UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100

BOSTON, MA 02109-3912

CERTIFIED MAIL RETURN RECEIPT REQUESTED

MAY 14 2015

Matthew Young
Senior Project Manager
Cumberland Farms, Inc.
100 Crossing Boulevard Farms, Inc.
Framingham, MA 01702

Re: Authorization to discharge under the Remediation General Permit (RGP) – MAG910000. Cumberland Farms Inc. Station # 2094 site located at 114 State Road, Dartmouth, MA 02747, Bristol County; Authorization # MAG910681

Dear Mr. Young:

Based on the review of a Notice of Intent (NOI) submitted by Michael Bricher, from Environmental Compliance Services, Inc., on behalf of Cumberland Farms Inc., for the site referenced above, the U.S. Environmental Protection Agency (EPA) hereby authorizes you, as the named Owner and Operator to discharge in accordance with the provisions of the RGP at that site. Your authorization number is listed above.

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

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

Also, please note that the metals included on the checklist are dilution dependent pollutants and subject to limitations based on selected dilution ranges and technology-based ceiling limitations. For each parameter the dilution factor 5.16 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 lead of 6.5 ug/L, and iron of 5,000 ug/L, are required to achieve permit compliance at your site.

This general permit and authorization to discharge will expire on September 9, 2015. You have reported that this project will terminate on December 30, 2015. 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

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

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

Sincerely,

Thelma Murphy

Thelma Murphy, Chief
Storm Water and Construction
Permits Section

Enclosure

cc: Robert Kubit, MassDEP
David T. Hickox, Dartmouth MA, DPW
Michael Bricher, Environmental Compliances Inc.

10 Remediation General Permit
Summary of Monitoring Parameters[1]

NPDES Authorization Number:	**MAG910681**
Authorization Issued:	June, 2015
Facility/Site Name:	Cumberland Farms # 2094/V0893
Facility/Site Address:	114 State Road, Dartmouth, MA RTN # 4-6034
	Email address of owner: myoung@cumberlandgulf.com
Legal Name of Operator:	Cumberland Farms, Inc.
Operator contact name, title, and Address:	Matthew Young, Senior Project Manager
	Email: same as the owner
Estimated date of The Project Completion:	December 30, 2015
Category and Sub-Category:	Category 1 Petroleum Related site Remediation. Subcategory C. Petroleum sites with Additional Contamination
RGP Termination Date:	September 2015
Receiving Water:	Paskamanset River

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

	Parameter	**Effluent Limit/Method#/ML** (All Effluent Limits are shown as Daily Maximum Limit, unless denoted by a **, in that case it will be a Monthly Average Limit)
√	1. Total Suspended Solids (TSS)	30 milligrams/liter (mg/L) **, 50 mg/L for hydrostatic testing ** Me#160.2/ML5ug/L
	2. Total Residual Chlorine (TRC) [1]	Freshwater = 11 ug/L ** Saltwater = 7.5 ug/L **/ Me#330.5/ML 20ug/L
	3. Total Petroleum Hydrocarbons (TPH)	5.0 mg/L/ Me# 1664A/ML 5.0mg/L
	4. Cyanide (CN) [2, 3]	Freshwater = 5.2 ug/l ** Saltwater = 1.0 ug/L **/ Me#335.4/ML 10ug/L
√	5. Benzene (B)	5ug/L /50.0 ug/L for hydrostatic testing only/ Me#8260C/ML 2 ug/L
	6. Toluene (T)	(limited as ug/L total BTEX)/ Me#8260C/ ML 2ug/L
	7. Ethylbenzene (E)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
	8. (m,p,o) Xylenes (X)	(limited as ug/L total BTEX) Me#8260C/ ML 2ug/L
√	9. Total Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX) [4]	100 ug/L/ Me#8260C/ ML 2ug/L

	10. Ethylene Dibromide (EDB) (1,2- Dibromoethane)	0.05 ug/l/ Me#8260C/ ML 10ug/L
√	11. Methyl-tert-Butyl Ether (MtBE)	70.0 ug/l/Me#8260C/ML 10ug/L
√	12.tert-Butyl Alcohol (TBA) (TertiaryButanol)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	13. tert-Amyl Methyl Ether (TAME)	Monitor Only(ug/L)/Me#8260C/ML 10ug/L
	14. Naphthalene [5]	20 ug/L /Me#8260C/ML 2ug/L
	15. Carbon Tetrachloride	4.4 ug/L /Me#8260C/ ML 5ug/L
	16. 1,2 Dichlorobenzene (o-DCB)	600 ug/L /Me#8260C/ ML 5ug/L
	17. 1,3 Dichlorobenzene (m-DCB)	320 ug/L /Me#8260C/ ML 5ug/L
	18. 1,4 Dichlorobenzene (p-DCB)	5.0 ug/L /Me#8260C/ ML 5ug/L
	18a. Total dichlorobenzene	763 ug/L - NH only /Me#8260C/ ML 5ug/L
	19. 1,1 Dichloroethane (DCA)	70 ug/L /Me#8260C/ ML 5ug/L
	20. 1,2 Dichloroethane (DCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	21. 1,1 Dichloroethene (DCE)	3.2 ug/L/Me#8260C/ ML 5ug/L
	22. cis-1,2 Dichloroethene (DCE)	70 ug/L/Me#8260C/ ML 5ug/L
	23. Methylene Chloride	4.6 ug/L/Me#8260C/ ML 5ug/L
	24. Tetrachloroethene (PCE)	5.0 ug/L/Me#8260C/ ML 5ug/L
	25. 1,1,1 Trichloro-ethane (TCA)	200 ug/L/Me#8260C/ ML 5ug/L
	26. 1,1,2 Trichloro-ethane (TCA)	5.0 ug/L /Me#8260C/ ML 5ug/L
	27. Trichloroethene (TCE)	5.0 ug/L /Me#8260C/ ML 5ug/L
	28. Vinyl Chloride (Chloroethene)	2.0 ug/L /Me#8260C/ ML 5ug/L
√	29. Acetone	Monitor Only(ug/L)/Me#8260C/ML 50ug/L
	30. 1,4 Dioxane	Monitor Only /Me#1624C/ML 50ug/L
	31. Total Phenols	300 ug/L Me#420.1&420.2/ML 2 ug/L/ Me# 420.4 /ML 50ug/L
	32. Pentachlorophenol (PCP)	1.0 ug/L /Me#8270D/ML 5ug/L,Me#604 &625/ML 10ug/L
	33. Total Phthalates (Phthalate esters) [6]	3.0 ug/L ** /Me#8270D/ML 5ug/L, Me#606/ML 10ug/L& Me#625/ML 5ug/L
	34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate]	6.0 ug/L /Me#8270D/ML 5ug/L,Me#606/ML 10ug/L & Me#625/ML 5ug/L
√	35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	10.0 ug/L
√	a. Benzo(a) Anthracene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	b. Benzo(a) Pyrene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L
√	c. Benzo(b)Fluoranthene [7]	0.0038 ug/L /Me#8270D/ ML 5ug/L, Me#610/ML 5ug/L& Me#625/ML 5ug/L

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

	Metal parameter	**Total Recoverable Metal Limit @ H [10]= 50 mg/l CaCO3 for discharges in Massachusetts (ug/l) [11/12]**	**Minimum level=ML**	
		Freshwater		
	39. Antimony	5.6/ML 10	ML	10
	40. Arsenic **	10/ML20	ML	20
	41. Cadmium **	0.2/ML10		10
	42. Chromium III (trivalent) **	48.8/ML15		15
	43. Chromium VI (hexavalent) **	11.4	ML	10
	44. Copper **	5.2	ML	15
√	45. Lead **	6.5	ML	20
	46. Mercury **	0.9	ML	0.2
	47. Nickel **	29	ML	20
	48. Selenium **	5	ML	20

	49. Silver	1.2		ML	10
	50. Zinc **	66.6		ML	15
√	51. Iron	5,000		ML	20

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

Footnotes:

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

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

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

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

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

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

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

to the discharge monitoring report, including the minimum level and minimum detection level for the analysis.

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

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

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

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

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

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

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

[14] Temperature sampling per Method 170.1

ecs WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

997 Millbury Street, Unit G, Worcester, MA 01607 tel 508.756.0151 fax 508.757.7063 www.ecsconsult.com

April 22, 2015
Project No. 03-222456

Mr. Victor Alvarez
U.S. Environmental Protection Agency
EPA-Region 1
5 Post Office Square
Mail Code OEP06-4
Boston, MA 02109-3912

RE: Notice of Intent for Remediation General Permit
Cumberland Farms #2094/V0893
114 State Road
Dartmouth, Massachusetts
MassDEP RTN # 4-6034

Dear Mr. Alvarez:

Environmental Compliance Services, Inc. (ECS) is pleased to provide supporting documentation for the Notice of Intent (NOI) for the Remediation General Permit (RGP) on behalf of Cumberland Farms, Inc. (CFI), for the above-referenced property. This NOI is being submitted in order to obtain a permit for the operation of a temporary groundwater recovery and treatment system (GWTS) at the Site. The GWTS is required to be operated at the Site in order to allow for the installation of new petroleum underground storage tanks (USTs) during site redevelopment. A Site Locus is provided as Figure 1, and a Site Plan depicting the dewatering discharge location is provided as Figure 2. A Flow Schematic of the dewatering treatment plan is included as Figure 3. A copy of the NOI form is provided as Attachment I.

System Design

The groundwater treatment system located on the Site will be composed of the following: Submersible pneumatic pumps that collect groundwater from the UST excavation area, then recovered groundwater will be pumped into two 20,000 gallon frac tank (to settle out solids) and then processed through particulate filters and two-1,000 lbs. liquid phase granular activated carbon (GAC) units for the treatment of recovered liquids. A line diagram of the groundwater treatment system is provided as Figure 3.

The proposed discharge location for treated groundwater is a catch basin located adjacent to the southern subject property boundary on State Road (US Route 6) (refer to Figure 2). This storm water catch basin (CB-1) discharges to a storm water drainage culvert running underneath State Road. The storm water drainage culvert discharges into an unnamed stream located north of State Road, and approximately 2,000 feet west of the subject property. This stream discharges into the

Paskamanset River located approximately 3,500 feet west of the Site. Please refer to Figure 1 for a depiction of the unnamed stream located west of the subject property as well as Paskamanset River.

Average flow rate of discharge of treated groundwater from the system to the storm water line is expected to be approximately 50 gallons per minute (gpm). The design capacity of the groundwater treatment system is 75 gpm based upon data collected from comparable systems installed at other remedial sites operated/designed by ECS.

Influent Sample Analysis

Groundwater samples were collected from monitoring well MW-6S on September 9, 2014 and March 16, 2015. These samples were submitted to Spectrum Analytical, Inc. of Agawam, Massachusetts under standard chain of custody protocol for analysis of volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) by MassDEP method, volatile organic compounds (VOCs) by USEPA Method 8260B, semi-volatile organic compounds (SVOCs) by USEPA method 8270C, total metals (iron and lead) by USEPA Method 200.7, flashpoint, pH, and total suspended solids by SM2540D. A copy of the laboratory report and chains of custody record are provided as Attachment II.

Appendix III of the 2010 RGP under NPDES sets the effluent limitations for treatment system discharges. Groundwater analytical results of the samples collected from MW-6S on September 9, 2014 and March 16, 2015 were compared to the Appendix III effluent limitations (www.epa.gov/region1/npdes/rgp.html). These results indicate that the petroleum constituents (i.e., benzene, total benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tert butyl ether (MTBE), and naphthalene) were not detected in the sample at concentrations above the applicable EPA RGP Appendix III effluent limitations for Subcategory A-Petroleum Sites with additional contamination. Total iron did exceed the applicable EPA RGP Appendix III effluent limitations.

Receiving Waters Information

The receiving water for the treated groundwater discharge is the Paskamanset River, located approximately 3,500 feet west of the Site. ECS consulted the online United States Geological Survey (USGS) Streamstats program to determine the 7Q10 flow rate at the discharge location (http://ma.water.usgs.gov/streamstats/, accessed April 15, 2015). Data obtained from the online resource indicated that the 7Q10 flow rate for the Paskamanset River at USGS station #01105933 is 0.7 cubic feet per second (cfs). Based on data available, ECS calculated a 7Q10 flow rate for this area to be 42 cubic feet per minute.

Receiving Water Classification

ECS consulted the Massachusetts Department of Environmental Protection (MassDEP) Division of Water Pollution Control (http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/tblfig.pdf) to determine the classification for the receiving waters. The Paskamanset River is listed as Class B surface water.

Evaluation of Threatened or Endangered Species or Critical Habitat Located within Receiving Waters

According to Massachusetts Geographic Information Systems (MassGIS) online maps for the Natural Heritage Endangered Species Program (NHESP) (2008), no Priority Habitat of Rare Species or Estimated Habitats of Rare Wildlife are located within the proposed at or immediately adjacent to the work zone area. The closest NHESP Estimated Habitats of Rare Wildlife in Wetland Areas/Protected Open Spaces are located approximately 3,000 feet southwest of the Site. Given the fact there will be an on-site dewatering treatment system, the potential discharge will not have an adverse affect on the NHESP Estimated Habitats of Rare Wildlife. A copy of the MassGIS Resource Priority and NHESP Maps of the Site area is included in Attachment III.

Review of National Register of Historic Places

Listings of Historic Places within the Town of Walpole in the vicinity of the Site were obtained from the Massachusetts Cultural Resources Information System (MACRIS) online database at http://mhc-macris.net/towns.aspx (accessed April 8, 2015). Copies of the MACRIS report are provided as Attachment IV. The database indicated that there are no historic places located in close proximity to the Site and proposed discharge area. This project does not involve the demolition or rehabilitation of historic properties.

Lastly, Post Response Action Outcome (RAO) environmental response actions are currently being conducted at this Site in accordance with the Massachusetts Contingency Plan (310 CMR 40.0000) under MassDEP 4-6034. Accordingly, discharges subject to the MCP do not require the completion of state application form BRPWM 12 or pay state fees.

Should you have any questions or concerns regarding the contents of this letter or the NOI for the RGP, please do not hesitate to contact the undersigned at (508) 756-0151.

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Michael C. Bricher, P.G., LSP
Senior Project Manager

cc: Matthew Young, Cumberland Farms, Inc., 100 Crossing Blvd, Framingham, MA 01702
Robert Kubit, MassDEP, Division of Watershed Management, 627 Main Street, Worcester, MA 01608
David Hickox, Director, Town of Dartmouth Department of Public Works, 759 Russells Mills Road, Dartmouth, MA 02748
Samuil Valkovski, MassDOT, 1000 County Street, Taunton, MA 02780

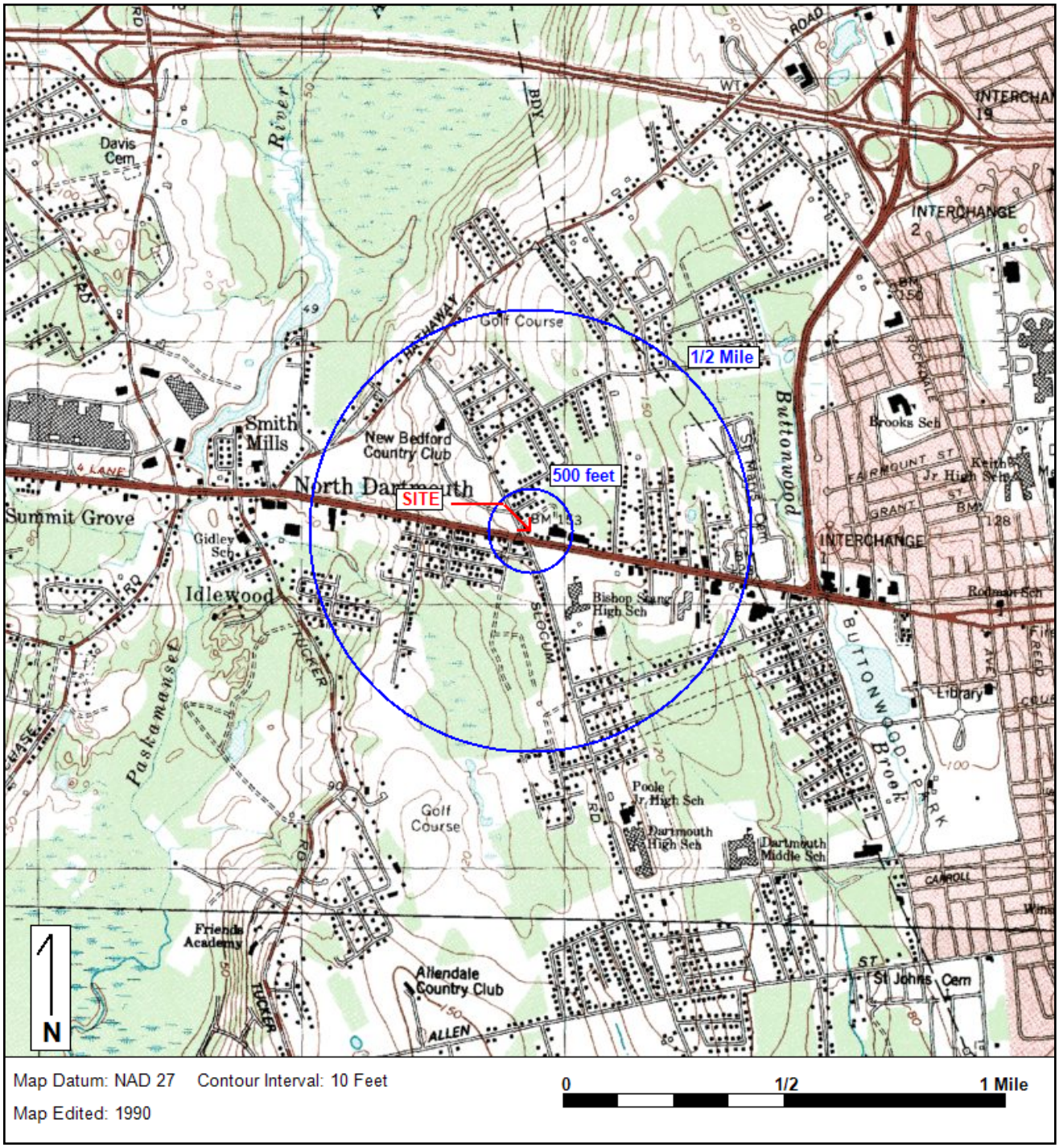
LIST OF ATTACHMENTS

FIGURES

Environmental Compliance Services, Inc.
997 Millbury Street, Unit G
Worcester, MA 01607
Phone 508-756-0151 Fax 508-757-7063
www.ecsconsult.com

MA-2094-North Dartmouth-114 State Road
114 State Road
Dartmouth, MA 02747-2921

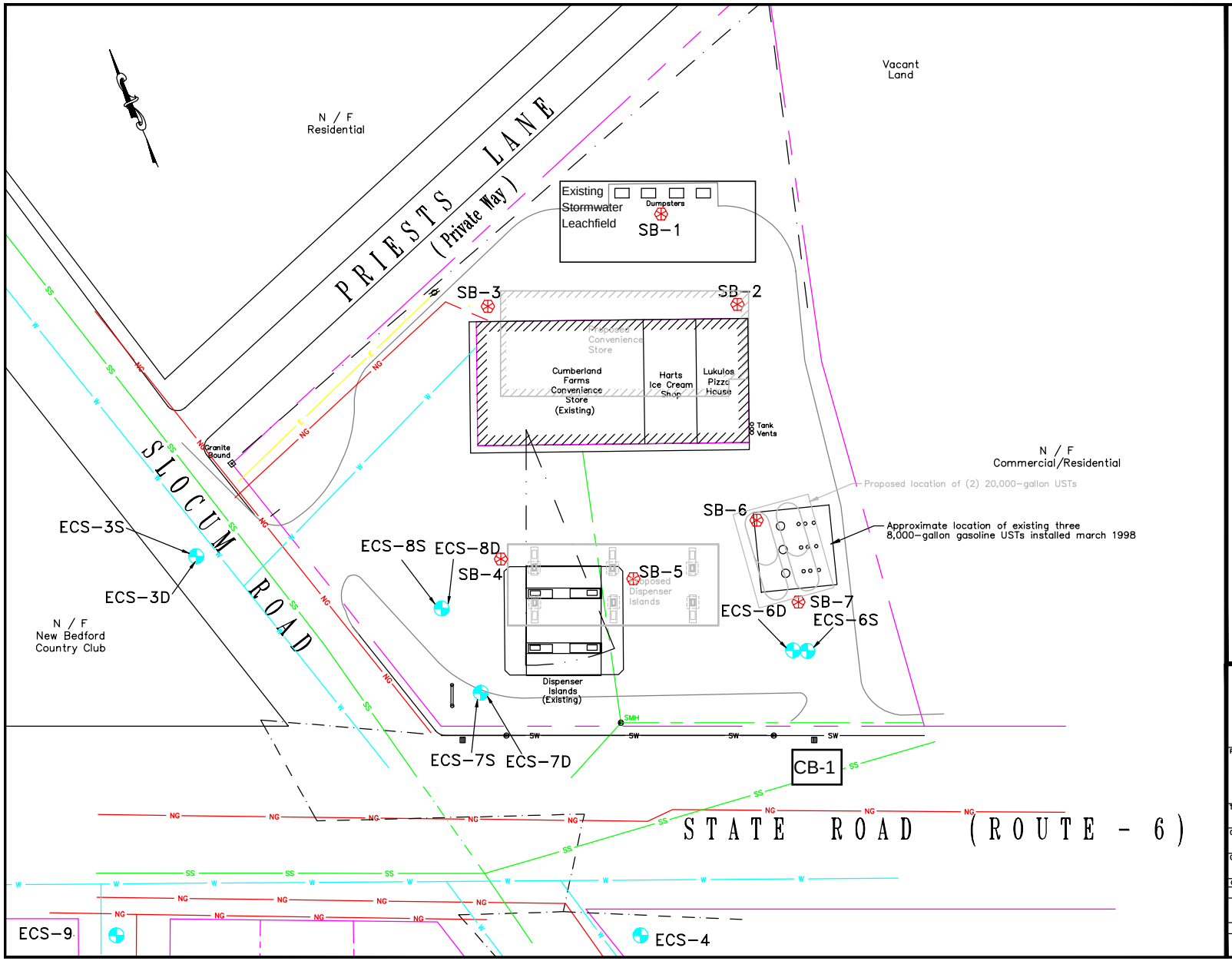
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: New Bedford North, MA

Lat/Lon: 41 38' 18.2868" NORTH, 70 58' 12.342" WEST - UTM Coordinates: 19 335917.2 EAST / 4611505.6 NORTH

Generated By: Carol Farrington



Legend

- Approximate Property Line
- Sanitary Sewer Line
- Storm Sewer Line
- Water Line
- Natural Gas Line
- Fence
- Sump
- Catchbasin
- Water Gate
- Fire Hydrant
- Utility Pole
- Soil Boring
- Monitoring Well

General Notes:

All locations, dimensions, and property lines depicted on this plan are approximate. This plan should not be used for construction or land conveyance purposes.

Horizontal, and vertical locations of wells, and selected site features determined through measurements made by representatives of ECS.

ecs
977 Millbury Street * Worcester, MA 01607
Phone: 508-756-0151 Fax: 508-757-7083
ecsconsult.com

PROJECT:
Station #2094/Store #V0893
114 State Road (Rt. 6)
Dartmouth, Massachusetts

TITLE:
Site Plan

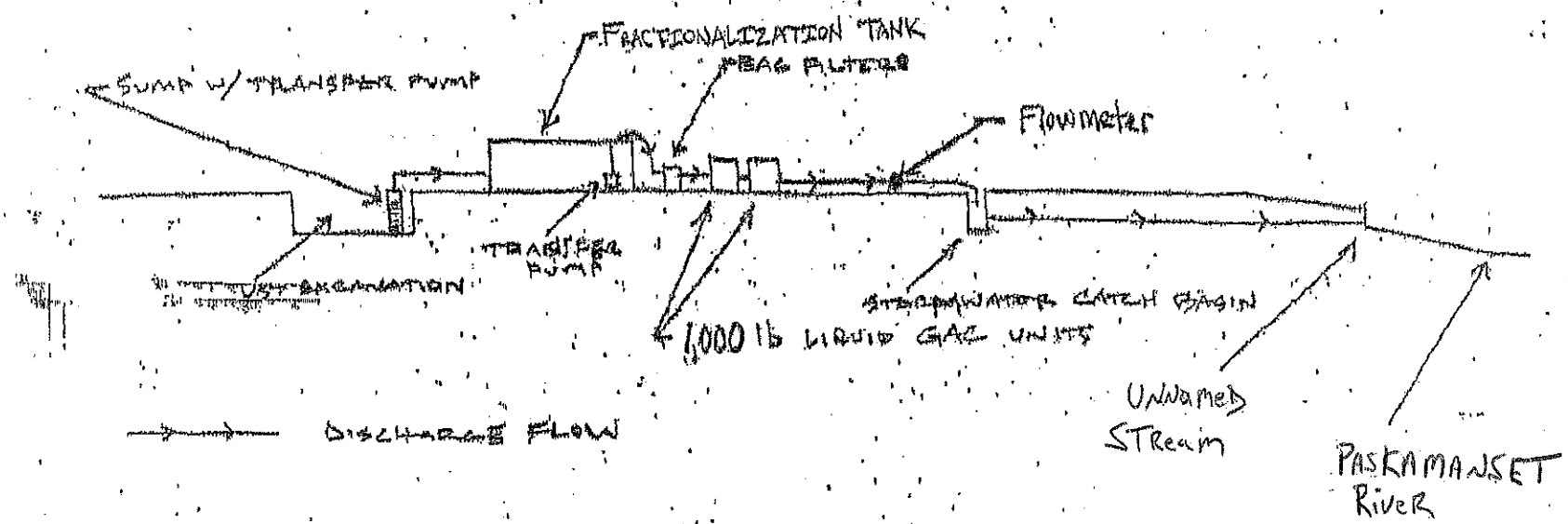
CLIENT:
Cumberland Farms Inc.

GRAPHIC SCALE: 40 20 0 20 40

COMPUTER CADFILE :

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
JAM	JAM	JW	JW
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
1" = 40'	9/25/2014	03-222456	2

Flow Schematic - Figure 3



ATTACHMENT I

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**: Cumberland Farms Inc. # 2094		**Facility/site** mailing address:			
Location of **facility/site**: longitude: 705812.34 latitude: 413818.28	Facility SIC code(s): 7549	Street: 114 State Road			
b) Name of **facility/site owner:**		Town: Dartmouth			
Email address of facility/site owner: myoung@cumberlandgulf.com		State: MA	Zip: 02747	County: Bristol	
Telephone no. of facility/site **owner**: 508-270-4477					
Fax no. of facility/site **owner**: 781-459-0454		**Owner** is (check one): 1. Federal ○ 2. State/Tribal ○ 3. Private ◉ 4. Other ○ if so, describe:			
Address of **owner** (if different from site):					
Street: 100 Crossing Boulevard					
Town: Framingham	State: MA	Zip: 01702	County: Middlesex		
c) Legal name of **operator**: Cumberland Farms, Inc.	**Operator** telephone no: 508-270-4477				
	Operator fax no.: 781-459-0454	**Operator** email: myoung@cumberlandgulf.co			
Operator contact name and title: Matthew Young, Senior Project Manager					
Address of **operator** (if different from owner):	Street:				
Town:	State:	Zip:	County:		

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

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

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

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

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

Activity Category	**Activity Sub-Category**
I - Petroleum Related Site Remediation	A. Gasoline Only Sites ☐ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) ☐ C. Petroleum Sites with Additional Contamination ☒
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites ☐ B. VOC Sites with Additional Contamination ☐ C. Primarily Heavy Metal Sites ☐
III - Contaminated Construction Dewatering	A. General Urban Fill Sites ☐ B. Known Contaminated Sites ☐

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

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:

The petroleum station is upgrading their underground fuel storage tanks and dewatering will be necessary to perform these upgrades. The discharge will be associated with the dewatering activities.

b) Provide the following information about each discharge:

1) Number of discharge points: 1

2) What is the **maximum** and **average flow rate** of discharge (in cubic feet per second, ft^3/s)?
Max. flow 0.168 Is maximum flow a **design value**? Y ○ N ◉
Average flow (include units) 0.0117 cubic ft/s Is average flow a design value or estimate? Estimate

3) Latitude and longitude of each discharge within 100 feet:
pt.1: lat. 413818.28 long. 705812.34; 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 7/1/2015 end 12/30/2015

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). Flow Schematic is attached.

3. Contaminant information.

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

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids (TSS)		☐	☒	1	Grab	SM2540D	5,000	<5,000		<5,000	
2. Total Residual Chlorine (TRC)		☒	☐								
3. Total Petroleum Hydrocarbons (TPH)		☒	☐	1	Grab	EPH	103	<103		<103	
4. Cyanide (CN)	57125	☒	☐								
5. Benzene (B)	71432	☐	☒	1	Grab	8260	1.0	2.7		2.7	
6. Toluene (T)	108883	☒	☐	1	Grab	8260	1.0	<1.0		<1.0	
7. Ethylbenzene (E)	100414	☒	☐	1	Grab	8260	1.0	<1.0		<1.0	
8. (m,p,o) Xylenes (X)	108883; 106423; 95476; 1330207	☒	☐	1	Grab	8260	1.0	<3.0		<3.0	
9. Total BTEX [2]	n/a	☐	☒	1	Grab	8260/	1.0	2.7		2.7	
10. Ethylene Dibromide (EDB) (1,2-Dibromoethane) [3]	106934	☒	☐	1	Grab	8260	0.5	<0.5		<0.5	
11. Methyl-tert-Butyl Ether (MtBE)	1634044	☐	☒	1	Grab	8260	1.0	7.6		7.6	
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol)	75650	☐	☒	1	Grab	8260	10	166		166	

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

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

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

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

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
28. Vinyl Chloride (Chloroethene)	75014	☒	☐	1	Grab	8260	1.0	<1.0		<1.0	
29. Acetone	67641	☐	☒	1	Grab	8260	10	12.6		12.6	
30. 1,4 Dioxane	123911	☒	☐	1	Grab	8260	20	<20		<20	
31. Total Phenols	108952	☒	☐	1	Grab	8270	5.38	<5.38		<5.38	
32. Pentachlorophenol (PCP)	87865	☒	☐	1	Grab	8270	21.5	<21.5		<21.5	
33. Total Phthalates (Phthalate esters) [4]		☒	☐	0							
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	117817	☒	☐	1	Grab	8270	5.38	<5.38		<5.38	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	Grab	MADEP EPH	5.38	<5.38		<5.38	
a. Benzo(a) Anthracene	56553	☒	☐	1	Grab		5.38	<5.38		<5.38	
b. Benzo(a) Pyrene	50328	☒	☐	1	Grab		5.38	<5.38		<5.56	
c. Benzo(b)Fluoranthene	205992	☒	☐	1	Grab		5.38	<5.38		<5.38	
d. Benzo(k)Fluoranthene	207089	☒	☐	1	Grab		5.38	<5.38		<5.38	
e. Chrysene	21801	☒	☐	1	Grab		5.38	<5.38		<5.38	
f. Dibenzo(a,h)anthracene	53703	☒	☐	1	Grab		5.38	<5.38		<5.38	
g. Indeno(1,2,3-cd) Pyrene	193395	☒	☐	1	Grab		5.38	<5.38		<5.38	
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		☒	☐	1	Grab	MADEP EPH	5.38	<5.38		<5.38	

[4] The sum of individual phthalate compounds.

Parameter *	CAS Number	Believed Absent	Believed Present	# of Samples	Sample Type (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
								concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
h. Acenaphthene	83329	☒	☐	1	Grab		5.38	<5.38			
i. Acenaphthylene	208968	☒	☐	1	Grab		5.38	<5.38			
j. Anthracene	120127	☒	☐	1	Grab		5.38	<5.38			
k. Benzo(ghi) Perylene	191242	☒	☐	1	Grab		5.38	<5.38			
l. Fluoranthene	206440	☒	☐	1	Grab		5.38	<5.38			
m. Fluorene	86737	☒	☐	1	Grab		5.38	<5.38			
n. Naphthalene	91203	☒	☐	1	Grab		5.38	<5.38			
o. Phenanthrene	85018	☒	☐	1	Grab		5.38	<5.38			
p. Pyrene	129000	☒	☐	1	Grab		5.38	<5.38			
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.	☒	☐	0							
38. Chloride	16887006	☒	☐	0							
39. Antimony	7440360	☒	☐	1	grab	6010C	12	<12			
40. Arsenic	7440382	☒	☐	1	grab	6010C	8	<8			
41. Cadmium	7440439	☒	☐	1	grab	6010C	5	<5			
42. Chromium III (trivalent)	16065831	☒	☐	1	grab	6010C	10	<10			
43. Chromium VI (hexavalent)	18540299	☒	☐	1	grab	6010C	10	<10			
44. Copper	7440508	☒	☐	1	grab	6010C	10	<10			
45. Lead	7439921	☒	☐	1	grab	6010C	7.5	<7.5			
46. Mercury	7439976	☒	☐	1	grab	6010C	0.20	<0.20			
47. Nickel	7440020	☒	☐	1	grab	6010C	10	<10			
48. Selenium	7782492	☒	☐	1	grab	6010C	30	<30			
49. Silver	7440224	☒	☐	1	grab	6010C	10	<10			
50. Zinc	7440666	☒	☐	1	grab	6010C	10	<10			
51. Iron	7439896	☐	☒	1	grab	6010C	30	4,460		4,460	
Other (describe):		☐	☐								

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

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

Step 1: Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y◉ N○	If yes, which metals? Iron
Step 2: For any metals which exceed the **Appendix III** limits, calculate the **dilution factor (DF)** using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal: Iron DF: 5.19 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:

The water from the UST excavation will be pumped into two frac tanks for settling, then through two bag filter units in parallell, two 1,000 lbs liquid granular activated carbon vessels in series, and a flow meter prior to discharge to the storm drainage manhole located on State Road, immediately south of the subject property. The storm drain located State Road is discharged to an unnamed stream located approximately 2,000 feet west of the Site. This unnamed stream discharges into the Paskamanset 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 50 gpm Maximum flow rate of treatment system 75 gpm
Design flow rate of treatment system 75 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):

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

The storm drain located on State Road is discharged to a unnamed stream which subsequently discharges to the Paskamanset 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 B

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 0.7 cfs
Please attach any calculation sheets used to support stream flow and dilution calculations.

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

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

6. ESA and NHPA Eligibility.

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

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

A (●) B ( ) C ( ) D ( ) E ( ) F ( )

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

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

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

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

1 ( ) 2 (●) 3 ( )

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

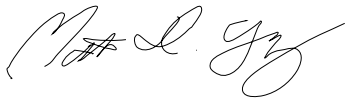
7. Supplemental information.

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

Based on a review of the MassDEP Resource Priority Map and the MassGIS Priority Habitat and Estimated Habitat Natural Heritage and Endangered Species Program Map, no areas of priority or estimated habitats or rare species were identified at the Site/work zone area relative to the proposed discharge (see attached maps). Therefore, it was determined that Criterion A in Section 6 (a) was applicable.

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:	Cumberland Farms Inc.
Operator signature:	
Printed Name &Title:	Matthew D. Young
Date:	April 27, 2015

ATTACHMENT II

Report Date:
20-Mar-15 09:40

☐ Final Report
☐ Re-Issued Report
☑ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Environmental Compliance Services
997 Millbury Street, Unit G
Worcester, MA 01607
Attn: Jason Ward

Project: CFI Dartmouth - 2094/V0893 - MA
Project #: 03-222456.00

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB96280-01	ECS-6S	Ground Water	09-Sep-14 12:34	12-Sep-14 15:25

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

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

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 30 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, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

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

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water		
Containers	✓ Satisfactory		
Sample Preservative	**Aqueous** (acid preserved)	N/A ✓ pH≤2 pH>2	
	Soil or Sediment	✓ N/A Samples not received in Methanol	ml Methanol/g soil 1:1 +/-25% Other
		Samples received in Methanol: covering soil/sediment not covering soil/sediment	
		Samples received in air-tight container	
Temperature	Received on ice Received at 4 ± 2 ºC ✓ Other: 0.9ºC		

Were all QA/QC procedures followed as required by the VPH method? *Yes*
Were any significant modifications made to the VPH method as specified in section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water
Containers	✓ Satisfactory
Aqueous Preservative	N/A ✓ pH≤2 pH>2 pH adjusted to <2 in lab
Temperature	Received on ice Received at 4 ± 2 ºC ✓ Other: 0.9ºC

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

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:

Nicole Leja
Laboratory Director

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.	**Project #:** 03-222456.00
Project Location: CFI Dartmouth - 2094/V0893 - MA	**RTN:**
This form provides certifications for the following data set: SB96280-01	
Matrices: Ground Water	

CAM Protocol

✓ 8260 VOC CAM II A	7470/7471 Hg CAM III B	✓ MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	✓ MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

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

Responses to questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

<u>Data User Note:</u> Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ✓ No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Nicole Leja
Laboratory Director
Date: 3/20/2015

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 0.9 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 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.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

March 20, 2015 Report Revision Case Narrative:

This report has been revised to include analyses added as listed in the appendix at the end of this report.

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

EPA 200.7/3005A/6010

Samples:

SB96280-01 *ECS-6S*

Field filtered. Laboratory preserved.

Filtration

SW846 6010C

Spikes:

1422079-MS1 *Source: SB96280-01*

The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.

Iron

Duplicates:

1422079-DUP1 *Source: SB96280-01*

MRL raised to correlate to batch QC reporting limits.

Zinc

Samples:

SW846 6010C

Samples:

SB96280-01 *ECS-6S*

MRL raised to correlate to batch QC reporting limits.

Zinc

SW846 8260C

Calibration:

1409047

Analyte quantified by quadratic equation type calibration.

Chloromethane

This affected the following samples:

1421856-BLK1
1421856-BS1
1421856-BSD1
ECS-6S
S410258-ICV1
S410480-CCV1

Laboratory Control Samples:

1421856 BS/BSD

Bromomethane percent recoveries (67/77) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS-6S

Samples:

S410480-CCV1

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

1,1,2-Trichlorotrifluoroethane (Freon 113) (30.5%)
1,1-Dichloroethene (20.1%)
Bromomethane (-33.3%)
trans-1,4-Dichloro-2-butene (-27.1%)
Trichlorofluoromethane (Freon 11) (25.5%)

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

Chloromethane (25.0%)

This affected the following samples:

1421856-BLK1
1421856-BS1
1421856-BSD1
ECS-6S

Sample Acceptance Check Form

Client:	Environmental Compliance Services - Worcester, MA
Project:	CFI Dartmouth - 2094/V0893 - MA / 03-222456.00
Work Order:	SB96280
Sample(s) received on:	9/12/2014

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
ECS-6S	03-222456.00	Ground Water	09-Sep-14 12:34	12-Sep-14
SB96280-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.0		µg/l	1.0	0.7	1	SW846 8260C	17-Sep-14	18-Sep-14	JEG	1421856	
67-64-1	Acetone	**12.6**		µg/l	10.0	3.6	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.5		µg/l	0.5	0.5	1	"	"	"	"	"	
71-43-2	Benzene	**2.7**		µg/l	1.0	0.3	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
75-25-2	Bromoform	< 1.0		µg/l	1.0	0.6	1	"	"	"	"	"	
74-83-9	Bromomethane	< 2.0		µg/l	2.0	0.5	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 10.0		µg/l	10.0	3.1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 2.0		µg/l	2.0	0.7	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
75-00-3	Chloroethane	< 2.0		µg/l	2.0	0.7	1	"	"	"	"	"	
67-66-3	Chloroform	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
74-87-3	Chloromethane	< 2.0		µg/l	2.0	0.5	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 2.0		µg/l	2.0	0.5	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 0.5		µg/l	0.5	0.3	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.0		µg/l	2.0	0.6	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.5		µg/l	0.5	0.5	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	< 10.0		µg/l	10.0	2.0	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
ECS-6S	03-222456.00	Ground Water	09-Sep-14 12:34	12-Sep-14
SB96280-01				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5030 Water MS													
98-82-8	Isopropylbenzene	< 1.0		µg/l	1.0	0.5	1	SW846 8260C	17-Sep-14	18-Sep-14	JEG	1421856	
99-87-6	4-Isopropyltoluene	< 1.0		µg/l	1.0	0.5	1						
1634-04-4	Methyl tert-butyl ether	7.6		µg/l	1.0	0.4	1						
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0	2.5	1						
75-09-2	Methylene chloride	< 2.0		µg/l	2.0	0.5	1						
91-20-3	Naphthalene	< 1.0		µg/l	1.0	0.5	1						
103-65-1	n-Propylbenzene	< 1.0		µg/l	1.0	0.4	1						
100-42-5	Styrene	< 1.0		µg/l	1.0	0.4	1						
630-20-6	1,1,1,2-Tetrachloroethane	< 1.0		µg/l	1.0	0.4	1						
79-34-5	1,1,2,2-Tetrachloroethane	< 0.5		µg/l	0.5	0.5	1						
127-18-4	Tetrachloroethene	< 1.0		µg/l	1.0	0.6	1						
108-88-3	Toluene	< 1.0		µg/l	1.0	0.3	1						
87-61-6	1,2,3-Trichlorobenzene	< 1.0		µg/l	1.0	0.8	1						
120-82-1	1,2,4-Trichlorobenzene	< 1.0		µg/l	1.0	0.4	1						
108-70-3	1,3,5-Trichlorobenzene	< 1.0		µg/l	1.0	0.6	1						
71-55-6	1,1,1-Trichloroethane	< 1.0		µg/l	1.0	0.4	1						
79-00-5	1,1,2-Trichloroethane	< 1.0		µg/l	1.0	0.3	1						
79-01-6	Trichloroethene	< 1.0		µg/l	1.0	0.4	1						
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.0		µg/l	1.0	0.8	1						
96-18-4	1,2,3-Trichloropropane	< 1.0		µg/l	1.0	0.3	1						
95-63-6	1,2,4-Trimethylbenzene	< 1.0		µg/l	1.0	0.3	1						
108-67-8	1,3,5-Trimethylbenzene	< 1.0		µg/l	1.0	0.4	1						
75-01-4	Vinyl chloride	< 1.0		µg/l	1.0	1.0	1						
179601-23-1	m,p-Xylene	< 2.0		µg/l	2.0	0.4	1						
95-47-6	o-Xylene	< 1.0		µg/l	1.0	0.4	1						
109-99-9	Tetrahydrofuran	< 2.0		µg/l	2.0	0.8	1						
60-29-7	Ethyl ether	< 1.0		µg/l	1.0	0.5	1						
994-05-8	Tert-amyl methyl ether	< 1.0		µg/l	1.0	0.3	1						
637-92-3	Ethyl tert-butyl ether	< 1.0		µg/l	1.0	0.4	1						
108-20-3	Di-isopropyl ether	< 1.0		µg/l	1.0	0.3	1						
75-65-0	Tert-Butanol / butyl alcohol	166		µg/l	10.0	8.9	1						
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	14.6	1						
110-57-6	trans-1,4-Dichloro-2-buten e	< 5.0		µg/l	5.0	1.0	1						
64-17-5	Ethanol	< 400		µg/l	400	80.8	1						
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*98*			*70-130 %*								
2037-26-5	*Toluene-d8*	*99*			*70-130 %*								
17060-07-0	*1,2-Dichloroethane-d4*	*107*			*70-130 %*								
1868-53-7	*Dibromofluoromethane*	*98*			*70-130 %*								
MADEP VPH													
Prepared by method VPH - EPA 5030C Water													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
ECS-6S	03-222456.00	Ground Water	09-Sep-14 12:34	12-Sep-14
SB96280-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
MADEP VPH													
Prepared by method VPH - EPA 5030C Water													
	C5-C8 Aliphatic Hydrocarbons	**123**	D	µg/l	75.0	6.62	5	MADEP VPH 5/2004 Rev. 1.1	17-Sep-14	18-Sep-14	mp	1421850	
	C9-C12 Aliphatic Hydrocarbons	< 25.0	D	µg/l	25.0	7.11	5						
	C9-C10 Aromatic Hydrocarbons	< 25.0	D	µg/l	25.0	1.78	5						
	Unadjusted C5-C8 Aliphatic Hydrocarbons	**137**	D	µg/l	75.0	7.93	5						
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0	D	µg/l	25.0	6.70	5						
71-43-2	Benzene	< 5.00	D	µg/l	5.00	1.16	5						
100-41-4	Ethylbenzene	< 5.00	D	µg/l	5.00	2.16	5						
1634-04-4	Methyl tert-butyl ether	**9.24**	D	µg/l	5.00	1.68	5						
91-20-3	Naphthalene	< 5.00	D	µg/l	5.00	1.80	5						
108-88-3	Toluene	< 5.00	D	µg/l	5.00	0.995	5						
179601-23-1	m,p-Xylene	< 10.0	D	µg/l	10.0	4.13	5						
95-47-6	o-Xylene	< 5.00	D	µg/l	5.00	2.22	5						
Surrogate recoveries:													
615-59-8	*2,5-Dibromotoluene (FID)*	*109*			*70-130 %*								
615-59-8	*2,5-Dibromotoluene (PID)*	*106*			*70-130 %*								
Extractable Petroleum Hydrocarbons													
MADEP EPH													
Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 103		µg/l	103	26.4	1	MADEP EPH 5/2004 R	18-Sep-14	22-Sep-14	MWP	1421966	
	C19-C36 Aliphatic Hydrocarbons	< 103		µg/l	103	37.2	1						
	C11-C22 Aromatic Hydrocarbons	< 103		µg/l	103	60.7	1						
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 103		µg/l	103	60.7	1						
91-20-3	Naphthalene	< 5.15		µg/l	5.15	2.13	1						
91-57-6	2-Methylnaphthalene	< 5.15		µg/l	5.15	2.08	1						
208-96-8	Acenaphthylene	< 5.15		µg/l	5.15	2.15	1						
83-32-9	Acenaphthene	< 5.15		µg/l	5.15	2.54	1						
86-73-7	Fluorene	< 5.15		µg/l	5.15	2.25	1						
85-01-8	Phenanthrene	< 5.15		µg/l	5.15	1.92	1						
120-12-7	Anthracene	< 5.15		µg/l	5.15	1.98	1						
206-44-0	Fluoranthene	< 5.15		µg/l	5.15	1.79	1						
129-00-0	Pyrene	< 5.15		µg/l	5.15	1.73	1						
56-55-3	Benzo (a) anthracene	< 5.15		µg/l	5.15	2.75	1						
218-01-9	Chrysene	< 5.15		µg/l	5.15	2.77	1						
205-99-2	Benzo (b) fluoranthene	< 5.15		µg/l	5.15	3.19	1						
207-08-9	Benzo (k) fluoranthene	< 5.15		µg/l	5.15	3.55	1						
50-32-8	Benzo (a) pyrene	< 5.15		µg/l	5.15	2.79	1						
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.15		µg/l	5.15	3.19	1						
53-70-3	Dibenzo (a,h) anthracene	< 5.15		µg/l	5.15	3.03	1						
191-24-2	Benzo (g,h,i) perylene	< 5.15		µg/l	5.15	3.16	1						

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
ECS-6S	03-222456.00	Ground Water	09-Sep-14 12:34	12-Sep-14
SB96280-01				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Extractable Petroleum Hydrocarbons													
MADEP EPH													
Prepared by method SW846 3510C													
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*41*			*40-140 %*			MADEP EPH 5/2004 R	18-Sep-14	22-Sep-14	MWP	1421966	
84-15-1	*Ortho-Terphenyl*	*71*			*40-140 %*								
321-60-8	*2-Fluorobiphenyl*	*75*			*40-140 %*								
Total Metals by EPA 200/6000 Series Methods													
	Preservation	**Field Preserved**		N/A			1	EPA 200/6000 methods			YR	1421783	
Total Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0100		mg/l	0.0100	0.0023	1	SW846 6010C	25-Sep-14	26-Sep-14	EDT	1422616	
7440-38-2	Arsenic	< 0.0080		mg/l	0.0080	0.0054	1						
7440-41-7	Beryllium	< 0.0040		mg/l	0.0040	0.0002	1						
7440-43-9	Cadmium	< 0.0050		mg/l	0.0050	0.0003	1						
7440-47-3	Chromium	< 0.0100		mg/l	0.0100	0.0021	1						
7440-50-8	Copper	< 0.0100		mg/l	0.0100	0.0070	1						
7439-89-6	Iron	**4.46**		mg/l	0.0300	0.0243	1						
7440-02-0	Nickel	< 0.0100		mg/l	0.0100	0.0027	1						
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0032	1		19-Sep-14	25-Sep-14		1422072	
7440-36-0	Antimony	< 0.0120		mg/l	0.0120	0.0050	1		25-Sep-14	26-Sep-14		1422616	
7782-49-2	Selenium	< 0.0300		mg/l	0.0300	0.0071	1			26-Sep-14			
7440-28-0	Thallium	< 0.0100		mg/l	0.0100	0.0031	1						
7440-66-6	Zinc	< 0.0100		mg/l	0.0100	0.0048	1			26-Sep-14			
Soluble Metals by EPA 200/6000 Series Methods													
	Filtration	**Field filtered. Laboratory preserved.**		N/A			1	EPA 200.7/3005A/6010	16-Sep-14 14:30	16-Sep-14 14:30	AAH	1421838	
Soluble Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0011	1	SW846 6010C	22-Sep-14	24-Sep-14	EDT	1422079	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0019	1						
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0004	1						
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0012	1						
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0014	1						
7440-50-8	Copper	< 0.0050		mg/l	0.0050	0.0022	1						
7439-89-6	Iron	**4.44**		mg/l	0.0150	0.0122	1			26-Sep-14			
7440-02-0	Nickel	< 0.0050		mg/l	0.0050	0.0014	1			24-Sep-14			
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0032	1						
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0022	1						
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0067	1						
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0018	1						
7440-66-6	Zinc	< 0.0450	R06	mg/l	0.0450	0.0024	1						
General Chemistry Parameters													
	Total Suspended Solids	< 5.0		mg/l	5.0	2.2	1	SM2540D	16-Sep-14	17-Sep-14	CMB	1421729	X

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421850 - VPH - EPA 5030C Water										
Blank (1421850-BLK1)					Prepared: 17-Sep-14 Analyzed: 18-Sep-14					
C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0						
C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0						
C9-C10 Aromatic Hydrocarbons	< 25.0		µg/l	25.0						
Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0						
Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0						
Benzene	< 5.00		µg/l	5.00						
Ethylbenzene	< 5.00		µg/l	5.00						
Methyl tert-butyl ether	< 5.00		µg/l	5.00						
Naphthalene	< 5.00		µg/l	5.00						
Toluene	< 5.00		µg/l	5.00						
m,p-Xylene	< 10.0		µg/l	10.0						
o-Xylene	< 5.00		µg/l	5.00						
2-Methylpentane	< 5.00		µg/l	5.00						
n-Nonane	< 10.0		µg/l	10.0						
n-Pentane	< 10.0		µg/l	10.0						
1,2,4-Trimethylbenzene	< 5.00		µg/l	5.00						
2,2,4-Trimethylpentane	< 5.00		µg/l	5.00						
n-Butylcyclohexane	< 5.00		µg/l	5.00						
n-Decane	< 5.00		µg/l	5.00						
Surrogate: 2,5-Dibromotoluene (FID)	*49.0*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*48.8*		µg/l		*50.0*		*98*	*70-130*		
LCS (1421850-BS1)					Prepared: 17-Sep-14 Analyzed: 18-Sep-14					
C5-C8 Aliphatic Hydrocarbons	**42.4**		µg/l		60.0		71	70-130		
C9-C12 Aliphatic Hydrocarbons	**56.4**		µg/l		60.0		94	70-130		
C9-C10 Aromatic Hydrocarbons	**23.0**		µg/l		20.0		115	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	**203**		µg/l		200		102	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	**79.4**		µg/l		80.0		99	70-130		
Benzene	**22.1**		µg/l		20.0		110	70-130		
Ethylbenzene	**23.1**		µg/l		20.0		115	70-130		
Methyl tert-butyl ether	**22.0**		µg/l		20.0		110	70-130		
Naphthalene	**23.6**		µg/l		20.0		118	70-130		
Toluene	**23.0**		µg/l		20.0		115	70-130		
m,p-Xylene	**46.9**		µg/l		40.0		117	70-130		
o-Xylene	**23.7**		µg/l		20.0		118	70-130		
2-Methylpentane	**18.1**		µg/l		20.0		91	70-130		
n-Nonane	**16.8**		µg/l		20.0		84	70-130		
n-Pentane	**17.4**		µg/l		20.0		87	70-130		
1,2,4-Trimethylbenzene	**23.8**		µg/l		20.0		119	70-130		
2,2,4-Trimethylpentane	**19.2**		µg/l		20.0		96	70-130		
n-Butylcyclohexane	**19.0**		µg/l		20.0		95	70-130		
n-Decane	**19.2**		µg/l		20.0		96	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*57.1*		µg/l		*50.0*		*114*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*55.6*		µg/l		*50.0*		*111*	*70-130*		
LCS Dup (1421850-BSD1)					Prepared: 17-Sep-14 Analyzed: 18-Sep-14					
C9-C12 Aliphatic Hydrocarbons	**61.4**		µg/l		60.0		102	70-130	8	25
C5-C8 Aliphatic Hydrocarbons	**43.2**		µg/l		60.0		72	70-130	2	25
C9-C10 Aromatic Hydrocarbons	**23.8**		µg/l		20.0		119	70-130	3	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	**214**		µg/l		200		107	70-130	5	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	**85.2**		µg/l		80.0		106	70-130	7	25

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421850 - VPH - EPA 5030C Water										
LCS Dup (1421850-BSD1)					Prepared: 17-Sep-14 Analyzed: 18-Sep-14					
Benzene	**22.5**		µg/l		20.0		113	70-130	2	25
Ethylbenzene	**24.9**		µg/l		20.0		124	70-130	7	25
Methyl tert-butyl ether	**22.2**		µg/l		20.0		111	70-130	1	25
Naphthalene	**25.2**		µg/l		20.0		126	70-130	6	25
Toluene	**23.9**		µg/l		20.0		120	70-130	4	25
m,p-Xylene	**51.5**		µg/l		40.0		129	70-130	10	25
o-Xylene	**25.9**		µg/l		20.0		130	70-130	9	25
2-Methylpentane	**18.1**		µg/l		20.0		90	70-130	0.4	25
n-Nonane	**20.5**		µg/l		20.0		102	70-130	20	25
n-Pentane	**17.8**		µg/l		20.0		89	70-130	2	25
1,2,4-Trimethylbenzene	**25.9**		µg/l		20.0		130	70-130	9	25
2,2,4-Trimethylpentane	**19.5**		µg/l		20.0		98	70-130	2	25
n-Butylcyclohexane	**22.7**		µg/l		20.0		114	70-130	18	25
n-Decane	**23.6**		µg/l		20.0		118	70-130	21	25
Surrogate: 2,5-Dibromotoluene (FID)	*59.9*		µg/l		*50.0*		*120*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*58.2*		µg/l		*50.0*		*116*	*70-130*		
Batch 1421856 - SW846 5030 Water MS										
Blank (1421856-BLK1)					Prepared & Analyzed: 17-Sep-14					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.0		µg/l	1.0						
Acetone	< 10.0		µg/l	10.0						
Acrylonitrile	< 0.5		µg/l	0.5						
Benzene	< 1.0		µg/l	1.0						
Bromobenzene	< 1.0		µg/l	1.0						
Bromochloromethane	< 1.0		µg/l	1.0						
Bromodichloromethane	< 0.5		µg/l	0.5						
Bromoform	< 1.0		µg/l	1.0						
Bromomethane	< 2.0		µg/l	2.0						
2-Butanone (MEK)	< 10.0		µg/l	10.0						
n-Butylbenzene	< 1.0		µg/l	1.0						
sec-Butylbenzene	< 1.0		µg/l	1.0						
tert-Butylbenzene	< 1.0		µg/l	1.0						
Carbon disulfide	< 2.0		µg/l	2.0						
Carbon tetrachloride	< 1.0		µg/l	1.0						
Chlorobenzene	< 1.0		µg/l	1.0						
Chloroethane	< 2.0		µg/l	2.0						
Chloroform	< 1.0		µg/l	1.0						
Chloromethane	< 2.0		µg/l	2.0						
2-Chlorotoluene	< 1.0		µg/l	1.0						
4-Chlorotoluene	< 1.0		µg/l	1.0						
1,2-Dibromo-3-chloropropane	< 2.0		µg/l	2.0						
Dibromochloromethane	< 0.5		µg/l	0.5						
1,2-Dibromoethane (EDB)	< 0.5		µg/l	0.5						
Dibromomethane	< 1.0		µg/l	1.0						
1,2-Dichlorobenzene	< 1.0		µg/l	1.0						
1,3-Dichlorobenzene	< 1.0		µg/l	1.0						
1,4-Dichlorobenzene	< 1.0		µg/l	1.0						
Dichlorodifluoromethane (Freon12)	< 2.0		µg/l	2.0						
1,1-Dichloroethane	< 1.0		µg/l	1.0						
1,2-Dichloroethane	< 1.0		µg/l	1.0						
1,1-Dichloroethene	< 1.0		µg/l	1.0						
cis-1,2-Dichloroethene	< 1.0		µg/l	1.0						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421856 - SW846 5030 Water MS										
Blank (1421856-BLK1)						Prepared & Analyzed: 17-Sep-14				
trans-1,2-Dichloroethene	< 1.0		µg/l	1.0						
1,2-Dichloropropane	< 1.0		µg/l	1.0						
1,3-Dichloropropane	< 1.0		µg/l	1.0						
2,2-Dichloropropane	< 1.0		µg/l	1.0						
1,1-Dichloropropene	< 1.0		µg/l	1.0						
cis-1,3-Dichloropropene	< 0.5		µg/l	0.5						
trans-1,3-Dichloropropene	< 0.5		µg/l	0.5						
Ethylbenzene	< 1.0		µg/l	1.0						
Hexachlorobutadiene	< 0.5		µg/l	0.5						
2-Hexanone (MBK)	< 10.0		µg/l	10.0						
Isopropylbenzene	< 1.0		µg/l	1.0						
4-Isopropyltoluene	< 1.0		µg/l	1.0						
Methyl tert-butyl ether	< 1.0		µg/l	1.0						
4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0						
Methylene chloride	< 2.0		µg/l	2.0						
Naphthalene	< 1.0		µg/l	1.0						
n-Propylbenzene	< 1.0		µg/l	1.0						
Styrene	< 1.0		µg/l	1.0						
1,1,1,2-Tetrachloroethane	< 1.0		µg/l	1.0						
1,1,2,2-Tetrachloroethane	< 0.5		µg/l	0.5						
Tetrachloroethene	< 1.0		µg/l	1.0						
Toluene	< 1.0		µg/l	1.0						
1,2,3-Trichlorobenzene	< 1.0		µg/l	1.0						
1,2,4-Trichlorobenzene	< 1.0		µg/l	1.0						
1,3,5-Trichlorobenzene	< 1.0		µg/l	1.0						
1,1,1-Trichloroethane	< 1.0		µg/l	1.0						
1,1,2-Trichloroethane	< 1.0		µg/l	1.0						
Trichloroethene	< 1.0		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	< 1.0		µg/l	1.0						
1,2,3-Trichloropropane	< 1.0		µg/l	1.0						
1,2,4-Trimethylbenzene	< 1.0		µg/l	1.0						
1,3,5-Trimethylbenzene	< 1.0		µg/l	1.0						
Vinyl chloride	< 1.0		µg/l	1.0						
m,p-Xylene	< 2.0		µg/l	2.0						
o-Xylene	< 1.0		µg/l	1.0						
Tetrahydrofuran	< 2.0		µg/l	2.0						
Ethyl ether	< 1.0		µg/l	1.0						
Tert-amyl methyl ether	< 1.0		µg/l	1.0						
Ethyl tert-butyl ether	< 1.0		µg/l	1.0						
Di-isopropyl ether	< 1.0		µg/l	1.0						
Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0						
1,4-Dioxane	< 20.0		µg/l	20.0						
trans-1,4-Dichloro-2-butene	< 5.0		µg/l	5.0						
Ethanol	< 400		µg/l	400						
Surrogate: 4-Bromofluorobenzene	*49.2*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*49.2*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.8*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Dibromofluoromethane	*47.5*		µg/l		*50.0*		*95*	*70-130*		
LCS (1421856-BS1)						Prepared & Analyzed: 17-Sep-14				
1,1,2-Trichlorotrifluoroethane (Freon 113)	**26.1**		µg/l		20.0		130	70-130		
Acetone	**19.4**		µg/l		20.0		97	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421856 - SW846 5030 Water MS										
LCS (1421856-BS1)					Prepared & Analyzed: 17-Sep-14					
Acrylonitrile	**21.3**		µg/l		20.0		107	70-130		
Benzene	**20.9**		µg/l		20.0		104	70-130		
Bromobenzene	**20.4**		µg/l		20.0		102	70-130		
Bromochloromethane	**19.6**		µg/l		20.0		98	70-130		
Bromodichloromethane	**19.6**		µg/l		20.0		98	70-130		
Bromoform	**16.1**		µg/l		20.0		80	70-130		
Bromomethane	**13.3**		µg/l		20.0		67	70-130		
2-Butanone (MEK)	**18.7**		µg/l		20.0		94	70-130		
n-Butylbenzene	**22.2**		µg/l		20.0		111	70-130		
sec-Butylbenzene	**22.4**		µg/l		20.0		112	70-130		
tert-Butylbenzene	**21.9**		µg/l		20.0		110	70-130		
Carbon disulfide	**21.4**		µg/l		20.0		107	70-130		
Carbon tetrachloride	**20.5**		µg/l		20.0		102	70-130		
Chlorobenzene	**20.6**		µg/l		20.0		103	70-130		
Chloroethane	**23.6**		µg/l		20.0		118	70-130		
Chloroform	**20.1**		µg/l		20.0		100	70-130		
Chloromethane	**25.0**		µg/l		20.0		125	70-130		
2-Chlorotoluene	**21.3**		µg/l		20.0		106	70-130		
4-Chlorotoluene	**21.0**		µg/l		20.0		105	70-130		
1,2-Dibromo-3-chloropropane	**18.4**		µg/l		20.0		92	70-130		
Dibromochloromethane	**17.6**		µg/l		20.0		88	70-130		
1,2-Dibromoethane (EDB)	**19.3**		µg/l		20.0		96	70-130		
Dibromomethane	**19.8**		µg/l		20.0		99	70-130		
1,2-Dichlorobenzene	**21.1**		µg/l		20.0		106	70-130		
1,3-Dichlorobenzene	**20.6**		µg/l		20.0		103	70-130		
1,4-Dichlorobenzene	**20.7**		µg/l		20.0		103	70-130		
Dichlorodifluoromethane (Freon12)	**21.3**		µg/l		20.0		107	70-130		
1,1-Dichloroethane	**20.3**		µg/l		20.0		101	70-130		
1,2-Dichloroethane	**20.6**		µg/l		20.0		103	70-130		
1,1-Dichloroethene	**24.0**		µg/l		20.0		120	70-130		
cis-1,2-Dichloroethene	**19.7**		µg/l		20.0		99	70-130		
trans-1,2-Dichloroethene	**20.2**		µg/l		20.0		101	70-130		
1,2-Dichloropropane	**19.7**		µg/l		20.0		98	70-130		
1,3-Dichloropropane	**20.1**		µg/l		20.0		100	70-130		
2,2-Dichloropropane	**19.1**		µg/l		20.0		96	70-130		
1,1-Dichloropropene	**22.7**		µg/l		20.0		113	70-130		
cis-1,3-Dichloropropene	**19.2**		µg/l		20.0		96	70-130		
trans-1,3-Dichloropropene	**18.8**		µg/l		20.0		94	70-130		
Ethylbenzene	**21.4**		µg/l		20.0		107	70-130		
Hexachlorobutadiene	**21.2**		µg/l		20.0		106	70-130		
2-Hexanone (MBK)	**17.3**		µg/l		20.0		86	70-130		
Isopropylbenzene	**21.9**		µg/l		20.0		110	70-130		
4-Isopropyltoluene	**22.4**		µg/l		20.0		112	70-130		
Methyl tert-butyl ether	**19.0**		µg/l		20.0		95	70-130		
4-Methyl-2-pentanone (MIBK)	**18.9**		µg/l		20.0		95	70-130		
Methylene chloride	**21.2**		µg/l		20.0		106	70-130		
Naphthalene	**17.6**		µg/l		20.0		88	70-130		
n-Propylbenzene	**21.9**		µg/l		20.0		109	70-130		
Styrene	**20.3**		µg/l		20.0		101	70-130		
1,1,1,2-Tetrachloroethane	**18.8**		µg/l		20.0		94	70-130		
1,1,2,2-Tetrachloroethane	**20.1**		µg/l		20.0		100	70-130		
Tetrachloroethene	**21.9**		µg/l		20.0		109	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421856 - SW846 5030 Water MS										
LCS (1421856-BS1)						Prepared & Analyzed: 17-Sep-14				
Toluene	**20.8**		µg/l		20.0		104	70-130		
1,2,3-Trichlorobenzene	**19.1**		µg/l		20.0		95	70-130		
1,2,4-Trichlorobenzene	**19.6**		µg/l		20.0		98	70-130		
1,3,5-Trichlorobenzene	**20.7**		µg/l		20.0		103	70-130		
1,1,1-Trichloroethane	**20.8**		µg/l		20.0		104	70-130		
1,1,2-Trichloroethane	**19.5**		µg/l		20.0		98	70-130		
Trichloroethene	**21.0**		µg/l		20.0		105	70-130		
Trichlorofluoromethane (Freon 11)	**25.1**		µg/l		20.0		126	70-130		
1,2,3-Trichloropropane	**20.0**		µg/l		20.0		100	70-130		
1,2,4-Trimethylbenzene	**21.2**		µg/l		20.0		106	70-130		
1,3,5-Trimethylbenzene	**21.7**		µg/l		20.0		108	70-130		
Vinyl chloride	**21.7**		µg/l		20.0		108	70-130		
m,p-Xylene	**21.1**		µg/l		20.0		106	70-130		
o-Xylene	**21.1**		µg/l		20.0		106	70-130		
Tetrahydrofuran	**17.3**		µg/l		20.0		87	70-130		
Ethyl ether	**21.6**		µg/l		20.0		108	70-130		
Tert-amyl methyl ether	**22.1**		µg/l		20.0		110	70-130		
Ethyl tert-butyl ether	**19.4**		µg/l		20.0		97	70-130		
Di-isopropyl ether	**19.6**		µg/l		20.0		98	70-130		
Tert-Butanol / butyl alcohol	**180**		µg/l		200		90	70-130		
1,4-Dioxane	**199**		µg/l		200		100	70-130		
trans-1,4-Dichloro-2-butene	**14.6**		µg/l		20.0		73	70-130		
Ethanol	**408**		µg/l		400		102	70-130		
Surrogate: 4-Bromofluorobenzene	*50.7*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: Toluene-d8	*49.2*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.9*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Dibromofluoromethane	*48.4*		µg/l		*50.0*		*97*	*70-130*		
LCS Dup (1421856-BSD1)						Prepared & Analyzed: 17-Sep-14				
1,1,2-Trichlorotrifluoroethane (Freon 113)	**25.1**		µg/l		20.0		125	70-130	4	20
Acetone	**19.4**		µg/l		20.0		97	70-130	0.3	20
Acrylonitrile	**21.5**		µg/l		20.0		108	70-130	0.8	20
Benzene	**19.7**		µg/l		20.0		99	70-130	6	20
Bromobenzene	**20.0**		µg/l		20.0		100	70-130	2	20
Bromochloromethane	**19.0**		µg/l		20.0		95	70-130	3	20
Bromodichloromethane	**18.8**		µg/l		20.0		94	70-130	4	20
Bromoform	**16.0**		µg/l		20.0		80	70-130	0.4	20
Bromomethane	**15.3**		µg/l		20.0		77	70-130	14	20
2-Butanone (MEK)	**19.0**		µg/l		20.0		95	70-130	1	20
n-Butylbenzene	**20.8**		µg/l		20.0		104	70-130	7	20
sec-Butylbenzene	**21.5**		µg/l		20.0		108	70-130	4	20
tert-Butylbenzene	**21.1**		µg/l		20.0		106	70-130	4	20
Carbon disulfide	**20.1**		µg/l		20.0		101	70-130	6	20
Carbon tetrachloride	**19.5**		µg/l		20.0		98	70-130	5	20
Chlorobenzene	**19.8**		µg/l		20.0		99	70-130	4	20
Chloroethane	**22.4**		µg/l		20.0		112	70-130	5	20
Chloroform	**19.3**		µg/l		20.0		96	70-130	4	20
Chloromethane	**23.4**		µg/l		20.0		117	70-130	7	20
2-Chlorotoluene	**20.5**		µg/l		20.0		102	70-130	4	20
4-Chlorotoluene	**20.2**		µg/l		20.0		101	70-130	4	20
1,2-Dibromo-3-chloropropane	**17.8**		µg/l		20.0		89	70-130	4	20
Dibromochloromethane	**17.0**		µg/l		20.0		85	70-130	3	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421856 - SW846 5030 Water MS										
LCS Dup (1421856-BSD1)					Prepared & Analyzed: 17-Sep-14					
1,2-Dibromoethane (EDB)	**19.0**		µg/l		20.0		95	70-130	1	20
Dibromomethane	**19.8**		µg/l		20.0		99	70-130	0.2	20
1,2-Dichlorobenzene	**20.2**		µg/l		20.0		101	70-130	4	20
1,3-Dichlorobenzene	**20.0**		µg/l		20.0		100	70-130	3	20
1,4-Dichlorobenzene	**20.0**		µg/l		20.0		100	70-130	3	20
Dichlorodifluoromethane (Freon12)	**20.2**		µg/l		20.0		101	70-130	6	20
1,1-Dichloroethane	**19.4**		µg/l		20.0		97	70-130	5	20
1,2-Dichloroethane	**20.0**		µg/l		20.0		100	70-130	3	20
1,1-Dichloroethene	**22.1**		µg/l		20.0		111	70-130	8	20
cis-1,2-Dichloroethene	**19.0**		µg/l		20.0		95	70-130	4	20
trans-1,2-Dichloroethene	**19.6**		µg/l		20.0		98	70-130	3	20
1,2-Dichloropropane	**18.6**		µg/l		20.0		93	70-130	6	20
1,3-Dichloropropane	**19.7**		µg/l		20.0		99	70-130	2	20
2,2-Dichloropropane	**18.6**		µg/l		20.0		93	70-130	3	20
1,1-Dichloropropene	**21.2**		µg/l		20.0		106	70-130	6	20
cis-1,3-Dichloropropene	**18.6**		µg/l		20.0		93	70-130	3	20
trans-1,3-Dichloropropene	**18.1**		µg/l		20.0		91	70-130	4	20
Ethylbenzene	**20.5**		µg/l		20.0		102	70-130	4	20
Hexachlorobutadiene	**20.4**		µg/l		20.0		102	70-130	4	20
2-Hexanone (MBK)	**17.1**		µg/l		20.0		86	70-130	1	20
Isopropylbenzene	**21.1**		µg/l		20.0		105	70-130	4	20
4-Isopropyltoluene	**20.9**		µg/l		20.0		104	70-130	7	20
Methyl tert-butyl ether	**18.5**		µg/l		20.0		93	70-130	3	20
4-Methyl-2-pentanone (MIBK)	**18.4**		µg/l		20.0		92	70-130	3	20
Methylene chloride	**20.7**		µg/l		20.0		104	70-130	3	20
Naphthalene	**17.8**		µg/l		20.0		89	70-130	1	20
n-Propylbenzene	**20.9**		µg/l		20.0		104	70-130	5	20
Styrene	**19.8**		µg/l		20.0		99	70-130	2	20
1,1,1,2-Tetrachloroethane	**18.5**		µg/l		20.0		93	70-130	2	20
1,1,2,2-Tetrachloroethane	**19.8**		µg/l		20.0		99	70-130	2	20
Tetrachloroethene	**20.8**		µg/l		20.0		104	70-130	5	20
Toluene	**19.9**		µg/l		20.0		100	70-130	4	20
1,2,3-Trichlorobenzene	**18.9**		µg/l		20.0		95	70-130	0.9	20
1,2,4-Trichlorobenzene	**19.3**		µg/l		20.0		96	70-130	2	20
1,3,5-Trichlorobenzene	**20.0**		µg/l		20.0		100	70-130	4	20
1,1,1-Trichloroethane	**20.1**		µg/l		20.0		100	70-130	4	20
1,1,2-Trichloroethane	**19.1**		µg/l		20.0		95	70-130	2	20
Trichloroethene	**19.5**		µg/l		20.0		98	70-130	7	20
Trichlorofluoromethane (Freon 11)	**24.1**		µg/l		20.0		120	70-130	4	20
1,2,3-Trichloropropane	**19.9**		µg/l		20.0		99	70-130	0.7	20
1,2,4-Trimethylbenzene	**20.4**		µg/l		20.0		102	70-130	4	20
1,3,5-Trimethylbenzene	**20.9**		µg/l		20.0		105	70-130	4	20
Vinyl chloride	**20.6**		µg/l		20.0		103	70-130	5	20
m,p-Xylene	**20.3**		µg/l		20.0		101	70-130	4	20
o-Xylene	**20.6**		µg/l		20.0		103	70-130	3	20
Tetrahydrofuran	**17.5**		µg/l		20.0		88	70-130	1	20
Ethyl ether	**21.2**		µg/l		20.0		106	70-130	2	20
Tert-amyl methyl ether	**21.0**		µg/l		20.0		105	70-130	5	20
Ethyl tert-butyl ether	**19.1**		µg/l		20.0		96	70-130	1	20
Di-isopropyl ether	**18.7**		µg/l		20.0		93	70-130	5	20
Tert-Butanol / butyl alcohol	**182**		µg/l		200		91	70-130	1	20
1,4-Dioxane	**203**		µg/l		200		101	70-130	2	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421856 - SW846 5030 Water MS										
LCS Dup (1421856-BSD1)					Prepared & Analyzed: 17-Sep-14					
trans-1,4-Dichloro-2-butene	**14.5**		µg/l		20.0		72	70-130	0.8	20
Ethanol	**416**		µg/l		400		104	70-130	2	20
Surrogate: 4-Bromofluorobenzene	*50.6*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: Toluene-d8	*49.4*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50.8*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*48.8*		µg/l		*50.0*		*98*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421966 - SW846 3510C										
Blank (1421966-BLK1)					Prepared: 18-Sep-14 Analyzed: 19-Sep-14					
C9-C18 Aliphatic Hydrocarbons	< 100		µg/l	100						
C19-C36 Aliphatic Hydrocarbons	< 100		µg/l	100						
C11-C22 Aromatic Hydrocarbons	< 100		µg/l	100						
Unadjusted C11-C22 Aromatic Hydrocarbons	< 100		µg/l	100						
Total Petroleum Hydrocarbons	< 300		µg/l	300						
Unadjusted Total Petroleum Hydrocarbons	< 300		µg/l	300						
Naphthalene	< 5.00		µg/l	5.00						
2-Methylnaphthalene	< 5.00		µg/l	5.00						
Acenaphthylene	< 5.00		µg/l	5.00						
Acenaphthene	< 5.00		µg/l	5.00						
Fluorene	< 5.00		µg/l	5.00						
Phenanthrene	< 5.00		µg/l	5.00						
Anthracene	< 5.00		µg/l	5.00						
Fluoranthene	< 5.00		µg/l	5.00						
Pyrene	< 5.00		µg/l	5.00						
Benzo (a) anthracene	< 5.00		µg/l	5.00						
Chrysene	< 5.00		µg/l	5.00						
Benzo (b) fluoranthene	< 5.00		µg/l	5.00						
Benzo (k) fluoranthene	< 5.00		µg/l	5.00						
Benzo (a) pyrene	< 5.00		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00						
Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00						
Benzo (g,h,i) perylene	< 5.00		µg/l	5.00						
n-Nonane (C9)	< 5.00		µg/l	5.00						
n-Decane	< 5.00		µg/l	5.00						
n-Dodecane	< 5.00		µg/l	5.00						
n-Tetradecane	< 5.00		µg/l	5.00						
n-Hexadecane	< 5.00		µg/l	5.00						
n-Octadecane	< 5.00		µg/l	5.00						
n-Nonadecane	< 5.00		µg/l	5.00						
n-Eicosane	< 5.00		µg/l	5.00						
n-Docosane	< 5.00		µg/l	5.00						
n-Tetracosane	< 5.00		µg/l	5.00						
n-Hexacosane	< 5.00		µg/l	5.00						
n-Octacosane	< 5.00		µg/l	5.00						
n-Triacontane	< 5.00		µg/l	5.00						
n-Hexatriacontane	< 5.00		µg/l	5.00						
Naphthalene (aliphatic fraction)	**0.00**		µg/l							
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l							
Surrogate: 1-Chlorooctadecane	*24.8*		µg/l		*50.0*		*50*	*40-140*		
Surrogate: Ortho-Terphenyl	*35.8*		µg/l		*50.0*		*72*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*26.5*		µg/l		*40.0*		*66*	*40-140*		
LCS (1421966-BS1)					Prepared: 18-Sep-14 Analyzed: 19-Sep-14					
C9-C18 Aliphatic Hydrocarbons	**365**		µg/l	100	600		61	40-140		
C19-C36 Aliphatic Hydrocarbons	**454**		µg/l	100	800		57	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**494**		µg/l	100	680		73	40-140		
Naphthalene	**21.5**		µg/l	5.00	40.0		54	40-140		
2-Methylnaphthalene	**23.8**		µg/l	5.00	40.0		60	40-140		
Acenaphthylene	**27.1**		µg/l	5.00	40.0		68	40-140		
Acenaphthene	**28.2**		µg/l	5.00	40.0		70	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421966 - SW846 3510C										
LCS (1421966-BS1)						Prepared: 18-Sep-14	Analyzed: 19-Sep-14			
Fluorene	**30.7**		µg/l	5.00	40.0		77	40-140		
Phenanthrene	**29.6**		µg/l	5.00	40.0		74	40-140		
Anthracene	**30.1**		µg/l	5.00	40.0		75	40-140		
Fluoranthene	**34.0**		µg/l	5.00	40.0		85	40-140		
Pyrene	**35.8**		µg/l	5.00	40.0		90	40-140		
Benzo (a) anthracene	**31.7**		µg/l	5.00	40.0		79	40-140		
Chrysene	**39.2**		µg/l	5.00	40.0		98	40-140		
Benzo (b) fluoranthene	**30.0**		µg/l	5.00	40.0		75	40-140		
Benzo (k) fluoranthene	**42.6**		µg/l	5.00	40.0		106	40-140		
Benzo (a) pyrene	**30.6**		µg/l	5.00	40.0		77	40-140		
Indeno (1,2,3-cd) pyrene	**34.4**		µg/l	5.00	40.0		86	40-140		
Dibenzo (a,h) anthracene	**34.7**		µg/l	5.00	40.0		87	40-140		
Benzo (g,h,i) perylene	**33.6**		µg/l	5.00	40.0		84	40-140		
n-Nonane (C9)	**39.5**		µg/l	5.00	100		39	30-140		
n-Decane	**44.8**		µg/l	5.00	100		45	40-140		
n-Dodecane	**47.9**		µg/l	5.00	100		48	40-140		
n-Tetradecane	**60.3**		µg/l	5.00	100		60	40-140		
n-Hexadecane	**68.3**		µg/l	5.00	100		68	40-140		
n-Octadecane	**76.3**		µg/l	5.00	100		76	40-140		
n-Nonadecane	**75.8**		µg/l	5.00	100		76	40-140		
n-Eicosane	**78.6**		µg/l	5.00	100		79	40-140		
n-Docosane	**81.6**		µg/l	5.00	100		82	40-140		
n-Tetracosane	**81.5**		µg/l	5.00	100		81	40-140		
n-Hexacosane	**80.9**		µg/l	5.00	100		81	40-140		
n-Octacosane	**83.2**		µg/l	5.00	100		83	40-140		
n-Triacontane	**82.6**		µg/l	5.00	100		83	40-140		
n-Hexatriacontane	**81.0**		µg/l	5.00	100		81	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		
Surrogate: 1-Chlorooctadecane	*31.1*		µg/l		*50.0*		*62*	*40-140*		
Surrogate: Ortho-Terphenyl	*37.1*		µg/l		*50.0*		*74*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*26.8*		µg/l		*40.0*		*67*	*40-140*		
LCS (1421966-BS2)						Prepared: 18-Sep-14	Analyzed: 19-Sep-14			
C9-C18 Aliphatic Hydrocarbons	**362**		µg/l	100	600		60	40-140		
C19-C36 Aliphatic Hydrocarbons	**576**		µg/l	100	800		72	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**482**		µg/l	100	680		71	40-140		
Naphthalene	**22.9**		µg/l	5.00	40.0		57	40-140		
2-Methylnaphthalene	**24.6**		µg/l	5.00	40.0		62	40-140		
Acenaphthylene	**27.0**		µg/l	5.00	40.0		68	40-140		
Acenaphthene	**27.9**		µg/l	5.00	40.0		70	40-140		
Fluorene	**29.5**		µg/l	5.00	40.0		74	40-140		
Phenanthrene	**29.1**		µg/l	5.00	40.0		73	40-140		
Anthracene	**30.2**		µg/l	5.00	40.0		76	40-140		
Fluoranthene	**32.9**		µg/l	5.00	40.0		82	40-140		
Pyrene	**35.2**		µg/l	5.00	40.0		88	40-140		
Benzo (a) anthracene	**32.3**		µg/l	5.00	40.0		81	40-140		
Chrysene	**40.2**		µg/l	5.00	40.0		100	40-140		
Benzo (b) fluoranthene	**29.9**		µg/l	5.00	40.0		75	40-140		
Benzo (k) fluoranthene	**41.0**		µg/l	5.00	40.0		102	40-140		
Benzo (a) pyrene	**30.7**		µg/l	5.00	40.0		77	40-140		
Indeno (1,2,3-cd) pyrene	**35.2**		µg/l	5.00	40.0		88	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421966 - SW846 3510C										
LCS (1421966-BS2)						Prepared: 18-Sep-14	Analyzed: 19-Sep-14			
Dibenzo (a,h) anthracene	**34.8**		µg/l	5.00	40.0		87	40-140		
Benzo (g,h,i) perylene	**33.8**		µg/l	5.00	40.0		84	40-140		
n-Nonane (C9)	**46.4**		µg/l	5.00	100		46	30-140		
n-Decane	**50.1**		µg/l	5.00	100		50	40-140		
n-Dodecane	**50.1**		µg/l	5.00	100		50	40-140		
n-Tetradecane	**62.1**		µg/l	5.00	100		62	40-140		
n-Hexadecane	**72.0**		µg/l	5.00	100		72	40-140		
n-Octadecane	**76.4**		µg/l	5.00	100		76	40-140		
n-Nonadecane	**76.4**		µg/l	5.00	100		76	40-140		
n-Eicosane	**78.9**		µg/l	5.00	100		79	40-140		
n-Docosane	**80.5**		µg/l	5.00	100		81	40-140		
n-Tetracosane	**81.5**		µg/l	5.00	100		81	40-140		
n-Hexacosane	**79.8**		µg/l	5.00	100		80	40-140		
n-Octacosane	**82.4**		µg/l	5.00	100		82	40-140		
n-Triacontane	**80.9**		µg/l	5.00	100		81	40-140		
n-Hexatriacontane	**82.3**		µg/l	5.00	100		82	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		
Surrogate: 1-Chlorooctadecane	*28.7*		µg/l		*50.0*		*57*	*40-140*		
Surrogate: Ortho-Terphenyl	*36.6*		µg/l		*50.0*		*73*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*27.2*		µg/l		*40.0*		*68*	*40-140*		
LCS Dup (1421966-BSD1)						Prepared: 18-Sep-14	Analyzed: 19-Sep-14			
C9-C18 Aliphatic Hydrocarbons	**394**		µg/l	100	600		66	40-140	8	25
C19-C36 Aliphatic Hydrocarbons	**404**		µg/l	100	800		51	40-140	12	25
Unadjusted C11-C22 Aromatic Hydrocarbons	**540**		µg/l	100	680		79	40-140	9	25
Naphthalene	**17.8**		µg/l	5.00	40.0		44	40-140	19	25
2-Methylnaphthalene	**22.3**		µg/l	5.00	40.0		56	40-140	6	25
Acenaphthylene	**27.3**		µg/l	5.00	40.0		68	40-140	0.5	25
Acenaphthene	**28.6**		µg/l	5.00	40.0		72	40-140	1	25
Fluorene	**30.3**		µg/l	5.00	40.0		76	40-140	2	25
Phenanthrene	**31.3**		µg/l	5.00	40.0		78	40-140	6	25
Anthracene	**33.8**		µg/l	5.00	40.0		84	40-140	12	25
Fluoranthene	**37.5**		µg/l	5.00	40.0		94	40-140	10	25
Pyrene	**40.7**		µg/l	5.00	40.0		102	40-140	13	25
Benzo (a) anthracene	**37.6**		µg/l	5.00	40.0		94	40-140	17	25
Chrysene	**45.8**		µg/l	5.00	40.0		114	40-140	15	25
Benzo (b) fluoranthene	**36.1**		µg/l	5.00	40.0		90	40-140	19	25
Benzo (k) fluoranthene	**49.8**		µg/l	5.00	40.0		125	40-140	16	25
Benzo (a) pyrene	**35.6**		µg/l	5.00	40.0		89	40-140	15	25
Indeno (1,2,3-cd) pyrene	**41.3**		µg/l	5.00	40.0		103	40-140	18	25
Dibenzo (a,h) anthracene	**41.5**		µg/l	5.00	40.0		104	40-140	18	25
Benzo (g,h,i) perylene	**41.0**		µg/l	5.00	40.0		102	40-140	20	25
n-Nonane (C9)	**44.9**		µg/l	5.00	100		45	30-140	13	25
n-Decane	**49.9**		µg/l	5.00	100		50	40-140	11	25
n-Dodecane	**54.0**		µg/l	5.00	100		54	40-140	12	25
n-Tetradecane	**65.7**		µg/l	5.00	100		66	40-140	8	25
n-Hexadecane	**74.0**		µg/l	5.00	100		74	40-140	8	25
n-Octadecane	**80.2**		µg/l	5.00	100		80	40-140	5	25
n-Nonadecane	**79.9**		µg/l	5.00	100		80	40-140	5	25
n-Eicosane	**82.1**		µg/l	5.00	100		82	40-140	4	25
n-Docosane	**82.6**		µg/l	5.00	100		83	40-140	1	25

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421966 - SW846 3510C										
LCS Dup (1421966-BSD1)					Prepared: 18-Sep-14 Analyzed: 19-Sep-14					
n-Tetracosane	**82.6**		µg/l	5.00	100		83	40-140	1	25
n-Hexacosane	**82.4**		µg/l	5.00	100		82	40-140	2	25
n-Octacosane	**82.9**		µg/l	5.00	100		83	40-140	0.4	25
n-Triacontane	**82.1**		µg/l	5.00	100		82	40-140	0.6	25
n-Hexatriacontane	**81.8**		µg/l	5.00	100		82	40-140	1	25
Naphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		200
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l					0-200		200
Surrogate: 1-Chlorooctadecane	*30.5*		µg/l		*50.0*		*61*	*40-140*		
Surrogate: Ortho-Terphenyl	*38.1*		µg/l		*50.0*		*76*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*24.7*		µg/l		*40.0*		*62*	*40-140*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1422072 - SW846 3005A										
Blank (1422072-BLK1)					Prepared: 19-Sep-14 Analyzed: 25-Sep-14					
Lead	< 0.0075		mg/l	0.0075						
LCS (1422072-BS1)					Prepared: 19-Sep-14 Analyzed: 25-Sep-14					
Lead	**1.37**		mg/l	0.0075	1.25		110	85-115		
LCS Dup (1422072-BSD1)					Prepared: 19-Sep-14 Analyzed: 25-Sep-14					
Lead	**1.35**		mg/l	0.0075	1.25		108	85-115	2	20
Batch 1422616 - SW846 3005A										
Blank (1422616-BLK1)					Prepared: 25-Sep-14 Analyzed: 26-Sep-14					
Iron	< 0.0300		mg/l	0.0300						
Silver	< 0.0100		mg/l	0.0100						
Selenium	< 0.0300		mg/l	0.0300						
Nickel	< 0.0100		mg/l	0.0100						
Copper	< 0.0100		mg/l	0.0100						
Zinc	< 0.0100		mg/l	0.0100						
Antimony	< 0.0120		mg/l	0.0120						
Chromium	< 0.0100		mg/l	0.0100						
Cadmium	< 0.0050		mg/l	0.0050						
Thallium	< 0.0100		mg/l	0.0100						
Beryllium	< 0.0040		mg/l	0.0040						
Arsenic	< 0.0080		mg/l	0.0080						
LCS (1422616-BS1)					Prepared: 25-Sep-14 Analyzed: 26-Sep-14					
Iron	**2.82**		mg/l	0.0300	2.50		113	85-115		
Thallium	**2.67**		mg/l	0.0100	2.50		107	85-115		
Arsenic	**2.68**		mg/l	0.0080	2.50		107	85-115		
Zinc	**2.60**		mg/l	0.0100	2.50		104	85-115		
Silver	**2.46**		mg/l	0.0100	2.50		98	85-115		
Beryllium	**2.67**		mg/l	0.0040	2.50		107	85-115		
Cadmium	**2.57**		mg/l	0.0050	2.50		103	85-115		
Chromium	**2.66**		mg/l	0.0100	2.50		106	85-115		
Copper	**2.64**		mg/l	0.0100	2.50		106	85-115		
Nickel	**2.64**		mg/l	0.0100	2.50		106	85-115		
Selenium	**2.72**		mg/l	0.0300	2.50		109	85-115		
Antimony	**2.59**		mg/l	0.0120	2.50		103	85-115		
LCS Dup (1422616-BSD1)					Prepared: 25-Sep-14 Analyzed: 26-Sep-14					
Iron	**2.77**		mg/l	0.0300	2.50		111	85-115	2	20
Nickel	**2.65**		mg/l	0.0100	2.50		106	85-115	0.3	20
Cadmium	**2.58**		mg/l	0.0050	2.50		103	85-115	0.5	20
Zinc	**2.59**		mg/l	0.0100	2.50		103	85-115	0.5	20
Antimony	**2.52**		mg/l	0.0120	2.50		101	85-115	2	20
Selenium	**2.76**		mg/l	0.0300	2.50		110	85-115	1	20
Copper	**2.64**		mg/l	0.0100	2.50		106	85-115	0.2	20
Chromium	**2.64**		mg/l	0.0100	2.50		106	85-115	0.5	20
Silver	**2.45**		mg/l	0.0100	2.50		98	85-115	0.2	20
Arsenic	**2.70**		mg/l	0.0080	2.50		108	85-115	0.9	20
Beryllium	**2.68**		mg/l	0.0040	2.50		107	85-115	0.6	20
Thallium	**2.67**		mg/l	0.0100	2.50		107	85-115	0.2	20
Duplicate (1422616-DUP1)			**Source: SB96280-01**			Prepared: 25-Sep-14 Analyzed: 26-Sep-14				
Iron	**4.48**		mg/l	0.0300		4.46			0.4	20
Silver	< 0.0100		mg/l	0.0100		BRL				20
Copper	< 0.0100		mg/l	0.0100		BRL				20
Arsenic	< 0.0080		mg/l	0.0080		BRL				20
Beryllium	< 0.0040		mg/l	0.0040		BRL				20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1422616 - SW846 3005A										
Duplicate (1422616-DUP1)			**Source: SB96280-01**			Prepared: 25-Sep-14	Analyzed: 26-Sep-14			
Cadmium	< 0.0050		mg/l	0.0050		BRL				20
Chromium	**0.0028**	J	mg/l	0.0100		0.0026			7	20
Selenium	< 0.0300		mg/l	0.0300		BRL				20
Thallium	< 0.0100		mg/l	0.0100		BRL				20
Antimony	< 0.0120		mg/l	0.0120		0.0064				20
Zinc	**0.0075**	J	mg/l	0.0100		0.0077			3	20
Nickel	< 0.0100		mg/l	0.0100		BRL				20
Matrix Spike (1422616-MS1)			**Source: SB96280-01**			Prepared: 25-Sep-14	Analyzed: 26-Sep-14			
Iron	**7.48**		mg/l	0.0300	2.50	4.46	121	75-125		
Chromium	**2.68**		mg/l	0.0100	2.50	0.0026	107	75-125		
Cadmium	**2.60**		mg/l	0.0050	2.50	BRL	104	75-125		
Beryllium	**2.74**		mg/l	0.0040	2.50	BRL	110	75-125		
Antimony	**2.65**		mg/l	0.0120	2.50	0.0064	106	75-125		
Thallium	**2.77**		mg/l	0.0100	2.50	BRL	111	75-125		
Nickel	**2.66**		mg/l	0.0100	2.50	BRL	106	75-125		
Copper	**2.73**		mg/l	0.0100	2.50	BRL	109	75-125		
Zinc	**2.62**		mg/l	0.0100	2.50	0.0077	105	75-125		
Arsenic	**2.85**		mg/l	0.0080	2.50	BRL	114	75-125		
Silver	**2.54**		mg/l	0.0100	2.50	BRL	101	75-125		
Selenium	**2.87**		mg/l	0.0300	2.50	BRL	115	75-125		
Matrix Spike Dup (1422616-MSD1)			**Source: SB96280-01**			Prepared: 25-Sep-14	Analyzed: 26-Sep-14			
Iron	**7.09**		mg/l	0.0300	2.50	4.46	105	75-125	5	20
Chromium	**2.57**		mg/l	0.0100	2.50	0.0026	103	75-125	4	20
Nickel	**2.55**		mg/l	0.0100	2.50	BRL	102	75-125	4	20
Zinc	**2.50**		mg/l	0.0100	2.50	0.0077	100	75-125	5	20
Antimony	**2.54**		mg/l	0.0120	2.50	0.0064	101	75-125	4	20
Thallium	**2.65**		mg/l	0.0100	2.50	BRL	106	75-125	4	20
Silver	**2.42**		mg/l	0.0100	2.50	BRL	97	75-125	5	20
Copper	**2.60**		mg/l	0.0100	2.50	BRL	104	75-125	5	20
Cadmium	**2.49**		mg/l	0.0050	2.50	BRL	100	75-125	4	20
Beryllium	**2.62**		mg/l	0.0040	2.50	BRL	105	75-125	4	20
Arsenic	**2.74**		mg/l	0.0080	2.50	BRL	110	75-125	4	20
Selenium	**2.77**		mg/l	0.0300	2.50	BRL	111	75-125	4	20
Post Spike (1422616-PS1)			**Source: SB96280-01**			Prepared: 25-Sep-14	Analyzed: 26-Sep-14			
Iron	**6.92**		mg/l	0.0300	2.50	4.46	99	80-120		
Silver	**2.41**		mg/l	0.0100	2.50	BRL	96	80-120		
Antimony	**2.57**		mg/l	0.0120	2.50	0.0064	103	80-120		
Thallium	**2.64**		mg/l	0.0100	2.50	BRL	106	80-120		
Selenium	**2.72**		mg/l	0.0300	2.50	BRL	109	80-120		
Nickel	**2.55**		mg/l	0.0100	2.50	BRL	102	80-120		
Zinc	**2.52**		mg/l	0.0100	2.50	0.0077	101	80-120		
Copper	**2.55**		mg/l	0.0100	2.50	BRL	102	80-120		
Chromium	**2.57**		mg/l	0.0100	2.50	0.0026	103	80-120		
Cadmium	**2.46**		mg/l	0.0050	2.50	BRL	99	80-120		
Beryllium	**2.60**		mg/l	0.0040	2.50	BRL	104	80-120		
Arsenic	**2.71**		mg/l	0.0080	2.50	BRL	109	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1422079 - SW846 3005A										
Blank (1422079-BLK1)					Prepared: 22-Sep-14 Analyzed: 26-Sep-14					
Iron	< 0.0150		mg/l	0.0150						
Antimony	< 0.0060		mg/l	0.0060						
Arsenic	< 0.0040		mg/l	0.0040						
Beryllium	< 0.0020		mg/l	0.0020						
Cadmium	< 0.0025		mg/l	0.0025						
Chromium	< 0.0050		mg/l	0.0050						
Copper	< 0.0050		mg/l	0.0050						
Nickel	< 0.0050		mg/l	0.0050						
Lead	< 0.0075		mg/l	0.0075						
Zinc	< 0.0450		mg/l	0.0450						
Thallium	< 0.0050		mg/l	0.0050						
Selenium	< 0.0150		mg/l	0.0150						
Silver	< 0.0050		mg/l	0.0050						
LCS (1422079-BS1)					Prepared: 22-Sep-14 Analyzed: 26-Sep-14					
Iron	**1.32**		mg/l	0.0150	1.25		106	85-115		
Selenium	**1.36**		mg/l	0.0150	1.25		109	85-115		
Copper	**1.36**		mg/l	0.0050	1.25		109	85-115		
Silver	**1.33**		mg/l	0.0050	1.25		106	85-115		
Arsenic	**1.35**		mg/l	0.0040	1.25		108	85-115		
Beryllium	**1.34**		mg/l	0.0020	1.25		108	85-115		
Zinc	**1.36**		mg/l	0.0450	1.25		109	85-115		
Chromium	**1.35**		mg/l	0.0050	1.25		108	85-115		
Thallium	**1.32**		mg/l	0.0050	1.25		105	85-115		
Nickel	**1.34**		mg/l	0.0050	1.25		107	85-115		
Lead	**1.31**		mg/l	0.0075	1.25		105	85-115		
Cadmium	**1.30**		mg/l	0.0025	1.25		104	85-115		
Antimony	**1.30**		mg/l	0.0060	1.25		104	85-115		
LCS Dup (1422079-BSD1)					Prepared: 22-Sep-14 Analyzed: 26-Sep-14					
Iron	**1.34**		mg/l	0.0150	1.25		107	85-115	1	20
Beryllium	**1.36**		mg/l	0.0020	1.25		109	85-115	1	20
Nickel	**1.39**		mg/l	0.0050	1.25		111	85-115	3	20
Arsenic	**1.40**		mg/l	0.0040	1.25		112	85-115	4	20
Cadmium	**1.35**		mg/l	0.0025	1.25		108	85-115	4	20
Chromium	**1.39**		mg/l	0.0050	1.25		111	85-115	3	20
Copper	**1.37**		mg/l	0.0050	1.25		109	85-115	0.3	20
Zinc	**1.41**		mg/l	0.0450	1.25		113	85-115	4	20
Thallium	**1.32**		mg/l	0.0050	1.25		106	85-115	0.3	20
Selenium	**1.42**		mg/l	0.0150	1.25		114	85-115	4	20
Antimony	**1.36**		mg/l	0.0060	1.25		109	85-115	5	20
Lead	**1.36**		mg/l	0.0075	1.25		109	85-115	4	20
Silver	**1.40**		mg/l	0.0050	1.25		112	85-115	5	20
Duplicate (1422079-DUP1)			**Source: SB96280-01**			Prepared: 22-Sep-14 Analyzed: 26-Sep-14				
Iron	**3.97**		mg/l	0.0150		4.44			11	20
Copper	< 0.0050		mg/l	0.0050		BRL				20
Silver	< 0.0050		mg/l	0.0050		BRL				20
Arsenic	< 0.0040		mg/l	0.0040		BRL				20
Beryllium	< 0.0020		mg/l	0.0020		BRL				20
Cadmium	< 0.0025		mg/l	0.0025		BRL				20
Chromium	**0.0020**	J	mg/l	0.0050		0.0019			3	20
Nickel	< 0.0050		mg/l	0.0050		BRL				20
Lead	< 0.0075		mg/l	0.0075		BRL				20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1422079 - SW846 3005A										
Duplicate (1422079-DUP1)			**Source: SB96280-01**			Prepared: 22-Sep-14	Analyzed: 24-Sep-14			
Antimony	< 0.0060		mg/l	0.0060		BRL				20
Selenium	< 0.0150		mg/l	0.0150		BRL				20
Thallium	< 0.0050		mg/l	0.0050		BRL				20
Zinc	**0.0176**	J,R06	mg/l	0.0450		0.0183			4	20
Matrix Spike (1422079-MS1)			**Source: SB96280-01**			Prepared: 22-Sep-14	Analyzed: 26-Sep-14			
Iron	**5.32**	QM8	mg/l	0.0150	1.25	4.44	70	75-125		
Cadmium	**1.28**		mg/l	0.0025	1.25	BRL	103	75-125		
Antimony	**1.35**		mg/l	0.0060	1.25	BRL	108	75-125		
Copper	**1.40**		mg/l	0.0050	1.25	BRL	112	75-125		
Zinc	**1.35**		mg/l	0.0450	1.25	0.0183	106	75-125		
Selenium	**1.41**		mg/l	0.0150	1.25	BRL	113	75-125		
Lead	**1.28**		mg/l	0.0075	1.25	BRL	102	75-125		
Nickel	**1.31**		mg/l	0.0050	1.25	BRL	104	75-125		
Chromium	**1.34**		mg/l	0.0050	1.25	0.0019	107	75-125		
Beryllium	**1.35**		mg/l	0.0020	1.25	BRL	108	75-125		
Arsenic	**1.42**		mg/l	0.0040	1.25	BRL	113	75-125		
Silver	**1.36**		mg/l	0.0050	1.25	BRL	109	75-125		
Thallium	**1.33**		mg/l	0.0050	1.25	BRL	106	75-125		
Matrix Spike Dup (1422079-MSD1)			**Source: SB96280-01**			Prepared: 22-Sep-14	Analyzed: 26-Sep-14			
Iron	**5.70**		mg/l	0.0150	1.25	4.44	101	75-125	7	20
Lead	**1.29**		mg/l	0.0075	1.25	BRL	104	75-125	1	20
Nickel	**1.32**		mg/l	0.0050	1.25	BRL	106	75-125	1	20
Silver	**1.39**		mg/l	0.0050	1.25	BRL	112	75-125	2	20
Arsenic	**1.44**		mg/l	0.0040	1.25	BRL	115	75-125	1	20
Beryllium	**1.36**		mg/l	0.0020	1.25	BRL	109	75-125	1	20
Cadmium	**1.30**		mg/l	0.0025	1.25	BRL	104	75-125	1	20
Chromium	**1.36**		mg/l	0.0050	1.25	0.0019	109	75-125	1	20
Antimony	**1.37**		mg/l	0.0060	1.25	BRL	110	75-125	2	20
Selenium	**1.44**		mg/l	0.0150	1.25	BRL	115	75-125	2	20
Zinc	**1.37**		mg/l	0.0450	1.25	0.0183	108	75-125	2	20
Thallium	**1.31**		mg/l	0.0050	1.25	BRL	105	75-125	1	20
Copper	**1.39**		mg/l	0.0050	1.25	BRL	111	75-125	0.6	20
Post Spike (1422079-PS1)			**Source: SB96280-01**			Prepared: 22-Sep-14	Analyzed: 26-Sep-14			
Iron	**5.55**		mg/l	0.0150	1.25	4.44	89	80-120		
Nickel	**1.31**		mg/l	0.0050	1.25	BRL	105	80-120		
Silver	**1.38**		mg/l	0.0050	1.25	BRL	110	80-120		
Arsenic	**1.43**		mg/l	0.0040	1.25	BRL	114	80-120		
Beryllium	**1.33**		mg/l	0.0020	1.25	BRL	106	80-120		
Cadmium	**1.29**		mg/l	0.0025	1.25	BRL	103	80-120		
Copper	**1.35**		mg/l	0.0050	1.25	BRL	108	80-120		
Lead	**1.29**		mg/l	0.0075	1.25	BRL	103	80-120		
Antimony	**1.36**		mg/l	0.0060	1.25	BRL	109	80-120		
Selenium	**1.43**		mg/l	0.0150	1.25	BRL	114	80-120		
Thallium	**1.28**		mg/l	0.0050	1.25	BRL	102	80-120		
Zinc	**1.36**		mg/l	0.0450	1.25	0.0183	107	80-120		
Chromium	**1.34**		mg/l	0.0050	1.25	0.0019	107	80-120		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1421729 - General Preparation										
Blank (1421729-BLK1)						Prepared: 16-Sep-14 Analyzed: 17-Sep-14				
Total Suspended Solids	< 5.0		mg/l	5.0						
LCS (1421729-BS1)						Prepared: 16-Sep-14 Analyzed: 17-Sep-14				
Total Suspended Solids	**465**		mg/l	25.0	468		99	90-110		

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S410760				
Calibration Check (S410760-CCV2)				
C9-C18 Aliphatic Hydrocarbons	275106.7	224116.6	-1.8	25
C19-C36 Aliphatic Hydrocarbons	1414275	428233.5	-7.0	25
Unadjusted C11-C22 Aromatic Hydrocarbons	39.93054	21.91247	4.9	25
Naphthalene	7.148352	6.924914	-3.1	25
2-Methylnaphthalene	4.850158	5.017831	3.5	25
Acenaphthylene	6.68362	7.146433	6.9	25
Acenaphthene	4.338901	4.500477	3.7	25
Fluorene	4.686461	4.804997	2.5	25
Phenanthrene	6.247175	6.17622	-1.1	25
Anthracene	6.278451	6.664798	6.2	25
Fluoranthene	6.212972	6.939638	11.7	25
Pyrene	6.485136	7.446221	14.8	25
Benzo (a) anthracene	5.485049	5.705291	4.0	25
Chrysene	5.393285	5.796056	7.5	25
Benzo (b) fluoranthene	5.388645	5.188975	-3.7	25
Benzo (k) fluoranthene	5.245373	6.13189	16.9	25
Benzo (a) pyrene	5.010513	5.618253	12.1	25
Indeno (1,2,3-cd) pyrene	5.65421	6.810599	20.5	25
Dibenzo (a,h) anthracene	4.808745	5.766135	19.9	25
Benzo (g,h,i) perylene	4.881499	5.888755	20.6	25
n-Nonane (C9)	219791.3	200440.8	-8.8	30
n-Decane	220516	203459.2	-7.7	25
n-Dodecane	220462.3	197236.2	-10.5	25
n-Tetradecane	215696	209237.8	-3.0	25
n-Hexadecane	210461.2	207021.6	-1.6	25
n-Octadecane	203702.3	203541.8	-0.08	25
n-Nonadecane	203702.3	193464.3	-5.0	25
n-Eicosane	193691	182804.4	-5.6	25
n-Docosane	185669.9	184575	-0.6	25
n-Tetracosane	178695.8	178771.9	0.04	25
n-Hexacosane	173797.3	163472.4	-5.9	25
n-Octacosane	164182.1	164897.9	0.4	25
n-Triacontane	165985.4	156650	-5.6	25
n-Hexatriacontane	152289.2	142353	-6.5	25
Calibration Check (S410760-CCV4)				
C9-C18 Aliphatic Hydrocarbons	275106.7	214808.5	-6.4	25
C19-C36 Aliphatic Hydrocarbons	1414275	409179.3	-19.1	25
Unadjusted C11-C22 Aromatic Hydrocarbons	39.93054	21.17468	0.6	25
Naphthalene	7.148352	6.888693	-3.6	25
2-Methylnaphthalene	4.850158	4.904579	1.1	25
Acenaphthylene	6.68362	7.062133	5.7	25
Acenaphthene	4.338901	4.436988	2.3	25
Fluorene	4.686461	4.929456	5.2	25
Phenanthrene	6.247175	6.129808	-1.9	25
Anthracene	6.278451	6.719285	7.0	25
Fluoranthene	6.212972	6.737384	8.4	25
Pyrene	6.485136	7.226013	11.4	25
Benzo (a) anthracene	5.485049	5.565361	1.5	25
Chrysene	5.393285	5.972272	10.7	25
Benzo (b) fluoranthene	5.388645	6.476163	20.2	25
Benzo (k) fluoranthene	5.245373	6.381607	21.7	25

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S410760				
Calibration Check (S410760-CCV4)				
Benzo (a) pyrene	5.010513	5.434058	8.5	25
Indeno (1,2,3-cd) pyrene	5.65421	6.544816	15.8	25
Dibenzo (a,h) anthracene	4.808745	5.541621	15.2	25
Benzo (g,h,i) perylene	4.881499	5.573284	14.2	25
n-Nonane (C9)	219791.3	189371.3	-13.8	30
n-Decane	220516	190443.7	-13.6	25
n-Dodecane	220462.3	190814.6	-13.4	25
n-Tetradecane	215696	202624.8	-6.1	25
n-Hexadecane	210461.2	197293	-6.3	25
n-Octadecane	203702.3	196101	-3.7	25
n-Nonadecane	203702.3	191580.8	-6.0	25
n-Eicosane	193691	184568	-4.7	25
n-Docosane	185669.9	192617.1	3.7	25
n-Tetracosane	178695.8	184599.9	3.3	25
n-Hexacosane	173797.3	170214.9	-2.1	25
n-Octacosane	164182.1	158025	-3.8	25
n-Triacontane	165985.4	163901.4	-1.3	25
n-Hexatriacontane	152289.2	150069.7	-1.5	25

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S410515				
Calibration Check (S410515-CCV1)				
Benzene	155637.7	175095.8	12.5	25
Ethylbenzene	89131.29	101938.3	14.4	25
Methyl tert-butyl ether	82295.58	92055.2	11.9	25
Naphthalene	38830.55	46140.25	18.8	25
Toluene	119503.5	138183.3	15.6	25
m,p-Xylene	96238.14	109271.6	13.5	25
o-Xylene	80883.17	92561.55	14.4	25
2-Methylpentane	12917.17	12785.65	-1.0	25
n-Nonane	6159.395	4815.7	-21.8	30
n-Pentane	12325.74	12169.15	-1.3	25
1,2,4-Trimethylbenzene	59091.13	69067.3	16.9	25
2,2,4-Trimethylpentane	11915.68	11486.55	-3.6	25
n-Butylcyclohexane	5867.875	5033.65	-14.2	25
n-Decane	3624.984	3021.85	-16.6	25
Calibration Check (S410515-CCV2)				
Benzene	155637.7	172993.6	11.2	25
Ethylbenzene	89131.29	103599.2	16.2	25
Methyl tert-butyl ether	82295.58	91394.3	11.1	25
Naphthalene	38830.55	47859.1	23.3	25
Toluene	119503.5	141058.9	18.0	25
m,p-Xylene	96238.14	110165.9	14.5	25
o-Xylene	80883.17	93727.15	15.9	25
2-Methylpentane	12917.17	12542.3	-2.9	25
n-Nonane	6159.395	4830.3	-21.6	30
n-Pentane	12325.74	12246.8	-0.6	25
1,2,4-Trimethylbenzene	59091.13	70807.1	19.8	25
2,2,4-Trimethylpentane	11915.68	10878.7	-8.7	25
n-Butylcyclohexane	5867.875	4439.85	-24.3	25
n-Decane	3624.984	2943.4	-18.8	25

Notes and Definitions

D	Data reported from a dilution
QM8	The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.
R06	MRL raised to correlate to batch QC reporting limits.
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).

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 intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor
Kimberly Anderson
Nicole Leja

SB96280 LH

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- [x] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: ECS Worcester
7746708236
Telephone #:
Project Mgr: Jay Ward

Invoice To: CFI
P.O No.: — Quote/RQN: —

Project No: 03-22245G.00
Site Name: CFI Dartmouth 2094/V0893
Location: 114 State Road Dartmouth State: MA
Sampler(s): JL/SM

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= None 12= _____

DW=Dinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= _____ X2= _____ X3= _____

G= Grab C=Composite

List Preservative Code below:

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Containers: 4/11	4/11	2	2	2	2	11	Check if chlorinated
										TRW Total and Dissolved	Lead Total and Dissolved	EPH	VPH	8260	EDB	TSS	
SB96280-4	ECS-GS	9/9/14	12:34	G	GW	3	2		3	X	X	X	X	X	X	X	☐
																	☐
																	☐
																	☐
																	☐
																	☐
																	☐
																	☐
																	☐
																	☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? [x] Yes [ ] No
CT DPH RCP Report? [ ] Yes [ ] No
[x] Standard [ ] No QC [ ] DQA*
[ ] ASP A* [ ] ASP B*
[ ] NJ Reduced* [ ] NJ Full*
[ ] Tier II* [ ] Tier IV*
[ ] Other: _____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
		9/12/14	905
		9/12/14	1525

Temp °C: Observed 0.9; Correction Factor 0; Corrected 0.9; IR ID # 02

[ ] EDD format: _____
[x] E-mail to: JWard@ECSConsult.com

Condition upon receipt: Custody Seals: [ ] Present [ ] Intact [ ] Broken
[ ] Ambient [ ] Iced [x] Refrigerated [ ] DI VOA Frozen [ ] Soil Jar Frozen

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

11 Almgren Drive
Agawam, MA 01001
(413) 789-9018

This preceding chain of custody has been amended to include the client requested additional analyses as noted below:

Laboratory ID	*Client ID*	*Analysis*	*Added*
SB96280-01	ECS-6S	Soluble Antimony by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Arsenic by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Beryllium by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Cadmium by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Chromium by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Copper by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Nickel by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Selenium by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Silver by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Thallium by ICP	3/17/2015
SB96280-01	ECS-6S	Soluble Zinc by ICP	3/17/2015
SB96280-01	ECS-6S	Total Antimony by ICP	3/17/2015
SB96280-01	ECS-6S	Total Arsenic by ICP	3/17/2015
SB96280-01	ECS-6S	Total Beryllium by ICP	3/17/2015
SB96280-01	ECS-6S	Total Cadmium by ICP	3/17/2015
SB96280-01	ECS-6S	Total Chromium by ICP	3/17/2015
SB96280-01	ECS-6S	Total Copper by ICP	3/17/2015
SB96280-01	ECS-6S	Total Nickel by ICP	3/17/2015
SB96280-01	ECS-6S	Total Selenium by ICP	3/17/2015
SB96280-01	ECS-6S	Total Silver by ICP	3/17/2015
SB96280-01	ECS-6S	Total Thallium by ICP	3/17/2015
SB96280-01	ECS-6S	Total Zinc by ICP	3/17/2015

Report Date:
24-Mar-15 12:49

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Environmental Compliance Services
997 Millbury Street, Unit G
Worcester, MA 01607
Attn: Matt Lyne

Project: CFI Dartmouth - 2094/V0893 - MA
Project #: 03-222456.15

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC04465-01	ECS6-S	Ground Water	16-Mar-15 10:30	17-Mar-15 15:30

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

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

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 18 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, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.	**Project #:** 03-222456.15
Project Location: CFI Dartmouth - 2094/V0893 - MA	**RTN:**
This form provides certifications for the following data set: SC04465-01	
Matrices: Ground Water	

CAM Protocol

8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for Presumptive Certainty status

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

Responses to questions G, H and I below are required for Presumptive Certainty status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	✓ Yes No

***Data User Note:* Data that achieve Presumptive Certainty status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	✓ Yes No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Nicole Leja
Laboratory Director
Date: 3/24/2015

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 0.7 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 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.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

Analyses for Total Hardness, pH, and Total Residual Chlorine fall under the state of Pennsylvania code Chapter 252.6 accreditation by rule.

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

SW846 8270D

Calibration:

1502045

Analyte quantified by quadratic equation type calibration.

2,4-Dinitrophenol
4,6-Dinitro-2-methylphenol
4-Nitrophenol
Benzidine
Benzoic acid
Indeno (1,2,3-cd) pyrene

This affected the following samples:

1504866-BLK1
1504866-BS1
1504866-BSD1
ECS6-S
S501700-ICV1
S502422-CCV1

Laboratory Control Samples:

1504866 BS/BSD

4-Bromophenyl phenyl ether percent recoveries (48/36) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS6-S

SW846 8270D

Laboratory Control Samples:

1504866 BS/BSD

4-Nitrophenol percent recoveries (30/28) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS6-S

Aniline percent recoveries (39/51) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS6-S

Benzidine percent recoveries (10/29) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS6-S

Benzoic acid percent recoveries (16/18) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS6-S

N-Nitrosodimethylamine percent recoveries (41/39) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS6-S

Pentachlorophenol percent recoveries (26/19) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS6-S

Pyridine percent recoveries (20/28) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

ECS6-S

1504866 BSD

4-Bromophenyl phenyl ether RPD 27% (20%) is outside individual acceptance criteria.

Aniline RPD 26% (20%) is outside individual acceptance criteria.

Benzidine RPD 101% (20%) is outside individual acceptance criteria.

Pentachlorophenol RPD 30% (20%) is outside individual acceptance criteria.

Pyridine RPD 33% (20%) is outside individual acceptance criteria.

1504866-BSD1

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

4-Bromophenyl phenyl ether
Aniline

Samples:

S502422-CCV1

SW846 8270D

Samples:

S502422-CCV1

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

4-Nitroaniline (25.0%)
Benzo (b) fluoranthene (23.4%)
Dibenzo (a,h) anthracene (51.0%)
Di-n-octyl phthalate (21.1%)
Pentachlorophenol (-48.1%)

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

2,4-Dinitrophenol (-44.6%)
4,6-Dinitro-2-methylphenol (-27.5%)
4-Nitrophenol (-29.4%)
Benzidine (62.3%)
Benzoic acid (-61.4%)
Indeno (1,2,3-cd) pyrene (34.5%)

This affected the following samples:

1504866-BLK1
1504866-BS1
1504866-BSD1
ECS6-S

Sample Acceptance Check Form

Client:	Environmental Compliance Services - Worcester, MA
Project:	CFI Dartmouth - 2094/V0893 - MA / 03-222456.15
Work Order:	SC04465
Sample(s) received on:	3/17/2015

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
ECS6-S	03-222456.15	Ground Water	16-Mar-15 10:30	17-Mar-15
SC04465-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	repared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3510C													
83-32-9	Acenaphthene	< 5.38		µg/l	5.38	1.42	1	SW846 8270D	18-Mar-15	23-Mar-15	ML	1504866	
208-96-8	Acenaphthylene	< 5.38		µg/l	5.38	1.44	1	"	"	"	"	"	
62-53-3	Aniline	< 5.38		µg/l	5.38	1.91	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.38		µg/l	5.38	1.51	1	"	"	"	"	"	
103-33-3	Azobenzene/Diphenyldiazene	< 5.38		µg/l	5.38	1.51	1	"	"	"	"	"	
92-87-5	Benzidine	< 5.38		µg/l	5.38	2.48	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 5.38		µg/l	5.38	1.35	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.38		µg/l	5.38	1.42	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.38		µg/l	5.38	1.77	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.38		µg/l	5.38	1.60	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.38		µg/l	5.38	1.43	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 5.38		µg/l	5.38	1.51	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 5.38		µg/l	5.38	1.73	1	"	"	"	"	"	
111-91-1	Bis(2-chloroethoxy)methane	< 5.38		µg/l	5.38	1.31	1	"	"	"	"	"	
111-44-4	Bis(2-chloroethyl)ether	< 5.38		µg/l	5.38	1.27	1	"	"	"	"	"	
108-60-1	Bis(2-chloroisopropyl)ether	< 5.38		µg/l	5.38	1.23	1	"	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	< 5.38		µg/l	5.38	1.44	1	"	"	"	"	"	
101-55-3	4-Bromophenyl phenyl ether	< 5.38		µg/l	5.38	1.44	1	"	"	"	"	"	
85-68-7	Butyl benzyl phthalate	< 5.38		µg/l	5.38	1.41	1	"	"	"	"	"	
86-74-8	Carbazole	< 5.38		µg/l	5.38	2.05	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 5.38		µg/l	5.38	1.78	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 5.38		µg/l	5.38	2.22	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 5.38		µg/l	5.38	1.75	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 5.38		µg/l	5.38	1.26	1	"	"	"	"	"	
7005-72-3	4-Chlorophenyl phenyl ether	< 5.38		µg/l	5.38	1.42	1	"	"	"	"	"	
218-01-9	Chrysene	< 5.38		µg/l	5.38	1.61	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.38		µg/l	5.38	1.66	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 5.38		µg/l	5.38	1.41	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5.38		µg/l	5.38	1.27	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5.38		µg/l	5.38	1.23	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5.38		µg/l	5.38	1.23	1	"	"	"	"	"	
91-94-1	3,3´-Dichlorobenzidine	< 5.38		µg/l	5.38	1.72	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 5.38		µg/l	5.38	1.40	1	"	"	"	"	"	
84-66-2	Diethyl phthalate	< 5.38		µg/l	5.38	1.38	1	"	"	"	"	"	
131-11-3	Dimethyl phthalate	< 5.38		µg/l	5.38	1.47	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 5.38		µg/l	5.38	1.43	1	"	"	"	"	"	
84-74-2	Di-n-butyl phthalate	< 5.38		µg/l	5.38	1.67	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 5.38		µg/l	5.38	2.17	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 5.38		µg/l	5.38	2.08	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 5.38		µg/l	5.38	1.99	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 5.38		µg/l	5.38	1.56	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
ECS6-S	03-222456.15	Ground Water	16-Mar-15 10:30	17-Mar-15
SC04465-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	repared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3510C													
117-84-0	Di-n-octyl phthalate	< 5.38		µg/l	5.38	1.43	1	SW846 8270D	18-Mar-15	23-Mar-15	ML	1504866	
206-44-0	Fluoranthene	< 5.38		µg/l	5.38	1.68	1						
86-73-7	Fluorene	< 5.38		µg/l	5.38	1.45	1						
118-74-1	Hexachlorobenzene	< 5.38		µg/l	5.38	1.46	1						
87-68-3	Hexachlorobutadiene	< 5.38		µg/l	5.38	1.33	1						
77-47-4	Hexachlorocyclopentadiene	< 5.38		µg/l	5.38	1.72	1						
67-72-1	Hexachloroethane	< 5.38		µg/l	5.38	1.18	1						
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.38		µg/l	5.38	1.87	1						
78-59-1	Isophorone	< 5.38		µg/l	5.38	1.25	1						
91-57-6	2-Methylnaphthalene	< 5.38		µg/l	5.38	1.54	1						
95-48-7	2-Methylphenol	< 5.38		µg/l	5.38	1.58	1						
108-39-4, 106-44-5	3 & 4-Methylphenol	< 10.8		µg/l	10.8	1.59	1						
91-20-3	Naphthalene	< 5.38		µg/l	5.38	1.26	1						
88-74-4	2-Nitroaniline	< 5.38		µg/l	5.38	1.82	1						
99-09-2	3-Nitroaniline	< 5.38		µg/l	5.38	2.41	1						
100-01-6	4-Nitroaniline	< 21.5		µg/l	21.5	2.38	1						
98-95-3	Nitrobenzene	< 5.38		µg/l	5.38	1.26	1						
88-75-5	2-Nitrophenol	< 5.38		µg/l	5.38	1.33	1						
100-02-7	4-Nitrophenol	< 21.5		µg/l	21.5	2.06	1						
62-75-9	N-Nitrosodimethylamine	< 5.38		µg/l	5.38	1.59	1						
621-64-7	N-Nitrosodi-n-propylamine	< 5.38		µg/l	5.38	1.53	1						
86-30-6	N-Nitrosodiphenylamine	< 5.38		µg/l	5.38	1.52	1						
87-86-5	Pentachlorophenol	< 21.5		µg/l	21.5	2.55	1						
85-01-8	Phenanthrene	< 5.38		µg/l	5.38	1.47	1						
108-95-2	Phenol	< 5.38		µg/l	5.38	1.66	1						
129-00-0	Pyrene	< 5.38		µg/l	5.38	1.38	1						
110-86-1	Pyridine	< 5.38		µg/l	5.38	1.96	1						
120-82-1	1,2,4-Trichlorobenzene	< 5.38		µg/l	5.38	1.17	1						
90-12-0	1-Methylnaphthalene	< 5.38		µg/l	5.38	1.26	1						
95-95-4	2,4,5-Trichlorophenol	< 5.38		µg/l	5.38	1.98	1						
88-06-2	2,4,6-Trichlorophenol	< 5.38		µg/l	5.38	1.82	1						
82-68-8	Pentachloronitrobenzene	< 5.38		µg/l	5.38	1.59	1						
95-94-3	1,2,4,5-Tetrachlorobenzene	< 5.38		µg/l	5.38	1.67	1						
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*60*			*30-130 %*								
367-12-4	*2-Fluorophenol*	*32*			*15-110 %*								
4165-60-0	*Nitrobenzene-d5*	*57*			*30-130 %*								
4165-62-2	*Phenol-d5*	*25*			*15-110 %*								
1718-51-0	*Terphenyl-dl4*	*58*			*30-130 %*								
118-79-6	*2,4,6-Tribromophenol*	*63*			*15-110 %*								
Total Metals by EPA 200/6000 Series Methods													
	Preservation	**Field Preserved**		N/A			1	EPA 200/6000 methods			AAH	1504923	

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Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
ECS6-S SC04465-01	03-222456.15	Ground Water	16-Mar-15 10:30	17-Mar-15

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*repared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00009	1	EPA 245.1/7470A	18-Mar-15	19-Mar-15	YR	1504925	X
Soluble Metals by EPA 200/6000 Series Methods													
	Filtration	**Field Filtered**		N/A			1	EPA 200.7/3005A/6010			AAH	1504942	
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00009	1	EPA 245.1/7470A	18-Mar-15	19-Mar-15	YR	1504924	X
General Chemistry Parameters													
	Flashpoint	**>150**		°F			1	SW846 1010A	18-Mar-15	18-Mar-15	BD	1504931	
	pH	**6.51**	pH	pH Units			1	ASTM D 1293-99B	18-Mar-15 19:53	18-Mar-15 19:55	DJB	1504962	X

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1504866 - SW846 3510C										
Blank (1504866-BLK1)					Prepared: 18-Mar-15 Analyzed: 23-Mar-15					
Acenaphthene	< 5.00		µg/l	5.00						
Acenaphthylene	< 5.00		µg/l	5.00						
Aniline	< 5.00		µg/l	5.00						
Anthracene	< 5.00		µg/l	5.00						
Azobenzene/Diphenyldiazene	< 5.00		µg/l	5.00						
Benzidine	< 5.00		µg/l	5.00						
Benzo (a) anthracene	< 5.00		µg/l	5.00						
Benzo (a) pyrene	< 5.00		µg/l	5.00						
Benzo (b) fluoranthene	< 5.00		µg/l	5.00						
Benzo (g,h,i) perylene	< 5.00		µg/l	5.00						
Benzo (k) fluoranthene	< 5.00		µg/l	5.00						
Benzoic acid	< 5.00		µg/l	5.00						
Benzyl alcohol	< 5.00		µg/l	5.00						
Bis(2-chloroethoxy)methane	< 5.00		µg/l	5.00						
Bis(2-chloroethyl)ether	< 5.00		µg/l	5.00						
Bis(2-chloroisopropyl)ether	< 5.00		µg/l	5.00						
Bis(2-ethylhexyl)phthalate	< 5.00		µg/l	5.00						
4-Bromophenyl phenyl ether	< 5.00		µg/l	5.00						
Butyl benzyl phthalate	< 5.00		µg/l	5.00						
Carbazole	< 5.00		µg/l	5.00						
4-Chloro-3-methylphenol	< 5.00		µg/l	5.00						
4-Chloroaniline	< 5.00		µg/l	5.00						
2-Chloronaphthalene	< 5.00		µg/l	5.00						
2-Chlorophenol	< 5.00		µg/l	5.00						
4-Chlorophenyl phenyl ether	< 5.00		µg/l	5.00						
Chrysene	< 5.00		µg/l	5.00						
Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00						
Dibenzofuran	< 5.00		µg/l	5.00						
1,2-Dichlorobenzene	< 5.00		µg/l	5.00						
1,3-Dichlorobenzene	< 5.00		µg/l	5.00						
1,4-Dichlorobenzene	< 5.00		µg/l	5.00						
3,3´-Dichlorobenzidine	< 5.00		µg/l	5.00						
2,4-Dichlorophenol	< 5.00		µg/l	5.00						
Diethyl phthalate	< 5.00		µg/l	5.00						
Dimethyl phthalate	< 5.00		µg/l	5.00						
2,4-Dimethylphenol	< 5.00		µg/l	5.00						
Di-n-butyl phthalate	< 5.00		µg/l	5.00						
4,6-Dinitro-2-methylphenol	< 5.00		µg/l	5.00						
2,4-Dinitrophenol	< 5.00		µg/l	5.00						
2,4-Dinitrotoluene	< 5.00		µg/l	5.00						
2,6-Dinitrotoluene	< 5.00		µg/l	5.00						
Di-n-octyl phthalate	< 5.00		µg/l	5.00						
Fluoranthene	< 5.00		µg/l	5.00						
Fluorene	< 5.00		µg/l	5.00						
Hexachlorobenzene	< 5.00		µg/l	5.00						
Hexachlorobutadiene	< 5.00		µg/l	5.00						
Hexachlorocyclopentadiene	< 5.00		µg/l	5.00						
Hexachloroethane	< 5.00		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00						
Isophorone	< 5.00		µg/l	5.00						
2-Methylnaphthalene	< 5.00		µg/l	5.00						
2-Methylphenol	< 5.00		µg/l	5.00						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1504866 - SW846 3510C										
Blank (1504866-BLK1)					Prepared: 18-Mar-15 Analyzed: 23-Mar-15					
3 & 4-Methylphenol	< 10.0		µg/l	10.0						
Naphthalene	< 5.00		µg/l	5.00						
2-Nitroaniline	< 5.00		µg/l	5.00						
3-Nitroaniline	< 5.00		µg/l	5.00						
4-Nitroaniline	< 20.0		µg/l	20.0						
Nitrobenzene	< 5.00		µg/l	5.00						
2-Nitrophenol	< 5.00		µg/l	5.00						
4-Nitrophenol	< 20.0		µg/l	20.0						
N-Nitrosodimethylamine	< 5.00		µg/l	5.00						
N-Nitrosodi-n-propylamine	< 5.00		µg/l	5.00						
N-Nitrosodiphenylamine	< 5.00		µg/l	5.00						
Pentachlorophenol	< 20.0		µg/l	20.0						
Phenanthrene	< 5.00		µg/l	5.00						
Phenol	< 5.00		µg/l	5.00						
Pyrene	< 5.00		µg/l	5.00						
Pyridine	< 5.00		µg/l	5.00						
1,2,4-Trichlorobenzene	< 5.00		µg/l	5.00						
1-Methylnaphthalene	< 5.00		µg/l	5.00						
2,4,5-Trichlorophenol	< 5.00		µg/l	5.00						
2,4,6-Trichlorophenol	< 5.00		µg/l	5.00						
Pentachloronitrobenzene	< 5.00		µg/l	5.00						
1,2,4,5-Tetrachlorobenzene	< 5.00		µg/l	5.00						
Surrogate: 2-Fluorobiphenyl	*32.8*		µg/l		*50.0*		*66*	*30-130*		
Surrogate: 2-Fluorophenol	*21.2*		µg/l		*50.0*		*42*	*15-110*		
Surrogate: Nitrobenzene-d5	*33.5*		µg/l		*50.0*		*67*	*30-130*		
Surrogate: Phenol-d5	*16.4*		µg/l		*50.0*		*33*	*15-110*		
Surrogate: Terphenyl-dl4	*28.5*		µg/l		*50.0*		*57*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*29.0*		µg/l		*50.0*		*58*	*15-110*		
LCS (1504866-BS1)					Prepared: 18-Mar-15 Analyzed: 23-Mar-15					
Acenaphthene	**30.2**		µg/l	5.00	50.0		60	40-140		
Acenaphthylene	**32.3**		µg/l	5.00	50.0		65	40-140		
Aniline	**19.6**	QC2	µg/l	5.00	50.0		39	40-140		
Anthracene	**41.5**		µg/l	5.00	50.0		83	40-140		
Azobenzene/Diphenyldiazene	**40.6**		µg/l	5.00	50.0		81	40-140		
Benzidine	**4.78**	QC2	µg/l	5.00	50.0		10	40-140		
Benzo (a) anthracene	**36.3**		µg/l	5.00	50.0		73	40-140		
Benzo (a) pyrene	**39.0**		µg/l	5.00	50.0		78	40-140		
Benzo (b) fluoranthene	**35.4**		µg/l	5.00	50.0		71	40-140		
Benzo (g,h,i) perylene	**39.3**		µg/l	5.00	50.0		79	40-140		
Benzo (k) fluoranthene	**35.9**		µg/l	5.00	50.0		72	40-140		
Benzoic acid	**8.18**	QC1	µg/l	5.00	50.0		16	30-130		
Benzyl alcohol	**28.2**		µg/l	5.00	50.0		56	40-140		
Bis(2-chloroethoxy)methane	**29.4**		µg/l	5.00	50.0		59	40-140		
Bis(2-chloroethyl)ether	**27.6**		µg/l	5.00	50.0		55	40-140		
Bis(2-chloroisopropyl)ether	**29.0**		µg/l	5.00	50.0		58	40-140		
Bis(2-ethylhexyl)phthalate	**39.7**		µg/l	5.00	50.0		79	40-140		
4-Bromophenyl phenyl ether	**23.9**		µg/l	5.00	50.0		48	40-140		
Butyl benzyl phthalate	**37.5**		µg/l	5.00	50.0		75	40-140		
Carbazole	**40.3**		µg/l	5.00	50.0		81	40-140		
4-Chloro-3-methylphenol	**35.1**		µg/l	5.00	50.0		70	30-130		
4-Chloroaniline	**27.3**		µg/l	5.00	50.0		55	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1504866 - SW846 3510C										
LCS (1504866-BS1)					Prepared: 18-Mar-15 Analyzed: 23-Mar-15					
2-Chloronaphthalene	**30.6**		µg/l	5.00	50.0		61	40-140		
2-Chlorophenol	**29.6**		µg/l	5.00	50.0		59	30-130		
4-Chlorophenyl phenyl ether	**32.8**		µg/l	5.00	50.0		66	40-140		
Chrysene	**32.5**		µg/l	5.00	50.0		65	40-140		
Dibenzo (a,h) anthracene	**50.4**		µg/l	5.00	50.0		101	40-140		
Dibenzofuran	**32.8**		µg/l	5.00	50.0		66	40-140		
1,2-Dichlorobenzene	**26.5**		µg/l	5.00	50.0		53	40-140		
1,3-Dichlorobenzene	**25.1**		µg/l	5.00	50.0		50	40-140		
1,4-Dichlorobenzene	**26.1**		µg/l	5.00	50.0		52	40-140		
3,3´-Dichlorobenzidine	**37.1**		µg/l	5.00	50.0		74	40-140		
2,4-Dichlorophenol	**32.8**		µg/l	5.00	50.0		66	30-130		
Diethyl phthalate	**36.3**		µg/l	5.00	50.0		73	40-140		
Dimethyl phthalate	**35.2**		µg/l	5.00	50.0		70	40-140		
2,4-Dimethylphenol	**30.6**		µg/l	5.00	50.0		61	30-130		
Di-n-butyl phthalate	**38.5**		µg/l	5.00	50.0		77	40-140		
4,6-Dinitro-2-methylphenol	**28.5**		µg/l	5.00	50.0		57	30-130		
2,4-Dinitrophenol	**19.7**		µg/l	5.00	50.0		39	30-130		
2,4-Dinitrotoluene	**37.9**		µg/l	5.00	50.0		76	40-140		
2,6-Dinitrotoluene	**36.5**		µg/l	5.00	50.0		73	40-140		
Di-n-octyl phthalate	**40.0**		µg/l	5.00	50.0		80	40-140		
Fluoranthene	**38.1**		µg/l	5.00	50.0		76	40-140		
Fluorene	**33.8**		µg/l	5.00	50.0		68	40-140		
Hexachlorobenzene	**40.2**		µg/l	5.00	50.0		80	40-140		
Hexachlorobutadiene	**24.1**		µg/l	5.00	50.0		48	40-140		
Hexachlorocyclopentadiene	**28.0**		µg/l	5.00	50.0		56	40-140		
Hexachloroethane	**25.8**		µg/l	5.00	50.0		52	40-140		
Indeno (1,2,3-cd) pyrene	**47.1**		µg/l	5.00	50.0		94	40-140		
Isophorone	**30.9**		µg/l	5.00	50.0		62	40-140		
2-Methylnaphthalene	**30.7**		µg/l	5.00	50.0		61	40-140		
2-Methylphenol	**31.4**		µg/l	5.00	50.0		63	30-130		
3 & 4-Methylphenol	**31.0**		µg/l	10.0	50.0		62	30-130		
Naphthalene	**27.6**		µg/l	5.00	50.0		55	40-140		
2-Nitroaniline	**34.8**		µg/l	5.00	50.0		70	40-140		
3-Nitroaniline	**38.0**		µg/l	5.00	50.0		76	40-140		
4-Nitroaniline	**43.0**		µg/l	20.0	50.0		86	40-140		
Nitrobenzene	**29.1**		µg/l	5.00	50.0		58	40-140		
2-Nitrophenol	**29.8**		µg/l	5.00	50.0		60	30-130		
4-Nitrophenol	**15.0**		µg/l	20.0	50.0		30	30-130		
N-Nitrosodimethylamine	**20.3**		µg/l	5.00	50.0		41	40-140		
N-Nitrosodi-n-propylamine	**35.3**		µg/l	5.00	50.0		71	40-140		
N-Nitrosodiphenylamine	**44.1**		µg/l	5.00	50.0		88	40-140		
Pentachlorophenol	**13.0**	QC2	µg/l	20.0	50.0		26	30-130		
Phenanthrene	**35.5**		µg/l	5.00	50.0		71	40-140		
Phenol	**15.3**		µg/l	5.00	50.0		31	30-130		
Pyrene	**34.5**		µg/l	5.00	50.0		69	40-140		
Pyridine	**10.0**	QC2	µg/l	5.00	50.0		20	40-140		
1,2,4-Trichlorobenzene	**26.2**		µg/l	5.00	50.0		52	40-140		
1-Methylnaphthalene	**28.4**		µg/l	5.00	50.0		57	40-140		
2,4,5-Trichlorophenol	**32.5**		µg/l	5.00	50.0		65	30-130		
2,4,6-Trichlorophenol	**33.8**		µg/l	5.00	50.0		68	30-130		
Pentachloronitrobenzene	**36.7**		µg/l	5.00	50.0		73	40-140		
1,2,4,5-Tetrachlorobenzene	**26.3**		µg/l	5.00	50.0		53	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1504866 - SW846 3510C										
LCS (1504866-BS1)					Prepared: 18-Mar-15 Analyzed: 23-Mar-15					
Surrogate: 2-Fluorobiphenyl	*33.0*		µg/l		*50.0*		*66*	*30-130*		
Surrogate: 2-Fluorophenol	*20.4*		µg/l		*50.0*		*41*	*15-110*		
Surrogate: Nitrobenzene-d5	*31.8*		µg/l		*50.0*		*64*	*30-130*		
Surrogate: Phenol-d5	*15.8*		µg/l		*50.0*		*32*	*15-110*		
Surrogate: Terphenyl-dl4	*23.2*		µg/l		*50.0*		*46*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*43.2*		µg/l		*50.0*		*86*	*15-110*		
LCS Dup (1504866-BSD1)					Prepared: 18-Mar-15 Analyzed: 23-Mar-15					
Acenaphthene	**28.4**		µg/l	5.00	50.0		57	40-140	6	20
Acenaphthylene	**30.3**		µg/l	5.00	50.0		61	40-140	6	20
Aniline	**25.5**	QR9	µg/l	5.00	50.0		51	40-140	26	20
Anthracene	**36.9**		µg/l	5.00	50.0		74	40-140	12	20
Azobenzene/Diphenyldiazene	**36.5**		µg/l	5.00	50.0		73	40-140	11	20
Benzidine	**14.6**	QC2, QR5	µg/l	5.00	50.0		29	40-140	101	20
Benzo (a) anthracene	**35.6**		µg/l	5.00	50.0		71	40-140	2	20
Benzo (a) pyrene	**35.6**		µg/l	5.00	50.0		71	40-140	9	20
Benzo (b) fluoranthene	**30.1**		µg/l	5.00	50.0		60	40-140	16	20
Benzo (g,h,i) perylene	**35.2**		µg/l	5.00	50.0		70	40-140	11	20
Benzo (k) fluoranthene	**35.1**		µg/l	5.00	50.0		70	40-140	2	20
Benzoic acid	**8.90**	QC1	µg/l	5.00	50.0		18	30-130	8	20
Benzyl alcohol	**26.6**		µg/l	5.00	50.0		53	40-140	6	20
Bis(2-chloroethoxy)methane	**26.5**		µg/l	5.00	50.0		53	40-140	10	20
Bis(2-chloroethyl)ether	**25.2**		µg/l	5.00	50.0		50	40-140	9	20
Bis(2-chloroisopropyl)ether	**27.4**		µg/l	5.00	50.0		55	40-140	6	20
Bis(2-ethylhexyl)phthalate	**34.6**		µg/l	5.00	50.0		69	40-140	14	20
4-Bromophenyl phenyl ether	**18.1**	QC2, QR9	µg/l	5.00	50.0		36	40-140	27	20
Butyl benzyl phthalate	**34.0**		µg/l	5.00	50.0		68	40-140	10	20
Carbazole	**36.3**		µg/l	5.00	50.0		73	40-140	10	20
4-Chloro-3-methylphenol	**32.0**		µg/l	5.00	50.0		64	30-130	9	20
4-Chloroaniline	**28.4**		µg/l	5.00	50.0		57	40-140	4	20
2-Chloronaphthalene	**29.8**		µg/l	5.00	50.0		60	40-140	3	20
2-Chlorophenol	**27.8**		µg/l	5.00	50.0		56	30-130	6	20
4-Chlorophenyl phenyl ether	**30.9**		µg/l	5.00	50.0		62	40-140	6	20
Chrysene	**28.8**		µg/l	5.00	50.0		58	40-140	12	20
Dibenzo (a,h) anthracene	**44.8**		µg/l	5.00	50.0		90	40-140	12	20
Dibenzofuran	**30.6**		µg/l	5.00	50.0		61	40-140	7	20
1,2-Dichlorobenzene	**26.4**		µg/l	5.00	50.0		53	40-140	0.2	20
1,3-Dichlorobenzene	**25.3**		µg/l	5.00	50.0		51	40-140	0.9	20
1,4-Dichlorobenzene	**26.2**		µg/l	5.00	50.0		52	40-140	0.6	20
3,3´-Dichlorobenzidine	**34.0**		µg/l	5.00	50.0		68	40-140	9	20
2,4-Dichlorophenol	**29.6**		µg/l	5.00	50.0		59	30-130	10	20
Diethyl phthalate	**32.8**		µg/l	5.00	50.0		66	40-140	10	20
Dimethyl phthalate	**31.8**		µg/l	5.00	50.0		64	40-140	10	20
2,4-Dimethylphenol	**27.0**		µg/l	5.00	50.0		54	30-130	13	20
Di-n-butyl phthalate	**35.2**		µg/l	5.00	50.0		70	40-140	9	20
4,6-Dinitro-2-methylphenol	**26.7**		µg/l	5.00	50.0		53	30-130	7	20
2,4-Dinitrophenol	**19.0**		µg/l	5.00	50.0		38	30-130	4	20
2,4-Dinitrotoluene	**33.7**		µg/l	5.00	50.0		67	40-140	12	20
2,6-Dinitrotoluene	**32.7**		µg/l	5.00	50.0		65	40-140	11	20
Di-n-octyl phthalate	**35.7**		µg/l	5.00	50.0		71	40-140	11	20
Fluoranthene	**35.7**		µg/l	5.00	50.0		71	40-140	6	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1504866 - SW846 3510C										
LCS Dup (1504866-BSD1)					Prepared: 18-Mar-15 Analyzed: 23-Mar-15					
Fluorene	**31.5**		µg/l	5.00	50.0		63	40-140	7	20
Hexachlorobenzene	**36.4**		µg/l	5.00	50.0		73	40-140	10	20
Hexachlorobutadiene	**23.9**		µg/l	5.00	50.0		48	40-140	0.8	20
Hexachlorocyclopentadiene	**27.4**		µg/l	5.00	50.0		55	40-140	2	20
Hexachloroethane	**26.0**		µg/l	5.00	50.0		52	40-140	0.5	20
Indeno (1,2,3-cd) pyrene	**41.8**		µg/l	5.00	50.0		84	40-140	12	20
Isophorone	**28.1**		µg/l	5.00	50.0		56	40-140	9	20
2-Methylnaphthalene	**29.9**		µg/l	5.00	50.0		60	40-140	3	20
2-Methylphenol	**29.1**		µg/l	5.00	50.0		58	30-130	8	20
3 & 4-Methylphenol	**29.0**		µg/l	10.0	50.0		58	30-130	7	20
Naphthalene	**26.3**		µg/l	5.00	50.0		53	40-140	5	20
2-Nitroaniline	**31.9**		µg/l	5.00	50.0		64	40-140	9	20
3-Nitroaniline	**36.8**		µg/l	5.00	50.0		74	40-140	3	20
4-Nitroaniline	**41.7**		µg/l	20.0	50.0		83	40-140	3	20
Nitrobenzene	**26.7**		µg/l	5.00	50.0		53	40-140	8	20
2-Nitrophenol	**27.7**		µg/l	5.00	50.0		55	30-130	7	20
4-Nitrophenol	**14.2**	QC2	µg/l	20.0	50.0		28	30-130	6	20
N-Nitrosodimethylamine	**19.3**	QC2	µg/l	5.00	50.0		39	40-140	5	20
N-Nitrosodi-n-propylamine	**32.2**		µg/l	5.00	50.0		64	40-140	9	20
N-Nitrosodiphenylamine	**38.9**		µg/l	5.00	50.0		78	40-140	13	20
Pentachlorophenol	**9.65**	QC2, QR5	µg/l	20.0	50.0		19	30-130	30	20
Phenanthrene	**31.9**		µg/l	5.00	50.0		64	40-140	11	20
Phenol	**15.0**		µg/l	5.00	50.0		30	30-130	2	20
Pyrene	**31.6**		µg/l	5.00	50.0		63	40-140	9	20
Pyridine	**14.0**	QC2, QR5	µg/l	5.00	50.0		28	40-140	33	20
1,2,4-Trichlorobenzene	**25.8**		µg/l	5.00	50.0		52	40-140	2	20
1-Methylnaphthalene	**27.4**		µg/l	5.00	50.0		55	40-140	4	20
2,4,5-Trichlorophenol	**29.3**		µg/l	5.00	50.0		59	30-130	10	20
2,4,6-Trichlorophenol	**28.6**		µg/l	5.00	50.0		57	30-130	17	20
Pentachloronitrobenzene	**33.0**		µg/l	5.00	50.0		66	40-140	11	20
1,2,4,5-Tetrachlorobenzene	**25.4**		µg/l	5.00	50.0		51	40-140	3	20
Surrogate: 2-Fluorobiphenyl	*29.4*		µg/l		*50.0*		*59*	*30-130*		
Surrogate: 2-Fluorophenol	*19.6*		µg/l		*50.0*		*39*	*15-110*		
Surrogate: Nitrobenzene-d5	*28.5*		µg/l		*50.0*		*57*	*30-130*		
Surrogate: Phenol-d5	*15.0*		µg/l		*50.0*		*30*	*15-110*		
Surrogate: Terphenyl-dl4	*25.1*		µg/l		*50.0*		*50*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*36.7*		µg/l		*50.0*		*73*	*15-110*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1504925 - EPA200/SW7000 Series										
Blank (1504925-BLK1)						Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	< 0.00020		mg/l	0.00020						
LCS (1504925-BS1)						Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	**0.00481**		mg/l	0.00020	0.00500		96	85-115		
Duplicate (1504925-DUP1)			**Source: SC04465-01**			Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	< 0.00020		mg/l	0.00020		BRL				20
Matrix Spike (1504925-MS1)			**Source: SC04465-01**			Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	**0.00522**		mg/l	0.00020	0.00500	BRL	104	80-120		
Matrix Spike Dup (1504925-MSD1)			**Source: SC04465-01**			Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	**0.00496**		mg/l	0.00020	0.00500	BRL	99	80-120	5	20
Post Spike (1504925-PS1)			**Source: SC04465-01**			Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	**0.00487**		mg/l	0.00020	0.00500	BRL	97	85-115		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1504924 - EPA200/SW7000 Series										
Blank (1504924-BLK1)						Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	< 0.00020		mg/l	0.00020						
LCS (1504924-BS1)						Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	**0.00455**		mg/l	0.00020	0.00500		91	85-115		
Duplicate (1504924-DUP1)			**Source: SC04465-01**			Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	< 0.00020		mg/l	0.00020		BRL				20
Matrix Spike (1504924-MS1)			**Source: SC04465-01**			Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	**0.00477**		mg/l	0.00020	0.00500	BRL	95	80-120		
Matrix Spike Dup (1504924-MSD1)			**Source: SC04465-01**			Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	**0.00486**		mg/l	0.00020	0.00500	BRL	97	80-120	2	20
Post Spike (1504924-PS1)			**Source: SC04465-01**			Prepared: 18-Mar-15 Analyzed: 19-Mar-15				
Mercury	**0.00487**		mg/l	0.00020	0.00500	BRL	97	85-115		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1504931 - General Preparation										
Duplicate (1504931-DUP1)			**Source: SC04465-01**			Prepared & Analyzed: 18-Mar-15				
Flashpoint	**>150**		°F			>150				20
Reference (1504931-SRM1)						Prepared & Analyzed: 18-Mar-15				
Flashpoint	**79**		°F		81.0		98	95-105		
Batch 1504962 - General Preparation										
Duplicate (1504962-DUP1)			**Source: SC04465-01**			Prepared & Analyzed: 18-Mar-15				
pH	**6.51**		pH Units			6.51			0	5
Reference (1504962-SRM1)						Prepared & Analyzed: 18-Mar-15				
pH	**6.01**		pH Units		6.00		100	97.5-102.5		
Reference (1504962-SRM2)						Prepared & Analyzed: 18-Mar-15				
pH	**6.07**		pH Units		6.00		101	97.5-102.5		

Notes and Definitions

QC1	Analyte out of acceptance range.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QR5	RPD out of acceptance range.
QR9	RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.

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 intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Nicole Leja
Rebecca Merz

SC044165 AME.

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 5 Day TAT

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: Matthew Lyne
ECS - Worcester

Telephone #: 508 756 0150
Project Mgr: Matthew Lyne

Invoice To: CFI PO 63647

P.O No.: 63647 Quote/RQN:

Project No: 03-22456.15
Site Name: CFI Dartmouth - Store #2094
Location: 114 State Rd Dartmouth MA State: MA
Sampler(s): Andrew Clark

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= 12=

DW=Dinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= X2= X3=

G= Grab C=Compsite

List Preservative Code below: U/F N/F N V

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: SVOC 8270	Dissolved Hg 7470A	Total Hg 7471B	Flashpoint	Check if chlorinated
SC044165-01	ECS6-S	3/16/15	10:30	G	GW		1		1	X				☐
									1		X	X		☐
									1				X	☐
									1					☐
														☐
														☐
														☐
														☐
														☐
														☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☒ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC ☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other:
State-specific reporting standards:

its only for metals per client req 3/17/15 e

Relinquished by:	Received by:	Date:	Time:
Andrew Clark	ECS fridge	3/16/15	5:00 pm
ECS fridge		3/17/15	940
	jen	3/19/15	1530

Temp °C: Observed 1.7; Correction Factor -1; Corrected 0.7; IR ID # 01

☐ EDD format:
☑ E-mail to: mlyne@ecsconsult.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

ATTACHMENT III

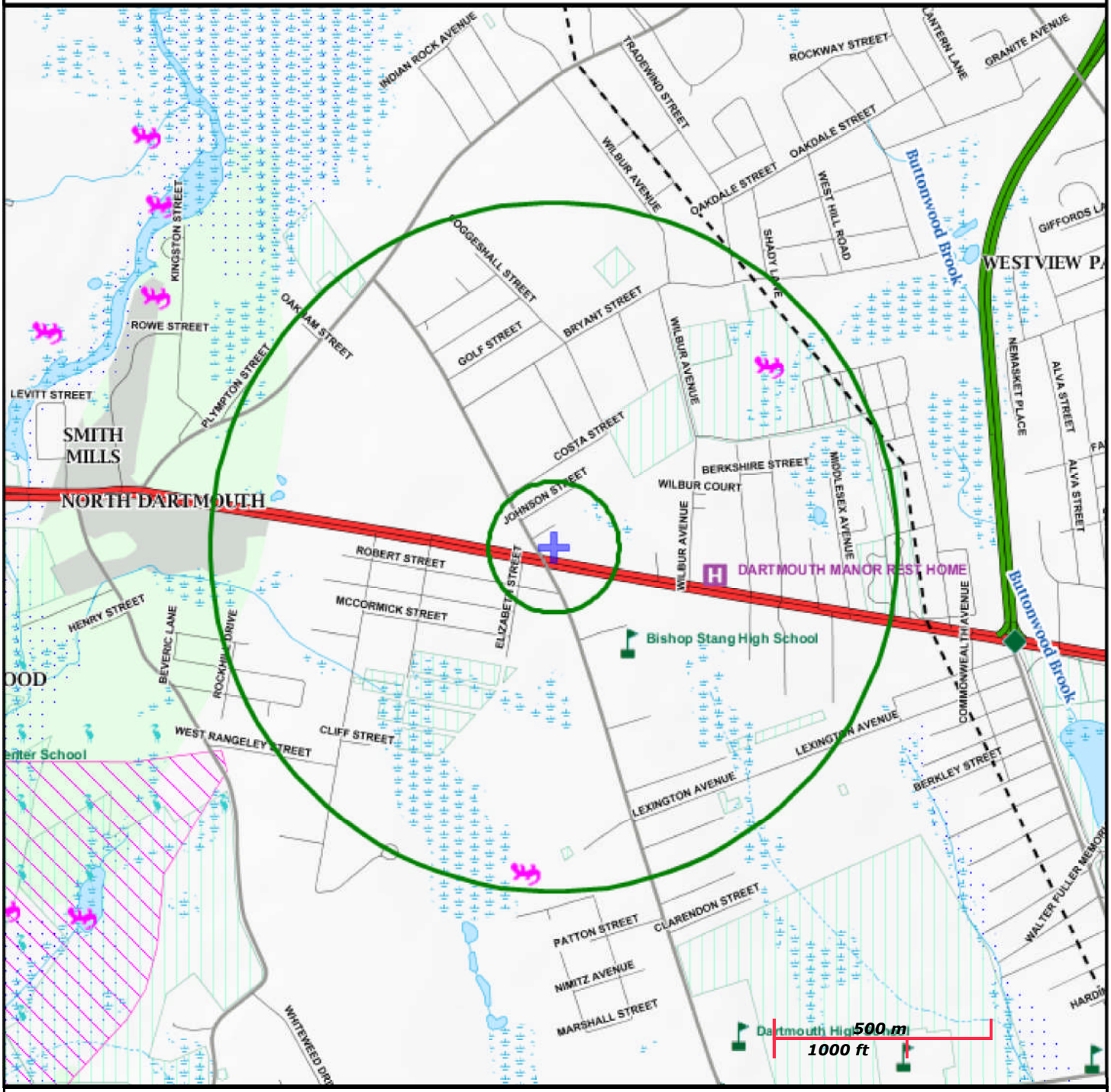
MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
CFI DARTMOUTH
114 STATE ROAD DARTMOUTH, MA
NAD83 UTM Meters:
4611505mN , 335915mE (Zone: 19)
October 22, 2014

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

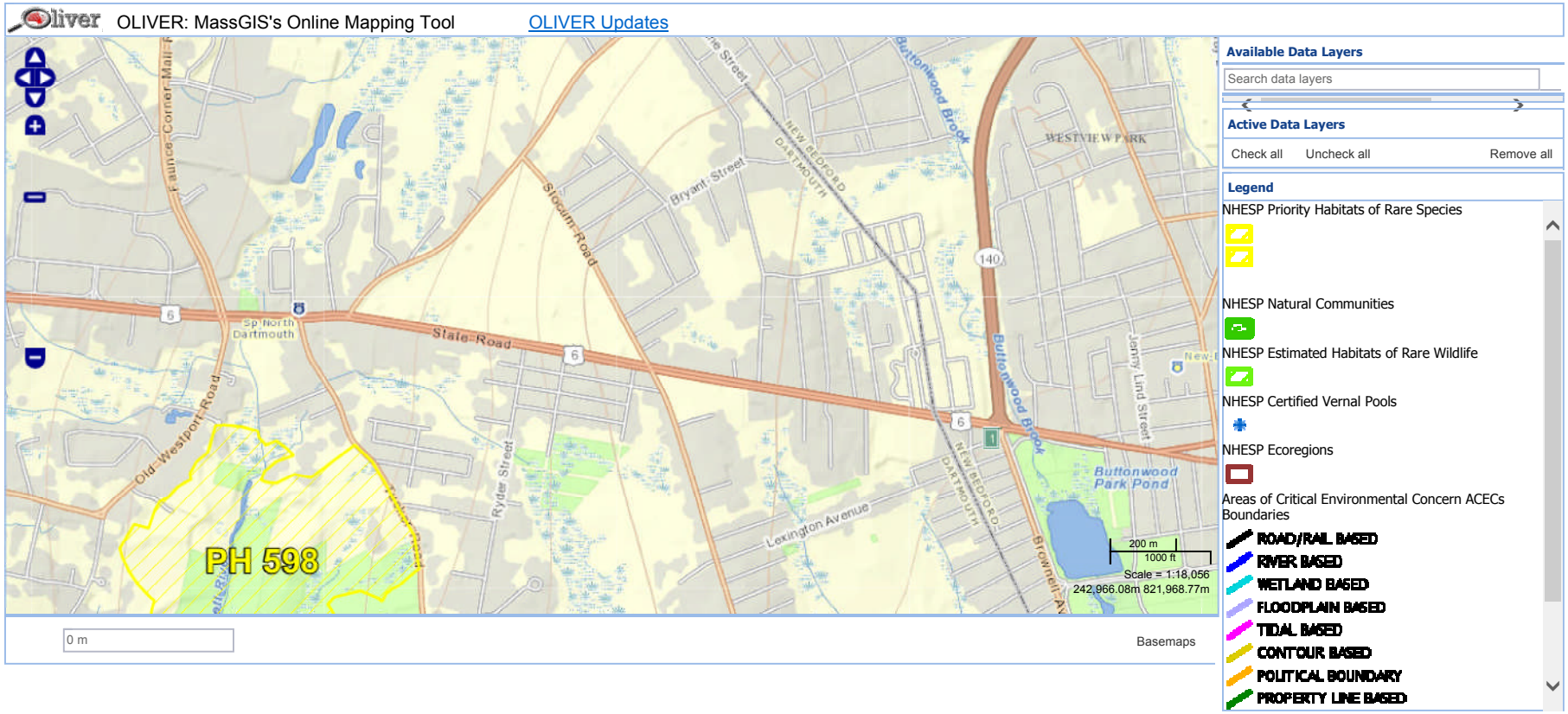
Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.


OLIVER: MassGIS's Online Mapping Tool
OLIVER Updates
PH 598
State Road
Bryant Street
Slocum Road
Old Westport Road
Ryder Street
Lexington Avenue
Buttonwood Brook
Buttonwood Park Pond
Jenny Lind Street
WESTVIEW PARK
NEW BEDFORD
DARTMOUTH
North Dartmouth
140
200 m
1000 ft
Scale = 1:18,056
242,966.08m 821,968.77m
0 m
Basemaps
Available Data Layers
Search data layers
Active Data Layers
Check all
Uncheck all
Remove all
Legend
NHESP Priority Habitats of Rare Species
NHESP Natural Communities
NHESP Estimated Habitats of Rare Wildlife
NHESP Certified Vernal Pools
NHESP Ecoregions
Areas of Critical Environmental Concern ACECs Boundaries
ROAD/RAIL BASED
RIVER BASED
WETLAND BASED
FLOODPLAIN BASED
TIDAL BASED
CONTOUR BASED
POLITICAL BOUNDARY
PROPERTY LINE BASED

ATTACHMENT IV

Massachusetts Cultural Resource Information System
MACRIS

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Login

Results

Get Results in Report Format
○PDF ◉Spreadsheet

Below are the results of your search, using the following search criteria:
Town(s): Dartmouth
Street No: 114
Street Name: State
Resource Type(s): Area, Building, Burial Ground, Object, Structure

For more information about this page and how to use it, click here

No Results Found.

New Search | New Search – Same Town(s) | Previous

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