaphthalene	30.0		µg/l	5.00	50.0		60	40-130		
2-Chlorophenol	23.5		µg/l	5.00	50.0		47	40-130		
4-Chlorophenyl phenyl ether	43.0		µg/l	5.00	50.0		86	40-130		
Chrysene	39.6		µg/l	5.00	50.0		79	40-130		
Dibenzo (a,h) anthracene	32.0		µg/l	5.00	50.0		64	40-130		
Dibenzofuran	32.6		µg/l	5.00	50.0		65	40-130		
1,2-Dichlorobenzene	27.4		µg/l	5.00	50.0		55	40-130		
1,3-Dichlorobenzene	25.5		µg/l	5.00	50.0		51	40-130		
1,4-Dichlorobenzene	28.0		µg/l	5.00	50.0		56	40-130		
3,3'-Dichlorobenzidine	42.6		µg/l	5.00	50.0		85	40-130		
2,4-Dichlorophenol	27.8		µg/l	5.00	50.0		56	40-130		
Diethyl phthalate	45.1		µg/l	5.00	50.0		90	40-130		
Dimethyl phthalate	36.7		µg/l	5.00	50.0		73	40-130		
2,4-Dimethylphenol	25.1		µg/l	5.00	50.0		50	40-130		
Di-n-butyl phthalate	34.9		µg/l	5.00	50.0		70	40-130		
4,6-Dinitro-2-methylphenol	37.2		µg/l	5.00	50.0		74	40-130		
2,4-Dinitrophenol	40.0		µg/l	5.00	50.0		80	40-130		
2,4-Dinitrotoluene	33.4		µg/l	5.00	50.0		67	40-130		
2,6-Dinitrotoluene	33.4		µg/l	5.00	50.0		67	40-130		
Di-n-octyl phthalate	35.6		µg/l	5.00	50.0		71	40-130		
Fluoranthene	32.9		µg/l	5.00	50.0		66	40-130		
Fluorene	40.2		µg/l	5.00	50.0		80	40-130		
Hexachlorobenzene	36.5		µg/l	5.00	50.0		73	40-130		
Hexachlorobutadiene	31.0		µg/l	5.00	50.0		62	40-130		
Hexachlorocyclopentadiene	50.6		µg/l	5.00	50.0		101	40-130		
Hexachloroethane	28.4		µg/l	5.00	50.0		57	40-130		
Indeno (1,2,3-cd) pyrene	29.4		µg/l	5.00	50.0		59	40-130		
Isophorone	25.4		µg/l	5.00	50.0		51	40-130		
2-Methylnaphthalene	31.5		µg/l	5.00	50.0		63	40-130		
2-Methylphenol	23.9		µg/l	5.00	50.0		48	40-130		
3 & 4-Methylphenol	26.1		µg/l	10.0	50.0		52	40-130		
Naphthalene	29.3		µg/l	5.00	50.0		59	40-130		
2-Nitroaniline	28.3		µg/l	5.00	50.0		57	40-130		
3-Nitroaniline	38.5		µg/l	5.00	50.0		77	40-130		
4-Nitroaniline	31.4		µg/l	20.0	50.0		63	40-130		
Nitrobenzene	27.8		µg/l	5.00	50.0		56	40-130		
2-Nitrophenol	26.0		µg/l	5.00	50.0		52	40-130		
4-Nitrophenol	17.2	QC2	µg/l	20.0	50.0		34	40-130		
N-Nitrosodimethylamine	20.2		µg/l	5.00	50.0		40	40-130		
N-Nitrosodi-n-propylamine	30.2		µg/l	5.00	50.0		60	40-130		
N-Nitrosodiphenylamine	37.7		µg/l	5.00	50.0		75	40-130		
Pentachlorophenol	27.2		µg/l	20.0	50.0		54	40-130		
Phenanthrene	37.6		µg/l	5.00	50.0		75	40-130		
Phenol	12.5	QC2	µg/l	5.00	50.0		25	40-130		
Pyrene	33.6		µg/l	5.00	50.0		67	40-130		
Pyridine	19.4	QC2	µg/l	5.00	50.0		39	40-140		
1,2,4-Trichlorobenzene	28.3		µg/l	5.00	50.0		57	40-130		
1-Methylnaphthalene	30.0		µg/l	5.00	50.0		60	40-140		
2,4,5-Trichlorophenol	30.7		µg/l	5.00	50.0		61	40-130		
2,4,6-Trichlorophenol	30.3		µg/l	5.00	50.0		61	40-130		
Pentachloronitrobenzene	47.2		µg/l	5.00	50.0		94	40-140		
1,2,4,5-Tetrachlorobenzene	33.0		µg/l	5.00	50.0		66	40-140		

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018111 - SW846 3510C										
<u>LCS (1018111-BS1)</u>					<u>Prepared: 25-Aug-10 Analyzed: 26-Aug-10</u>					
Surrogate: 2-Fluorobiphenyl	32.1		µg/l		50.0		64	30-130		
Surrogate: 2-Fluorophenol	17.4		µg/l		50.0		35	15-110		
Surrogate: Nitrobenzene-d5	29.5		µg/l		50.0		59	30-130		
Surrogate: Phenol-d5	15.5		µg/l		50.0		31	15-110		
Surrogate: Terphenyl-d14	32.4		µg/l		50.0		65	30-130		
Surrogate: 2,4,6-Tribromophenol	39.6		µg/l		50.0		79	15-110		
<u>LCS Dup (1018111-BSD1)</u>					<u>Prepared: 25-Aug-10 Analyzed: 26-Aug-10</u>					
Acenaphthene	28.6		µg/l	5.00	50.0		57	40-130	16	20
Acenaphthylene	27.6		µg/l	5.00	50.0		55	40-130	15	20
Aniline	31.1		µg/l	5.00	50.0		62	40-130	18	20
Anthracene	30.2		µg/l	5.00	50.0		60	40-130	6	20
Azobenzene/Diphenyldiazine	30.3		µg/l	5.00	50.0		61	40-130	9	20
Benzidine	41.0		µg/l	5.00	50.0		82	40-140	6	20
Benzo (a) anthracene	28.2		µg/l	5.00	50.0		56	40-130	11	20
Benzo (a) pyrene	30.7		µg/l	5.00	50.0		61	40-130	9	20
Benzo (b) fluoranthene	28.1		µg/l	5.00	50.0		56	40-130	12	20
Benzo (g,h,i) perylene	25.7		µg/l	5.00	50.0		51	40-130	8	20
Benzo (k) fluoranthene	35.2		µg/l	5.00	50.0		70	40-130	7	20
Benzoic acid	12.3	QC2	µg/l	5.00	50.0		25	40-130	9	20
Benzyl alcohol	23.6		µg/l	5.00	50.0		47	40-130	9	20
Bis(2-chloroethoxy)methane	21.4		µg/l	5.00	50.0		43	40-130	12	20
Bis(2-chloroethyl)ether	21.5		µg/l	5.00	50.0		43	40-130	16	20
Bis(2-chloroisopropyl)ether	24.2		µg/l	5.00	50.0		48	40-130	14	20
Bis(2-ethylhexyl)phthalate	29.4		µg/l	5.00	50.0		59	40-130	12	20
4-Bromophenyl phenyl ether	34.4		µg/l	5.00	50.0		69	40-130	11	20
Butyl benzyl phthalate	28.5		µg/l	5.00	50.0		57	40-130	9	20
Carbazole	33.3		µg/l	5.00	50.0		67	40-130	8	20
4-Chloro-3-methylphenol	26.5		µg/l	5.00	50.0		53	40-130	9	20
4-Chloroaniline	31.7		µg/l	5.00	50.0		63	40-130	13	20
2-Chloronaphthalene	24.8		µg/l	5.00	50.0		50	40-130	19	20
2-Chlorophenol	20.2		µg/l	5.00	50.0		40	40-130	15	20
4-Chlorophenyl phenyl ether	38.3		µg/l	5.00	50.0		77	40-130	11	20
Chrysene	34.8		µg/l	5.00	50.0		70	40-130	13	20
Dibenzo (a,h) anthracene	29.3		µg/l	5.00	50.0		59	40-130	9	20
Dibenzofuran	28.5		µg/l	5.00	50.0		57	40-130	13	20
1,2-Dichlorobenzene	20.9	QR5	µg/l	5.00	50.0		42	40-130	27	20
1,3-Dichlorobenzene	19.9	QR5	µg/l	5.00	50.0		40	40-130	25	20
1,4-Dichlorobenzene	22.1	QR5	µg/l	5.00	50.0		44	40-130	24	20
3,3'-Dichlorobenzidine	37.0		µg/l	5.00	50.0		74	40-130	14	20
2,4-Dichlorophenol	24.6		µg/l	5.00	50.0		49	40-130	12	20
Diethyl phthalate	41.7		µg/l	5.00	50.0		83	40-130	8	20
Dimethyl phthalate	33.4		µg/l	5.00	50.0		67	40-130	10	20
2,4-Dimethylphenol	23.0		µg/l	5.00	50.0		46	40-130	9	20
Di-n-butyl phthalate	32.6		µg/l	5.00	50.0		65	40-130	7	20
4,6-Dinitro-2-methylphenol	34.1		µg/l	5.00	50.0		68	40-130	9	20
2,4-Dinitrophenol	36.5		µg/l	5.00	50.0		73	40-130	9	20
2,4-Dinitrotoluene	31.2		µg/l	5.00	50.0		62	40-130	7	20
2,6-Dinitrotoluene	30.6		µg/l	5.00	50.0		61	40-130	9	20
Di-n-octyl phthalate	33.0		µg/l	5.00	50.0		66	40-130	8	20
Fluoranthene	30.8		µg/l	5.00	50.0		62	40-130	6	20
Fluorene	35.0		µg/l	5.00	50.0		70	40-130	14	20

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018111 - SW846 3510C										
<u>LCS Dup (1018111-BSD1)</u>					<u>Prepared: 25-Aug-10 Analyzed: 26-Aug-10</u>					
Hexachlorobenzene	33.4		µg/l	5.00	50.0		67	40-130	9	20
Hexachlorobutadiene	24.4	QR5	µg/l	5.00	50.0		49	40-130	24	20
Hexachlorocyclopentadiene	38.1	QR5	µg/l	5.00	50.0		76	40-130	28	20
Hexachloroethane	22.3	QR5	µg/l	5.00	50.0		45	40-130	24	20
Indeno (1,2,3-cd) pyrene	26.4		µg/l	5.00	50.0		53	40-130	11	20
Isophorone	22.5		µg/l	5.00	50.0		45	40-130	12	20
2-Methylnaphthalene	25.3	QR5	µg/l	5.00	50.0		51	40-130	22	20
2-Methylphenol	20.8		µg/l	5.00	50.0		42	40-130	14	20
3 & 4-Methylphenol	23.9		µg/l	10.0	50.0		48	40-130	9	20
Naphthalene	23.2	QR5	µg/l	5.00	50.0		46	40-130	23	20
2-Nitroaniline	26.1		µg/l	5.00	50.0		52	40-130	8	20
3-Nitroaniline	34.1		µg/l	5.00	50.0		68	40-130	12	20
4-Nitroaniline	29.6		µg/l	20.0	50.0		59	40-130	6	20
Nitrobenzene	23.2		µg/l	5.00	50.0		46	40-130	18	20
2-Nitrophenol	22.4		µg/l	5.00	50.0		45	40-130	15	20
4-Nitrophenol	15.0	QC2	µg/l	20.0	50.0		30	40-130	13	20
N-Nitrosodimethylamine	17.3	QC2	µg/l	5.00	50.0		35	40-130	15	20
N-Nitrosodi-n-propylamine	27.0		µg/l	5.00	50.0		54	40-130	11	20
N-Nitrosodiphenylamine	36.1		µg/l	5.00	50.0		72	40-130	4	20
Pentachlorophenol	25.0		µg/l	20.0	50.0		50	40-130	8	20
Phenanthrene	34.5		µg/l	5.00	50.0		69	40-130	9	20
Phenol	11.1	QC2	µg/l	5.00	50.0		22	40-130	12	20
Pyrene	30.4		µg/l	5.00	50.0		61	40-130	10	20
Pyridine	17.4	QC2	µg/l	5.00	50.0		35	40-140	11	20
1-Methylnaphthalene	24.3	QR5	µg/l	5.00	50.0		49	40-140	21	20
1,2,4-Trichlorobenzene	23.0	QR5	µg/l	5.00	50.0		46	40-130	21	20
2,4,5-Trichlorophenol	27.2		µg/l	5.00	50.0		54	40-130	12	20
2,4,6-Trichlorophenol	27.6		µg/l	5.00	50.0		55	40-130	9	20
Pentachloronitrobenzene	43.8		µg/l	5.00	50.0		88	40-140	7	20
1,2,4,5-Tetrachlorobenzene	26.8	QR5	µg/l	5.00	50.0		54	40-140	21	20
Surrogate: 2-Fluorobiphenyl	25.9		µg/l		50.0		52	30-130		
Surrogate: 2-Fluorophenol	15.0		µg/l		50.0		30	15-110		
Surrogate: Nitrobenzene-d5	24.4		µg/l		50.0		49	30-130		
Surrogate: Phenol-d5	13.8		µg/l		50.0		28	15-110		
Surrogate: Terphenyl-dl4	27.6		µg/l		50.0		55	30-130		
Surrogate: 2,4,6-Tribromophenol	37.4		µg/l		50.0		75	15-110		

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018319 - SW846 3510C										
<u>Blank (1018319-BLK1)</u>					<u>Prepared & Analyzed: 27-Aug-10</u>					
Aroclor-1016	BRL		µg/l	0.200						
Aroclor-1016 [2C]	BRL		µg/l	0.200						
Aroclor-1221	BRL		µg/l	0.200						
Aroclor-1221 [2C]	BRL		µg/l	0.200						
Aroclor-1232	BRL		µg/l	0.200						
Aroclor-1232 [2C]	BRL		µg/l	0.200						
Aroclor-1242	BRL		µg/l	0.200						
Aroclor-1242 [2C]	BRL		µg/l	0.200						
Aroclor-1248	BRL		µg/l	0.200						
Aroclor-1248 [2C]	BRL		µg/l	0.200						
Aroclor-1254	BRL		µg/l	0.200						
Aroclor-1254 [2C]	BRL		µg/l	0.200						
Aroclor-1260	BRL		µg/l	0.200						
Aroclor-1260 [2C]	BRL		µg/l	0.200						
Aroclor-1262	BRL		µg/l	0.200						
Aroclor-1262 [2C]	BRL		µg/l	0.200						
Aroclor-1268	BRL		µg/l	0.200						
Aroclor-1268 [2C]	BRL		µg/l	0.200						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.112		µg/l		0.200		56	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.0900		µg/l		0.200		45	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.0960		µg/l		0.200		48	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.103		µg/l		0.200		52	30-150		
<u>LCS (1018319-BS1)</u>					<u>Prepared & Analyzed: 27-Aug-10</u>					
Aroclor-1016	2.43		µg/l	0.200	2.50		97	50-114		
Aroclor-1016 [2C]	2.29		µg/l	0.200	2.50		91	50-114		
Aroclor-1260	1.94		µg/l	0.200	2.50		78	40-127		
Aroclor-1260 [2C]	2.11		µg/l	0.200	2.50		84	40-127		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.185		µg/l		0.200		92	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.189		µg/l		0.200		94	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.148		µg/l		0.200		74	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.153		µg/l		0.200		76	30-150		
<u>LCS Dup (1018319-BSD1)</u>					<u>Prepared & Analyzed: 27-Aug-10</u>					
Aroclor-1016	2.31		µg/l	0.200	2.50		92	50-114	5	20
Aroclor-1016 [2C]	2.20		µg/l	0.200	2.50		88	50-114	4	20
Aroclor-1260	2.01		µg/l	0.200	2.50		80	40-127	3	20
Aroclor-1260 [2C]	2.18		µg/l	0.200	2.50		87	40-127	4	20
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.190		µg/l		0.200		95	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.180		µg/l		0.200		90	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.137		µg/l		0.200		68	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.165		µg/l		0.200		82	30-150		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018317 - SW846 3510C										
<u>Blank (1018317-BLK1)</u>										
Non-polar material (SGT-HEM)	BRL		mg/l	1.0						
<u>LCS (1018317-BS1)</u>										
Non-polar material (SGT-HEM)	25.9		mg/l		31.0		84	83-101		

Prepared: 27-Aug-10 Analyzed: 31-Aug-10

Prepared: 27-Aug-10 Analyzed: 31-Aug-10

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 1018351 - EPA 200 Series										
<u>Blank (1018351-BLK1)</u>					<u>Prepared: 27-Aug-10 Analyzed: 30-Aug-10</u>					
Zinc	BRL		mg/l	0.0050						
Selenium	BRL		mg/l	0.0150						
Antimony	BRL		mg/l	0.0060						
Nickel	BRL		mg/l	0.0050						
Iron	BRL		mg/l	0.0150						
Silver	BRL		mg/l	0.0050						
Chromium	BRL		mg/l	0.0050						
Arsenic	BRL		mg/l	0.0040						
Copper	BRL		mg/l	0.0050						
Cadmium	BRL		mg/l	0.0025						
<u>LCS (1018351-BS1)</u>					<u>Prepared: 27-Aug-10 Analyzed: 30-Aug-10</u>					
Zinc	1.31		mg/l	0.0050	1.25		105	85-115		
Selenium	1.29		mg/l	0.0150	1.25		103	85-115		
Antimony	1.21		mg/l	0.0060	1.25		97	85-115		
Nickel	1.29		mg/l	0.0050	1.25		103	85-115		
Iron	1.29		mg/l	0.0150	1.25		103	85-115		
Chromium	1.17		mg/l	0.0050	1.25		93	85-115		
Copper	1.31		mg/l	0.0050	1.25		105	85-115		
Cadmium	1.28		mg/l	0.0025	1.25		102	85-115		
Arsenic	1.27		mg/l	0.0040	1.25		101	85-115		
Silver	1.22		mg/l	0.0050	1.25		97	85-115		
<u>Duplicate (1018351-DUP1)</u>				<u>Source: SB17163-03</u>		<u>Prepared: 27-Aug-10 Analyzed: 30-Aug-10</u>				
Zinc	0.0350		mg/l	0.0050		0.0353			0.9	20
Nickel	0.0092		mg/l	0.0050		0.0098			5	20
Iron	0.0236		mg/l	0.0150		0.0268			12	20
Copper	0.0038	J	mg/l	0.0050		0.0034			13	20
<u>Matrix Spike (1018351-MS1)</u>				<u>Source: SB17163-01</u>		<u>Prepared: 27-Aug-10 Analyzed: 30-Aug-10</u>				
Zinc	1.33		mg/l	0.0050	1.25	0.0437	103	70-130		
Iron	1.36		mg/l	0.0150	1.25	0.0962	101	70-130		
Nickel	1.28		mg/l	0.0050	1.25	0.0044	102	70-130		
Antimony	1.21		mg/l	0.0060	1.25	BRL	97	70-130		
Selenium	1.27		mg/l	0.0150	1.25	BRL	102	70-130		
Cadmium	1.26		mg/l	0.0025	1.25	0.0006	101	70-130		
Silver	1.23		mg/l	0.0050	1.25	BRL	99	70-130		
Chromium	1.17		mg/l	0.0050	1.25	0.0080	93	70-130		
Arsenic	1.31		mg/l	0.0040	1.25	BRL	104	70-130		
Copper	1.37		mg/l	0.0050	1.25	0.0034	109	70-130		
<u>Post Spike (1018351-PS1)</u>				<u>Source: SB17163-01</u>		<u>Prepared: 27-Aug-10 Analyzed: 30-Aug-10</u>				
Iron	1.42		mg/l	0.0150	1.25	0.0962	106	85-115		
Zinc	1.38		mg/l	0.0050	1.25	0.0437	107	85-115		
Selenium	1.32		mg/l	0.0150	1.25	BRL	105	85-115		
Antimony	1.25		mg/l	0.0060	1.25	BRL	100	85-115		
Nickel	1.32		mg/l	0.0050	1.25	0.0044	105	85-115		
Silver	1.27		mg/l	0.0050	1.25	BRL	101	85-115		
Chromium	1.20		mg/l	0.0050	1.25	0.0080	96	85-115		
Arsenic	1.35		mg/l	0.0040	1.25	BRL	108	85-115		
Copper	1.40		mg/l	0.0050	1.25	0.0034	112	85-115		
Cadmium	1.31		mg/l	0.0025	1.25	0.0006	104	85-115		
Batch 1018354 - EPA 200 Series										
<u>Blank (1018354-BLK1)</u>					<u>Prepared: 27-Aug-10 Analyzed: 31-Aug-10</u>					
Lead	BRL		mg/l	0.0002						

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* Reportable Detection Limit

BRL = Below Reporting Limit

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 1018354 - EPA 200 Series										
<u>LCS (1018354-BS1)</u>								<u>Prepared: 27-Aug-10 Analyzed: 31-Aug-10</u>		
Lead	1.30		mg/l	0.0125	1.25		104	85-115		
<u>Duplicate (1018354-DUP1)</u>				<u>Source: SB17163-03</u>				<u>Prepared: 27-Aug-10 Analyzed: 31-Aug-10</u>		
Lead	0.0023		mg/l	0.0002		0.0021			6	20
<u>Matrix Spike (1018354-MS1)</u>				<u>Source: SB17163-01</u>				<u>Prepared: 27-Aug-10 Analyzed: 31-Aug-10</u>		
Lead	1.30		mg/l	0.0125	1.25	0.0003	104	70-130		
<u>Post Spike (1018354-PS1)</u>				<u>Source: SB17163-01</u>				<u>Prepared: 27-Aug-10 Analyzed: 31-Aug-10</u>		
Lead	1.31		mg/l	0.0125	1.25	0.0003	105	85-115		
Batch 1018358 - EPA200/SW7000 Series										
<u>Blank (1018358-BLK1)</u>								<u>Prepared: 27-Aug-10 Analyzed: 30-Aug-10</u>		
Mercury	BRL		mg/l	0.00020						
<u>LCS (1018358-BS1)</u>								<u>Prepared: 27-Aug-10 Analyzed: 30-Aug-10</u>		
Mercury	0.00529		mg/l	0.00020	0.00500		106	85-115		
<u>Duplicate (1018358-DUP1)</u>				<u>Source: SB17163-01</u>				<u>Prepared: 27-Aug-10 Analyzed: 30-Aug-10</u>		
Mercury	BRL		mg/l	0.00020		BRL				20

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018092 - General Preparation										
<u>Blank (1018092-BLK1)</u>										
Hexavalent Chromium	BRL		mg/l	0.005						
<u>LCS (1018092-BS1)</u>										
Hexavalent Chromium	0.051		mg/l	0.005	0.0500		102	80-120		
<u>Duplicate (1018092-DUP1)</u>										
Hexavalent Chromium	0.002	J	mg/l	0.005		BRL				20
<u>Matrix Spike (1018092-MS1)</u>										
Hexavalent Chromium	0.056		mg/l	0.005	0.0500	BRL	112	85-115		
<u>Matrix Spike Dup (1018092-MSD1)</u>										
Hexavalent Chromium	0.055		mg/l	0.005	0.0500	BRL	110	85-115	2	20
<u>Reference (1018092-SRM1)</u>										
Hexavalent Chromium	0.024		mg/l	0.005	0.0248		97	85-115		
Batch 1018093 - General Preparation										
<u>Blank (1018093-BLK1)</u>										
Total Residual Chlorine	BRL		mg/l	0.020						
<u>LCS (1018093-BS1)</u>										
Total Residual Chlorine	0.049		mg/l	0.020	0.0500		98	90-110		
<u>Duplicate (1018093-DUP1)</u>										
Total Residual Chlorine	BRL		mg/l	0.020		BRL				20
<u>Matrix Spike (1018093-MS1)</u>										
Total Residual Chlorine	0.053		mg/l	0.020	0.0500	BRL	106	80-120		
<u>Matrix Spike Dup (1018093-MSD1)</u>										
Total Residual Chlorine	0.054		mg/l	0.020	0.0500	BRL	108	80-120	2	20
<u>Reference (1018093-SRM1)</u>										
Total Residual Chlorine	0.107		mg/l	0.020	0.110		97	85-115		
Batch 1018179 - General Preparation										
<u>Blank (1018179-BLK1)</u>										
Total Suspended Solids	BRL		mg/l	5.00						
<u>Blank (1018179-BLK2)</u>										
Total Suspended Solids	BRL		mg/l	5.00						
<u>LCS (1018179-BS1)</u>										
Total Suspended Solids	94.0		mg/l	10.0	91.3		103	90-110		
<u>LCS (1018179-BS2)</u>										
Total Suspended Solids	98.0		mg/l	10.0	91.3		107	90-110		
Batch 1018465 - General Preparation										
<u>Blank (1018465-BLK1)</u>										
Cyanide (total)	BRL		mg/l	0.00500						
<u>Blank (1018465-BLK2)</u>										
Cyanide (total)	BRL		mg/l	0.00500						
<u>LCS (1018465-BS1)</u>										
Cyanide (total)	0.275		mg/l	0.00500	0.300		92	90-110		
<u>LCS (1018465-BS2)</u>										
Cyanide (total)	0.300		mg/l	0.00500	0.300		100	90-110		
<u>Duplicate (1018465-DUP1)</u>										
Cyanide (total)	BRL		mg/l	0.00500		BRL				20
<u>Matrix Spike (1018465-MS1)</u>										
Cyanide (total)	0.276		mg/l	0.00500	0.300	BRL	92	90-110		
<u>Matrix Spike Dup (1018465-MSD1)</u>										
Cyanide (total)	0.274		mg/l	0.00500	0.300	BRL	91	90-110	0.9	20
<u>Reference (1018465-SRM1)</u>										

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* Reportable Detection Limit

BRL = Below Reporting Limit

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General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 1018465 - General Preparation									
<u>Reference (1018465-SRM1)</u>							<u>Prepared & Analyzed: 30-Aug-10</u>		
Cyanide (total)	1.20	QM9	mg/l	0.0100	0.732		164 62.7-136.6		

Notes and Definitions

E	The concentration indicated for this analyte is an estimated value. This value is considered an estimate (CLP E-flag).
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.
QR5	RPD out of acceptance range.
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).
CIHT	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.

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

- Gasoline - includes regular, unleaded, premium, etc.
- Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
- Fuel Oil #4 - includes #4 fuel oil
- Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
- Motor Oil - includes virgin and waste automobile oil
- Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
- Aviation Fuel - includes kerosene, Jet A and JP-4
- Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as *TPH (Calculated as).

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
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CHAIN OF CUSTODY

FED-EX Tracking #
Accurate Quote #

Bottle Order Control	
Accutest Job #	

SB17163

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Appendix III: Minimum Levels and Test Methods

PARAMETER - CAS No. -	Minimum Levels and Test Methods ^{1,2,3}				
	GC ⁴	GC/MS ⁵	LC ⁶	FAA ⁷	Other
1. Total Suspended Solids (TSS)					5 mg/l Method 160.2
2. Total Residual Chlorine (TRC)					20 ug/l Method 330.5
3. Total Petroleum Hydrocarbons (TPH)					5 mg/l Method 166.4
4. Cyanide (total) - 57125 -					10 ug/l Method 335.4
5. Benzene (B) - 71432 -	0.5 ug/l Method 602	2 ug/l Method 624			Method 8260C ⁸
6. Toluene (T) - 108883 -	0.5 ug/l Method 602	2 ug/l Method 624			Method 8260C ⁸
7. Ethylbenzene (E) - 100414 -	0.5 ug/l Method 602	2 ug/l Method 624			Method 8260C ⁸
8. (m,p,o) Xylenes (X) - 108383, 106423, 95476 -	0.5 ug/l Method 602	10 ug/l Method 1624			Method 8260C ⁸
9. Total BTEX	0.5 ug/l Method 602	2 ug/l Method 624			Method 8260C ⁸
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) - 106934 -	1.0 ug/l Method 618 0.01 ug/l Method 504.1	0.1 ug/l Methods 524.2			Method 8260C ⁸

PARAMETER - CAS No. -	Minimum Levels and Test Methods (40 CFR 136)				
	GC	GC/MS	LC	FAA	Other
11. Methyl-tert-Butyl Ether (MTBE)	0.5 ug/l Method 602 ^a	5.0 ug/l Method 524.2			Method 8260C ²
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol) - 75650 -	0.5 ug/l Method 602 ^a	100 ug/l Method 1666			Method 8260C ²
13. tert-Amyl Methyl Ether (TAME) -994058-	0.5 ug/l Method 602 ^a				Method 8260C ²
14. Naphthalene -91203 -	10 ug/l Method 610 GC/MSD	2 ug/l Method 625 500 ug/l Method 524.2	0.2 ug/l Method 610 HPLC		Method 8270D ¹
15. Carbon Tetrachloride -56235 -	0.5 ug/l Method 601	2 ug/l Methods 624, 1624			Method 8260C ²
16. 1,4 Dichlorobenzene (p-DCB) -106467 -	0.5 ug/l Methods 601, 602	2 ug/l Methods 624, 625			Method 8260C ²
17. 1,2 Dichlorobenzene (o-DCB) -95801 -	0.5 ug/l Methods 601, 602	2 ug/l Methods 624, 625			Method 8260C ²
18. 1,3 Dichlorobenzene (m-DCB) - 541731 -	0.5 ug/l Methods 601, 602	2 ug/l Methods 624, 625			Method 8260C ²
19. 1,1 Dichloroethane (DCA) - 75343 -	0.5 ug/l Method 601	1 ug/l Method 624			Method 8260C ²
20. 1,2 Dichloroethane (DCA) - 107062 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²

total 7
PCB.

PARAMETER -CAS No.-	Minimum Levels and Test Methods (40 CFR 136)				
	GC	GC/MS	LC	FAA	Other
21. 1,1 Dichloroethylene (DCE) - 75354 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
22. cis-1,2 Dichloro-ethylene (DCE) -156592-	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
23. Dichloromethane (Methylene Chloride)- 75092 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
24. Tetrachloroethylene (PCE) - 127184 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
25. 1,1,1 Trichloro-ethane (TCA) - 71556 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
26. 1,1,2 Trichloro-ethane (TCA) - 79005 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
27. Trichloroethylene (TCE) - 79016 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
28. Vinyl Chloride - 75014 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
29. Acetone - 67641 -	1.0 ug/l Method 524.2	50 ug/l Method 1624			Method 8260C ²
30. 1,4 Dioxane -123911-		50 ug/l Method 1624			Method 8260C ²
31. Total Phenols - 108952	1.0 ug/l Method 624 Method 8260 ²	1 ug/l Methods 625, 1625			Method 8260C ² Method 8270D ³
32. Pentachlorophenol (PCP) - 87865 -	1.0 ug/l Method 604 GC/MS	5 ug/l Methods 625, 1625			Method 8270D ³

PARAMETER - CAS No. -	Minimum Levels and Test Methods (40 CFR 136)				
	GC	GC/MS	LC	PAH	Other
33. Total Phthalates ^a (Phthalate esters)		5 ug/l Method 625			Method 8270D ^b
34. Bis (2-Ethylhexyl) Phthalate [De (ethylhexyl) Phthalate] - 117817 - ^c	10 ug/l Method 606	5 ug/l Method 625			Method 8270D ^b
35. Total Group I Polynuclear Aromatic Hydrocarbons (PAH)					Method 8270D ^b
a. Benzo(a) Anthracene -56553-	10 ug/l Method 610 GC	5 ug/l Method 625	0.05 ug/l Method 610 HPLC		Method 8270D ^b
b. Benzo(a) Pyrene -50328-		10 ug/l Method 625	2 ug/l Method 610 HPLC		Method 8270D ^b
c. Benzo(b) Fluoranthene -205092-		10 ug/l Method 625	0.1 ug/l Method 610 HPLC		Method 8270D ^b
d. Benzo(k) Fluoranthene -207089-		10 ug/l Method 625	2 ug/l Method 610 HPLC		Method 8270D ^b
e. Chrysene -218019-		10 ug/l Method 625	5 ug/l Method 610 HPLC		Method 8270D ^b
f. Dibenzo(a,h) anthracene		10 ug/l Method 625	0.1 ug/l Method 610 HPLC		Method 8270D ^b
g. Indeno(1,2,3-cd) Pyrene -193395-		10 ug/l Method 625	0.15 ug/l Method 610		Method 8270D ^b
36. Total Group II Polynuclear Aromatic Hydrocarbons (PAH)					Method 8270D ^b
h. Acenaphthene -83329-	1 ug/l Method 610 GC/PIID	1 ug/l Method 625	0.5 ug/l Method 610 HPLC		Method 8270D ^b
i. Acenaphthylene -208968-		10 ug/l Method 625	0.2 ug/l Method 610 HPLC		Method 8270D ^b

PARAMETER - CAS No. -	Minimum Levels and Test Methods (40 CFR 136)				
	GC	GC/MS	LC	FAA	Other
j. Anthracene - 120127 -		10 ug/l Method 625	2 ug/l Method 610 HPLC		Method 8270D ³
k. Benzo[ghi] Perylene - 191242 -		5 ug/l Method 625	0.1 ug/l Method 610 HPLC		Method 8270D ³
l. Fluoranthene - 206440 -	10 ug/l Method 610 GC/EID	1 ug/l Method 625	0.5 ug/l Method 610 HPLC		Method 8270D ³
m. Fluorene - 86737 -		10 ug/l Method 625	0.1 ug/l Method 610 HPLC		Method 8270D ³
n. Naphthalene - 91203 -	10 ug/l Method 610 GC/EID	2 ug/l Method 625 5.0 ug/l Method 524.2	0.2 ug/l Method 610 HPLC		Method 8270D ³
o. Phenanthrene - 85018 -		5 ug/l Method 625	0.05 ug/l Method 610 HPLC		Method 8270D ³
p. Pyrene - 129000 -		10 ug/l Method 625	0.05 ug/l Method 610 HPLC		Method 8270D ³
37. Total Polychlorinated Biphenyls (PCBs) ¹⁰	0.5 ug/l Method 608				0.00065 ug/l Method 1668A ¹⁰
Inorganic parameters:		Minimum Levels (ug/l) and Test Methods			
		Flame Atomic Absorption	Inductively Coupled Plasma	Furnace Atomic Absorption	Other
38. Antimony		200 ug/l	50 ug/l	5 ug/l	
39. Arsenic			5 ug/l	2 ug/l	
40. Cadmium		10 ug/l	5 ug/l	0.5 ug/l	

Inorganic parameters:	Minimum Levels (ug/l) and Test Methods			
	Flame Atomic Absorption	Inductively Coupled Plasma	Furnace Atomic Absorption	Other
41. Chromium (total)	Method 218.1	10 ug/l Methods 200.7 ¹¹ , 200.8, 200.15, 1620	5 ug/l Method 200.9	50 ug/l Method 218.6 Method 1636
42. Chromium (hexavalent)				
43. Copper	20 ug/l	5 ug/l	3 ug/l	
44. Lead	100 ug/l	40 ug/l	3 ug/l	
45. Mercury				0.2 ug/l
46. Nickel	30 ug/l	10 ug/l	5 ug/l	
47. Selenium		50 ug/l	5 ug/l	
48. Silver	50 ug/l	10 ug/l	2 ug/l	
49. Zinc	30 ug/l	10 ug/l		
50. Iron		Methods 6010b 200.7 ¹²		

3. 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). Where a minimum level (ML) is listed but a test method is not specified, permittee may use any of the available methods approved for use under 40 CFR 136, including alternatives approved by this permit, that meets that ML. See EPA's "Methods and Guidance for the Analysis of Water" at www.epa.gov/water/owcc/owccbk2.pdf. Where test method is specified but ML not listed for that method, the lowest ML for listed methods must be used before concentration can be considered as "non-detect."

2. For measuring volatile organic compounds, Method 8260C (or the latest version) may be used as a substitute for CWA Methods 524.2, 602, 624, or 1624. Method 8260C must be preceded by Method 5030 as the preparation method. However, any method changes must be accompanied by documented quality assurance quality control (QA/QC) test results to prove that the analytical process can achieve the lower detection limits of Method 8260C.
3. For measuring semi-volatile organic compounds, Method 8270D may be used as a substitute for Methods 610, 625, or 1625. Method 8270D must be preceded by Method 3535 or Method 3520C as the sample preparation method. In either case, the quality control requirements of Method 3500B must be taken into account. The sample preparation method must be specified with data analysis records. Method 8270D may be modified to provide lower detection and quantitation limits using Selected Ion Monitoring (SIM). Any method changes must be accompanied by documented quality assurance quality control (QA/QC) test results to prove that the analytical process can achieve the lower detection limits of Method 8270D.
4. GC - gas chromatography
5. GC/MS - gas chromatography/mass spectrometry
6. LC - high pressure liquid chromatography
7. Flame Atomic Absorption
8. For measuring fuel oxygenates, Method 602 must be modified to include a heated purge.
9. The sum of individual phthalate compounds.
10. In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as "*total PCBs is the sum of all homologous, all isomer, all congeners, or all diastereomer analyses*".
11. Method 1668a (HRGC/HRMS) has been proposed by EPA and is currently being validated. When approval of the method is finalized, it will be approved for use with this general permit.
12. Methods 6010b and 200.7 for metals may only be used when sample prepared with SW-846 digestion method, Method 3010.