AECOM
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Chelmsford, MA 01824

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February 23, 2018

Shelley Puleo
New Hampshire Department of Environmental Services
Water Division, Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Subject: Remediation General Permit Notice of Intent for the Discharge of Groundwater Remediation Wastewater Directly to Surface Water

Dear Ms. Puleo:

AECOM is submitting a Notice of Intent application for the discharge of groundwater remediation wastewater directly to surface water at the Cumberland Farm Store #NH3160, located at 831 Meadow Street, Littleton NH, for your review and approval. Currently the site is bare, but Cumberland Farms will install a service station at this location with construction beginning in March 2018. It will be necessary to dewater the excavation area and discharge treated water to the adjacent Parker Brook which ultimately discharges to the Ammonoosuc River. Based on site history, the contaminants of concern expected are primarily Total Suspended Solids (TSS) and Metals (primarily Iron). Treatment would include the use of a weir tank with aeration discs, settling tank, bag filters, and granular activated carbon. The discharge to the surface water will be through applicable energy dissipation methods and an option to add a gel floc sock manifold at the beginning of the treatment train will be included in the event that initial discharge sampling results still exceed the iron limits.

Upon consent of this application, please provide AECOM with an approval letter from the NHDES.
If you have any questions or require any additional information, please contact the undersigned.

Yours Sincerely,

Matthew Pearsall
Project Engineer
978-905-2224
matthew.pearsall@aecom.com

Sean Crowell, P.E.
Senior Project Engineer
919-461-1244
sean.crowell@aecom.com

II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Cumberland Farms store #NH3160</td><td colspan="3">Site address:831 Meadow Street
Street:</td></tr>
<tr><td>City: Littleton</td><td>State: NH</td><td>Zip: 03561</td></tr>
<tr><td rowspan="4">2. Site owner
Cumberland Farms Inc.

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Matthew D. Young</td></tr>
<tr><td colspan="2">Telephone: (508) 270-4477</td><td>Email: myoung@cumberlandfarms.com</td></tr>
<tr><td colspan="3">Mailing address: 165 Flanders Road
Street:</td></tr>
<tr><td>City: Westborough</td><td>State: MA</td><td>Zip: 01581</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Same as above</td><td colspan="3">Contact Person: Same as above</td></tr>
<tr><td colspan="2">Telephone: Same as above</td><td>Email: Same as above</td></tr>
<tr><td colspan="3">Mailing address:
Street: Same as above</td></tr>
<tr><td>City:</td><td>State:</td><td>Zip:</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
NA - New discharge

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
☐ MA Chapter 21e; list RTN(s):
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Parker Brook	NHRIV801030403-11	B

Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River

2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ☐ Yes ☐ No

Are sensitive receptors present near the site? (check one): ■ Yes ☐ No

If yes, specify: Wetland Areas

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. Yes, the Ammonoosuc River is listed for pH and Aluminum at a low TMDL priority.

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	0.18 CFS
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	2.31

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No

If yes, indicate date confirmation received: February 7, 2018

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No

C. Source water information:

1. Source water(s) is (check any that apply):

■ Contaminated groundwater Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No	■ Contaminated surface water Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No	☐ The receiving water ☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:

2. Source water contaminants: Iron, TSS	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): The discharge point will be located at the back of the site by the Meadow Street bridge into Parker Brook designated as Outfall-001. Stormwater drains are currently not installed on site. Parker Brook ultimately discharges into the Ammonoosuc River.	Outfall location(s): (Latitude, Longitude) (44.300604, -71.803268)
Discharges enter the receiving water(s) via (check any that apply): ■ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: Direct discharge to Parker Brook which will have applicable energy dissipation mechanics at the discharge into surface water. ☐ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): March 2018 - September 2018 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="5">■ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
☐ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

■ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
■ C. Halogenated Volatile Organic Compounds
■ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
■ F. Fuels Parameters</td></tr>
<tr><td colspan="2">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</td></tr>
<tr><td>☐ G. Sites with Known Contamination</td><td>☐ H. Sites with Unknown Contamination</td></tr>
<tr><td>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✓	1	EPA350.1	250	0	0.52	Report mg/L	---
Chloride		✓	1	EPA 300.0	7,000	176,000	176,000	Report µg/l	---
Total Residual Chlorine	✓		1	SM4500-C	20	<0.02	<0.20	0.2 mg/L	25
Total Suspended Solids		✓	1	SM2540D	50,000	2,730,000	2,730,000	30 mg/L	---
Antimony	✓		1	SW846-30	6.0	<6.0	<6.0	206 µg/L	9.9
Arsenic		✓	1	SW846-30	4.0	7.2	7.2	104 µg/L	23
Cadmium		✓	1	SW846-30	2.5	<2.5	<2.5	10.2 µg/L	0.4514
Chromium III		✓	1	SW846-30	5.0	20.0	20.0	323 µg/L	138.9
Chromium VI		✓	1	SW846-30	5.0	20.0	20.0	323 µg/L	26.4
Copper		✓	1	SW846-30	5.0	23.0	23.0	242 µg/L	14.8
Iron		✓	1	SW846-30	40.0	16,800	16,800	5,000 µg/L	1878
Lead		✓	1	SW846-30	7.5	13.2	13.2	160 µg/L	4.26
Mercury	✓		1	EPA 245.1	0.2	<0.2	<0.2	0.739 µg/L	2.09
Nickel		✓	1	SW846-30	5.0	13.2	13.2	1,450 µg/L	83.1
Selenium		✓	1	SW846-30	15.0	<15.0	<15.0	235.8 µg/L	11.6
Silver		✓	1	SW846-30	5.0	<5.0	<5.0	35.1 µg/L	4.1
Zinc		✓	1	SW846-30	5.0	42.6	42.6	420 µg/L	190.7
Cyanide	✓		1	SW846	5.0	<5.0	<5.0	178 mg/L	12.0
B. Non-Halogenated VOCs									
Total BTEX	✓		1	EPA 524.2	4.5	<4.5	<4.5	100 µg/L	---
Benzene	✓		1	EPA 524.2	0.5	<0.5	<0.5	5.0 µg/L	---
1,4 Dioxane	✓		1	EPA 524.2	20.0	<20.0	<20.0	200 µg/L	---
Acetone	✓		1	EPA 524.2	10.0	<10.0	<10.0	7.97 mg/L	---
Phenol	✓		1	EPA 524.2	5.0	<5.0	<5.0	1,080 µg/L	693

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✓		1	EPA 524.2	0.50	<0.50	<0.50	4.4 µg/L	
1,2 Dichlorobenzene	✓		1	EPA 524.2	0.50	<0.50	<0.50	600 µg/L	---
1,3 Dichlorobenzene	✓		1	EPA 524.2	0.50	<0.50	<0.50	320 µg/L	---
1,4 Dichlorobenzene	✓		1	EPA 524.2	0.50	<0.50	<0.50	5.0 µg/L	---
Total dichlorobenzene	✓		1	EPA 524.2	1.50	<1.50	<0.50	763 µg/L in NH	---
1,1 Dichloroethane	✓		1	EPA 524.2	0.50	<0.50	<0.50	70 µg/L	---
1,2 Dichloroethane	✓		1	EPA 524.2	0.50	<0.50	<0.50	5.0 µg/L	---
1,1 Dichloroethylene	✓		1	EPA 524.2	0.50	<0.50	<0.50	3.2 µg/L	---
Ethylene Dibromide		✓	1	EPA 524.2	0.50	<0.50	<0.50	0.05 µg/L	---
Methylene Chloride	✓		1	EPA 524.2	0.50	<0.50	<0.50	4.6 µg/L	---
1,1,1 Trichloroethane	✓		1	EPA 524.2	0.50	<0.50	<0.50	200 µg/L	---
1,1,2 Trichloroethane	✓		1	EPA 524.2	0.50	<0.50	<0.50	5.0 µg/L	---
Trichloroethylene	✓		1	EPA 524.2	0.50	<0.50	<0.50	5.0 µg/L	---
Tetrachloroethylene	✓		1	EPA 524.2	0.50	<0.50	<0.50	5.0 µg/L	
cis-1,2 Dichloroethylene	✓		1	EPA 524.2	0.50	<0.50	<0.50	70 µg/L	---
Vinyl Chloride	✓		1	EPA 524.2	0.50	<0.50	<0.50	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates		✓	1	SIM	0.05	<0.05	<0.05	190 µg/L	6.9
Diethylhexyl phthalate		✓	1	SIM	0.05	<0.05	<0.05	101 µg/L	5.1
Total Group I PAHs		✓	1	SIM	0.05	<0.05	<0.035	1.0 µg/L	---
Benzo(a)anthracene		✓	1	SIM	0.05	<0.05	<0.05	As Total PAHs	0.0088
Benzo(a)pyrene		✓	1	SIM	0.05	<0.05	<0.05		0.0088
Benzo(b)fluoranthene		✓	1	SIM	0.05	<0.05	<0.05		0.0088
Benzo(k)fluoranthene		✓	1	SIM	0.05	<0.05	<0.05		0.0088
Chrysene		✓	1	SIM	0.05	<0.05	<0.05		0.0088
Dibenzo(a,h)anthracene		✓	1	SIM	0.05	<0.05	<0.05		0.0088
Indeno(1,2,3-cd)pyrene		✓	1	SIM	0.05	<0.05	<0.05		0.0088

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✓	1	SIM	0.045	<0.045	<0.045	100 µg/L	---
Naphthalene		✓	1	SIM	0.05	<0.05	<0.05	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs		✓	1	3501C	0.204	<1.84	<1.84	0.000064 µg/L	---
Pentachlorophenol		✓	1	3501C	20.0	<20.0	<20.0	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✓		1	3510C	106	<106	<106	5.0 mg/L	---
Ethanol	✓		1	3260	200	<0.20	<0.20	Report mg/L	---
Methyl-tert-Butyl Ether	✓		1	3260	1.0	<1.0	<1.0	70 µg/L	
tert-Butyl Alcohol	✓		1	3260	10.0	<10.0	<10.0	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✓		1	3260	1.0	<1.0	<1.0	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
Hardness	✓		1	SM 2340	0.291	55.0	55.0		

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ■ Air Stripping ■ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption

☐ Ion Exchange ■ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ■ Other; if so, specify:

Aeration will be added using bubblers at the bottom of a weir tank to drop out iron. Gel floc socks will be an optional additive at the beginning of the treatment if it is found through initial sampling that the aeration discs and carbon are not sufficient to remove the iron

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.

Groundwater will be pumped from an open excavation into a 20,000 gallon weir tank with aeration discs in the bottom of it to settle out iron. This will be pumped to a frac settling tank before being pumped through a series of 20 micron bag filters. the final filtration effort will be through granular activated carbon before being pumped to a 20,000 gallon frac tank which will allow for controlled discharge. Discharge would be at the surface water of Parker Brook through applicable energy dissipation manifold at the effluent. Prior to initial discharge, a sample of the effluent will be collected to see if iron and tss have reduced to below limits. If they have not, then a gel floc sock manifold will be added on line prior to the aeration tanks

Identify each major treatment component (check any that apply):

■ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter

☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify: Aeration discs within a weir tank, optional gel floc socks manifold, energy dissipation manifold

Indicate if either of the following will occur (check any that apply):

☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Carbon vessels Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	200 gpm
Provide the proposed maximum effluent flow in gpm.	200 gpm
Provide the average effluent flow in gpm.	120 gpm
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	NA

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ■ Yes ☐ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ■ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:

2. Provide the following information for each chemical/additive, using attachments, if necessary:
Brand name HaloKlear: Gel-Floc and HaloKlear: DBP-2100 will be used as an option flocculant to increase settling potential of the iron in the water. To be applied for
a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ■ Yes ☐ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive?
(check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

☐ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☐ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

☐ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☐ the operator ☐ EPA ☐ Other; if so, specify:

☐ **NMFS Criterion**: A determination made by EPA is affirmed by the operator that the discharges and related activities will have "no effect" or are "not likely to adversely affect" any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ☐ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ■ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

■ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

☐ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ■ Yes ☐ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ■ No

I. Supplemental information

Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

Authorization should proceed using numeric WQBELs for the following parameters: total recoverable cadmium, total recoverable selenium, total recoverable silver, total phthalates, benzo (a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and total PCBs.

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ■ Yes ☐ No

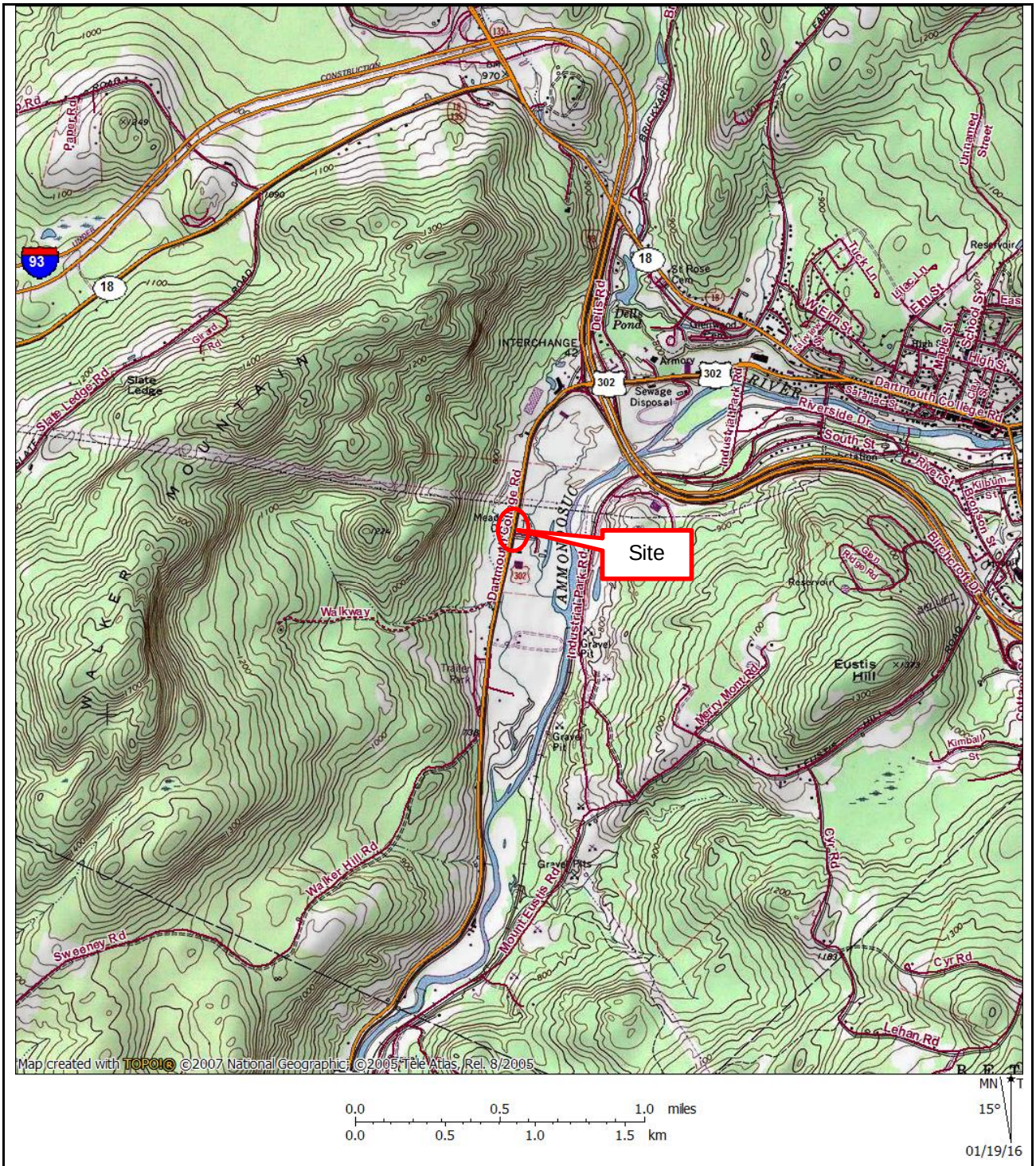
Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ■ Yes ☐ No

J. Certification requirement

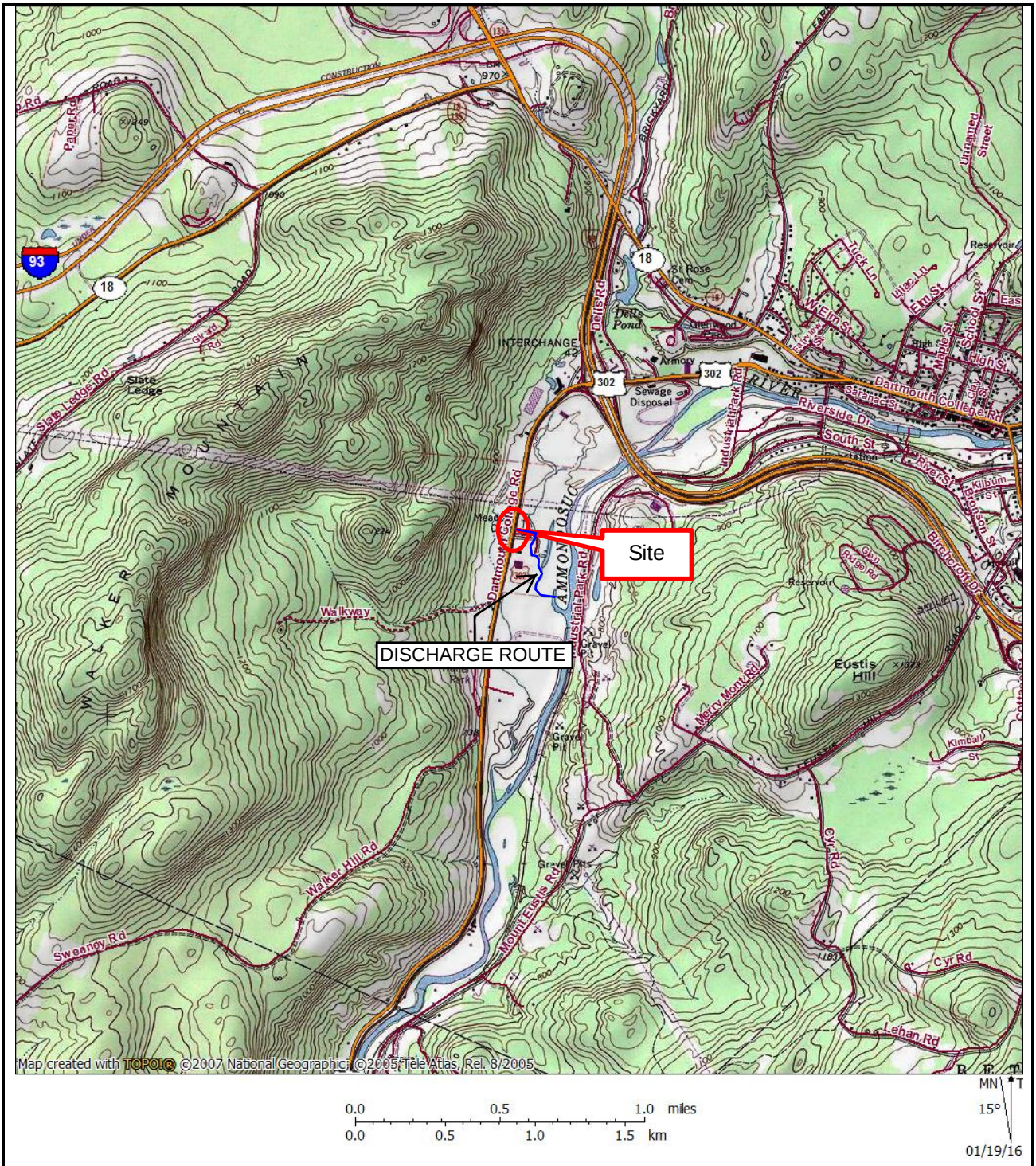
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

BMPP certification statement:	Environmental contaminants are being removed as indicated by the various treatment system filtration components. Operators will monitor the system at all times while it is in operation and will ensure that all components are operating as designed. A BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☐ No ☐ NA ■
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ■
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: Matthew D Young	Date: 02/21/2018
Print Name and Title: Matthew D. Young	Senior Project Manager

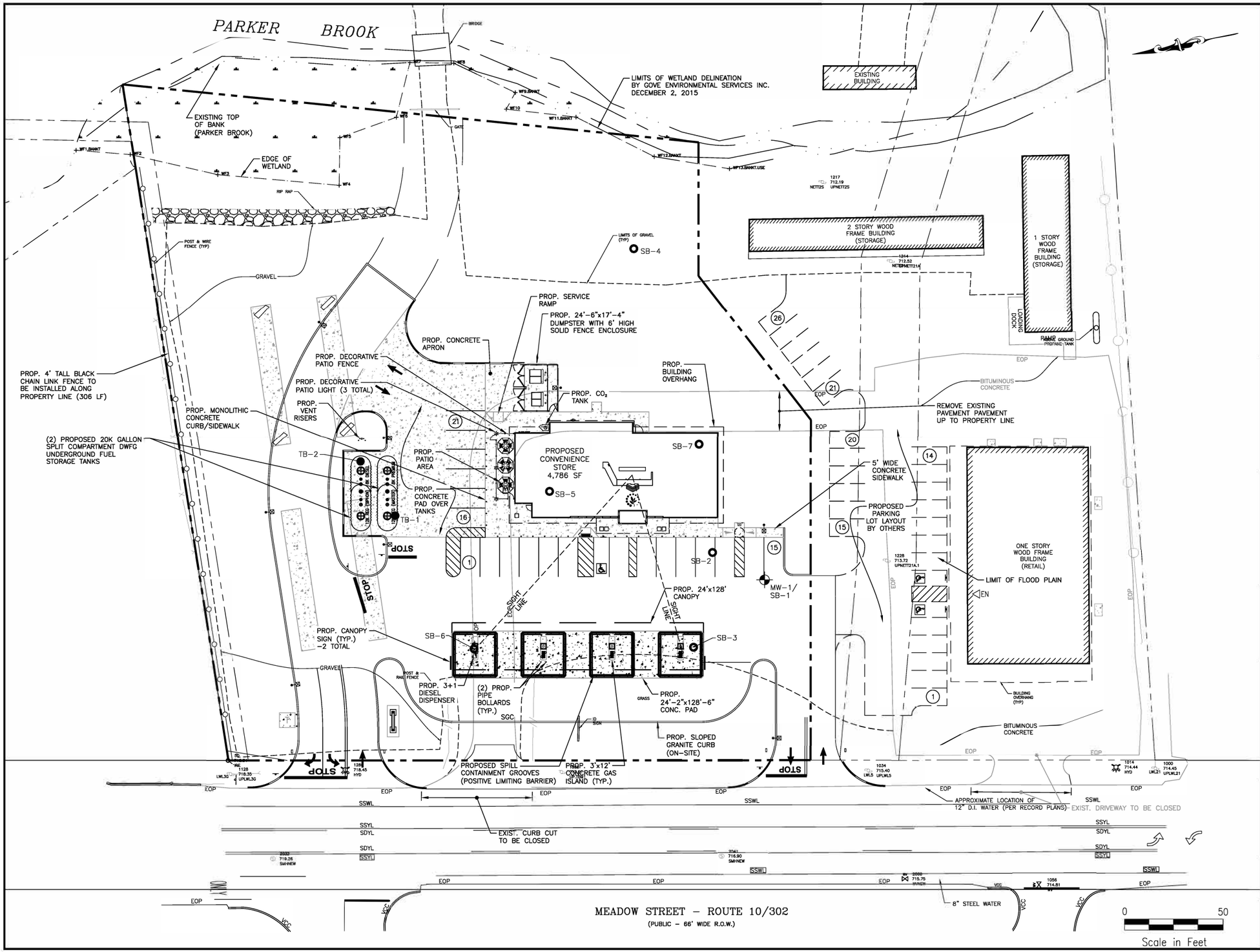
Attachments



AECOM	**Proposed Cumberland Farms** **CFI #NH8327** **831 Meadow Street** **Littleton, NH**	Site Location Map **Project # 60480341** **Figure 1**



AECOM	**Proposed Cumberland Farms** **CFI #NH8327** **831 Meadow Street** **Littleton, NH**	Proposed Discharge Route **Project # 60480341** **Figure 2**



LEGEND:

- Property Boundary
- Fire Hydrant
- Utility Pole
- SB-4 Existing Soil Boring
- MW-1 Monitoring Well
- TB-1 New Soil Boring

CLIENT

Cumberland Farms
165 Flanders Road
Westborough, MA 01581

PROJECT TITLE

CFI Store #NH3160
831 Meadow Street
Littleton, New Hampshire

FIGURE TITLE

Proposed CFI Facility

APPROVED BY	REVIEWED BY
J. Dvorak	J. Currier
DRAWN BY	SCALE
K. Barry	1" = 50'
JOB NUMBER	DATE
60562121	January 2018

AECOM Environment
250 Apollo Drive
Chelmsford, Massachusetts 01824
(978) 905-2100

Figure 3

SHEET

AECOM

NOTE: SYSTEM EQUIPMENT IS TO BE PLACED ON SITE AND EXTEND TO THE DISCHARGE POINT WITH FLEXIBLE HOSE.
EQUIPMENT TO BE PLACED AS NECESSARY BASED ON CONSTRUCTION ACTIVITIES.

PARKER BROOK

PROPOSED DISCHARGE LOCATION: PARKER BROOK

PROPOSED DISCHARGE ROUTE

EXISTING TOP OF BANK (PARKER BROOK)

EDGE OF WETLAND

RIP RAP

LIMITS OF WETLAND DELINEATION BY GOVE ENVIRONMENTAL SERVICES INC. DECEMBER 2, 2015

EXISTING BUILDING

2 STORY WOOD FRAME BUILDING (STORAGE)

1 STORY WOOD FRAME BUILDING (STORAGE)

LOADING DOCK

RAISE GROUND PROPANE TANK

WATER TREATMENT SYSTEM: APPROXIMATE LOCATION

PROP. SERVICE RAMP

PROP. 24'-6"x17'-4" DUMPSTER WITH 6' HIGH SOLID FENCE ENCLOSURE

PROP. CONCRETE APRON

PROP. DECORATIVE PATIO FENCE

PROP. DECORATIVE PATIO LIGHT (3 TOTAL)

PROP. VENT RISERS

PROP. CO_2 TANK

PROP. BUILDING OVERHANG

PROP. 4' TALL BLACK CHAIN LINK FENCE TO BE INSTALLED ALONG PROPERTY LINE (306 LF)

PROP. MONOLITHIC CONCRETE CURB/SIDEWALK

(2) PROPOSED 20K GALLON SPLIT COMPARTMENT DWFG UNDERGROUND FUEL STORAGE TANKS

PROP. PATIO AREA

PROP. CONCRETE PAD OVER TANKS

PROPOSED CONVENIENCE STORE 4,786 SF

REMOVE EXISTING PAVEMENT PAVEMENT UP TO PROPERTY LINE

BITUMINOUS CONCRETE

5' WIDE CONCRETE SIDEWALK

PROPOSED PARKING LOT LAYOUT BY OTHERS

ONE STORY WOOD FRAME BUILDING (RETAIL)

LIMIT OF FLOOD PLAIN

PROP. 24'x128' CANOPY

PROP. CANOPY SIGN (TYP.) -2 TOTAL

PROP. 3+1 DIESEL DISPENSER

(2) PROP. PIPE BOLLARDS (TYP.)

PROP. 24'-2"x128'-6" CONC. PAD

PROP. SLOPED GRANITE CURB (ON-SITE)

PROPOSED SPILL CONTAINMENT GROOVES (POSITIVE LIMITING BARRIER)

PROP. 3'x12' CONCRETE GAS ISLAND (TYP.)

EXIST. CURB CUT TO BE CLOSED

APPROXIMATE LOCATION OF 12" D.I. WATER (PER RECORD PLANS)

EXIST. DRIVEWAY TO BE CLOSED

8" STEEL WATER

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 MW-1 TB-1 TB-2

MEADOW STREET – ROUTE 10/302
(PUBLIC – 66' WIDE R.O.W.)

0 50
Scale in Feet

LEGEND:

- Property Boundary
- Fire Hydrant
- Utility Pole
- SB-4 Existing Soil Boring
- MW-1 Monitoring Well
- TB-1 New Soil Boring

CLIENT

Cumberland Farms
165 Flanders Road
Westborough, MA 01581

PROJECT TITLE

CFI Store #NH3160
831 Meadow Street
Littleton, New Hampshire

FIGURE TITLE

Proposed Site Discharge

APPROVED BY	REVIEWED BY
J. Dvorak	J. Currier
DRAWN BY	SCALE
K. Barry	1" = 50'
JOB NUMBER	DATE
60562121	January 2018

AECOM Environment
250 Apollo Drive
Chelmsford, Massachusetts 01824
(978) 905-2100

Figure 4

SHEET

AECOM

T–01
WEIR TANK
20,000 GALLON

T–02
FRAC TANK
20,000 GALLON

C–01
AIR COMPRESSOR
100 CFM AT 20 PSI

P–01
DEWATERING PUMP(S)
SUBMERSIBLE PUMP

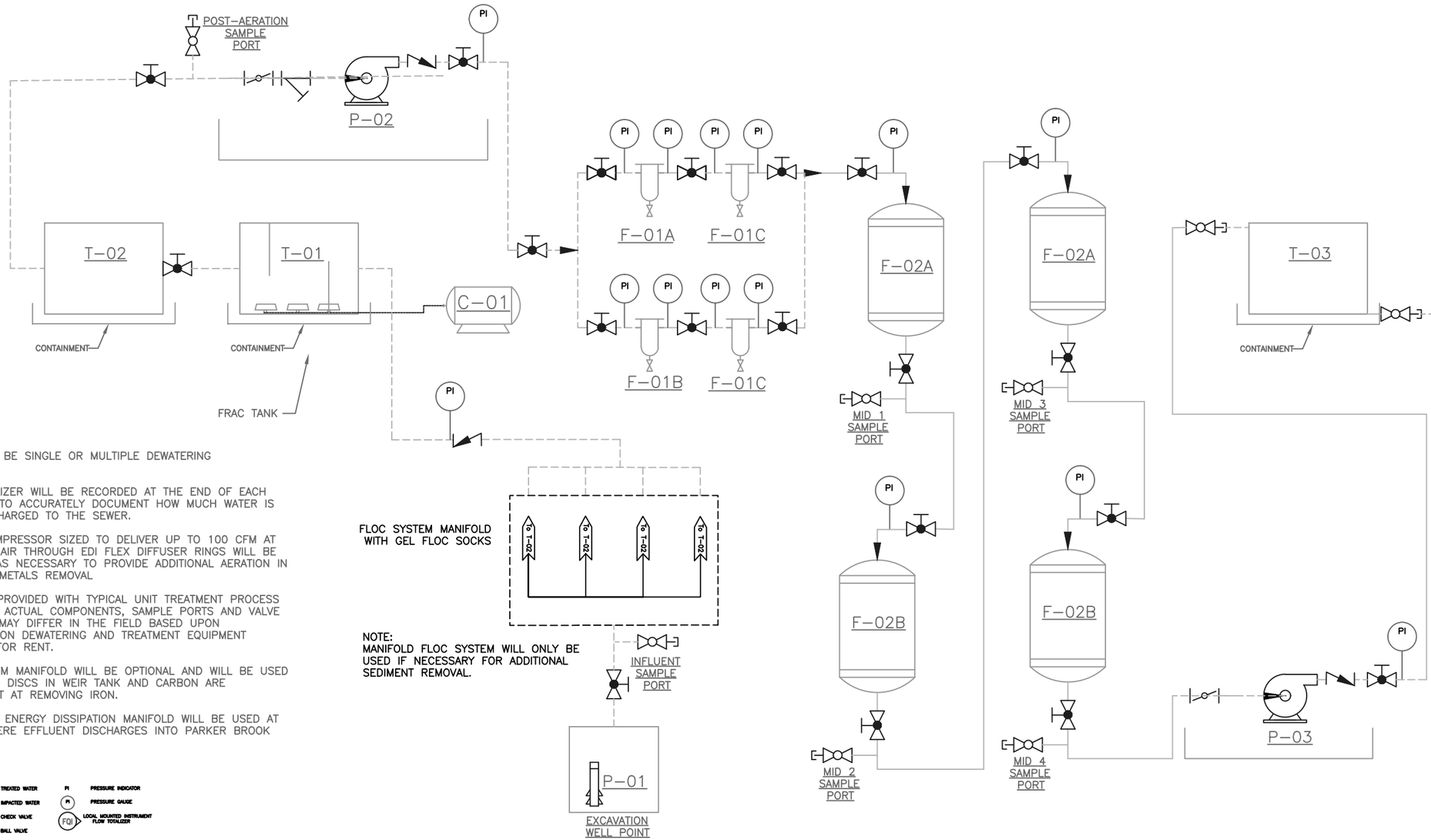
P–02
TRANFER PUMP

F–01A TO 01D
BAG FILTER
20 MICRON

F–02A TO 02D
2,000 LB
GRANULAR ACTIVATED CARBON

P–02
TRANFER PUMP

T–03
20,000 GALLON FRAC TANK
WITH SECONDARY CONTAINMENT



NOTES:

1. THERE MAY BE SINGLE OR MULTIPLE DEWATERING PUMPS.
2. FLOW TOTALIZER WILL BE RECORDED AT THE END OF EACH WORK DAY TO ACCURATELY DOCUMENT HOW MUCH WATER IS BEING DISCHARGED TO THE SEWER.
3. AN AIR COMPRESSOR SIZED TO DELIVER UP TO 100 CFM AT 20 PSI OF AIR THROUGH EDI FLEX DIFFUSER RINGS WILL BE AVAILABLE AS NECESSARY TO PROVIDE ADDITIONAL AERATION IN T–01 FOR METALS REMOVAL
4. DESIGN IS PROVIDED WITH TYPICAL UNIT TREATMENT PROCESS EQUIPMENT. ACTUAL COMPONENTS, SAMPLE PORTS AND VALVE LOCATIONS MAY DIFFER IN THE FIELD BASED UPON CONSTRUCTION DEWATERING AND TREATMENT EQUIPMENT AVAILABLE FOR RENT.
5. FLOC SYSTEM MANIFOLD WILL BE OPTIONAL AND WILL BE USED IF AERATION DISCS IN WEIR TANK AND CARBON ARE INSUFFICIENT AT REMOVING IRON.
6. APPLICABLE ENERGY DISSIPATION MANIFOLD WILL BE USED AT OUTLET WHERE EFFLUENT DISCHARGES INTO PARKER BROOK

LEGEND

TREATED WATER		PI	PRESSURE INDICATOR
IMPACTED WATER		PI	PRESSURE GAUGE
CHECK VALVE		FQI	LOCAL MOUNTED INSTRUMENT FLOW TOTALIZER
BALL VALVE			
Y–STRAINER			
BUTTERFLY VALVE			

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0							

AECOM
250 Apollo Drive
Chelmsford, MA 01824
www.aecom.com

CUMBERLAND FARMS, INC.
CUMBERLAND FARMS STORE #NH3160
LITTLETON, NEW HAMPSHIRE

PROJ. NUMBER: 60562121

DATE: 2/7/2018

PROPOSED WATER TREATMENT SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

DRAWING NUMBER: P-02

SHEET NUMBER: 2 of 2

REVISION 0

AECOM

JOB TITLE PROJECT ENGINEER II
PROJECT/JOB NO. 60562121 CALCULATION NO. —
COMPUTED BY MATTHEW PEARSALL DATE 2/7/18
VERIFIED BY DATE
SCALE NTS SHEET NO. 1 OF 1

RGP - LITTLETON NH

DILUTION FACTOR
* FROM APPENDIX VI OF NH RGP

$$DF = \frac{Q_S + Q_D}{Q_D}(0.9)$$

Q_S = 7Q10 in MILLION GALLONS PER DAY
Q_D = DISCHARGE FLOW IN MGD
0.9 = FACTOR TO RESERVE 10 PERCENT OF THE RECEIVING WATER'S ASSIMILATIVE CAPACITY.

7Q10 = 0.18 CFS → FROM JEFF ANDREWS AT EPA

$$= 0.18 \frac{ft^3}{sec} \times \frac{7.481\ gal}{1\ ft^3} \times \frac{86{,}400\ sec}{1\ day}$$

$$= 116{,}344.5 \frac{gal}{day} \rightarrow \boxed{0.116\ MGD}$$

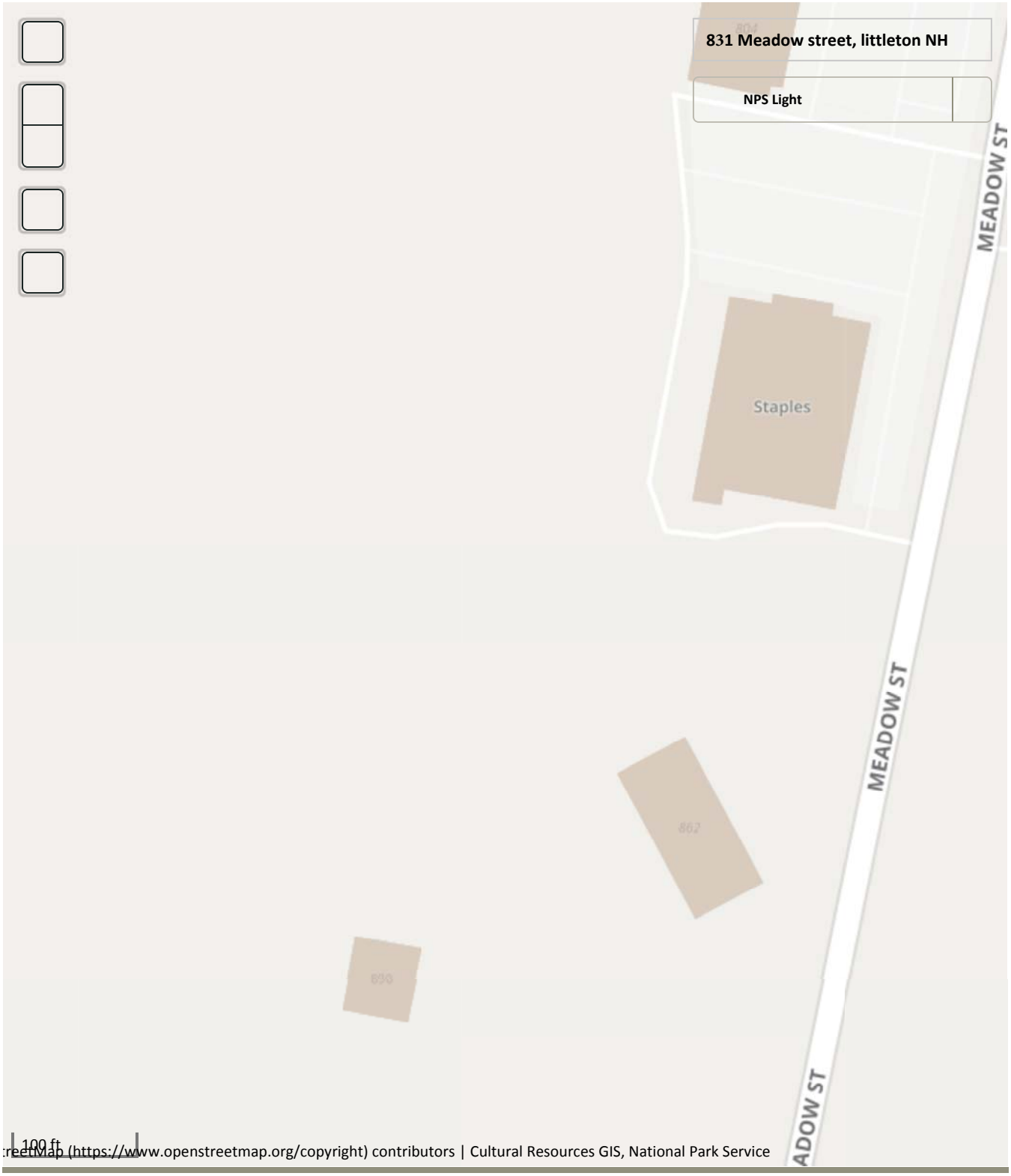
$$DF = \left[\frac{0.116\ MGD + 0.074\ MGD}{0.074\ MGD}\right](0.9)$$

DF = 2.31

National Register of Hi...

National Park Service
U.S. Department of the Interior

Public, non-restricted data depicting National Register spatia...



Home (https://www.nps.gov) | Frequently Asked Questions (https://www.nps.gov/faqs.htm)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: February 14, 2018
Consultation Code: 05E1NE00-2018-SLI-0977
Event Code: 05E1NE00-2018-E-02226
Project Name: Cumberland Farms - Littleton, NH

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2018-SLI-0977

Event Code: 05E1NE00-2018-E-02226

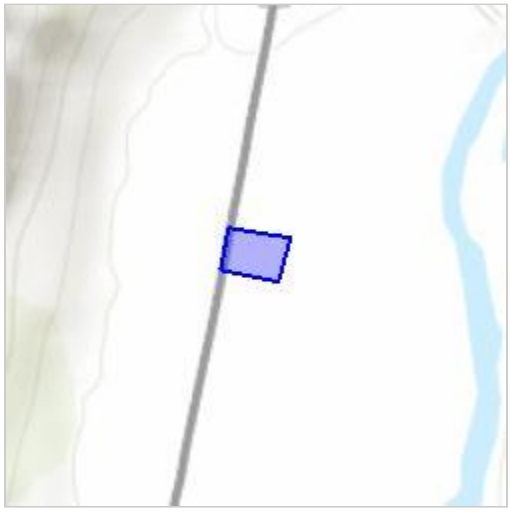
Project Name: Cumberland Farms - Littleton, NH

Project Type: DEVELOPMENT

Project Description: The proposed construction of a Cumberland farms gas station. Endangered species list is needed for developing Remediation General Permit (RGP) for discharging groundwater to surface water during construction activities.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.300444855509895N71.80432843372952W



Counties: Grafton, NH

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Canada Lynx *Lynx canadensis* Population: Wherever Found in Contiguous U.S. There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

DBP-2100™

HaloKlear™ DBP-2100 is formulated from natural biopolymers and is 100% biodegradeable through enzymatic activity thus preventing bioaccumulation. The patented design & concentrated formula delivers cost effective, superior and consistent performance. It is used in conjunction with HaloKlear LiquiFloc™ or GelFloc™ as part of the Dual Polymer System. The DBP-2100 series of products act as a charging agent when deployed in contaminant laden water enabling it to form highly stable strong bonds with the chitosan products.

SPECIFICATIONS

Appearance:	Off-white to tan, odorless powder
pH:	6.0 - 8.0 (as 1% solution)
Bulk Density:	0.338 g/ml (freely settled)
Tap Density:	0.383 g/ml

Works well for contaminant removal applications including:

- Sediment
- Hydrocarbons
- Fats, oils or grease (FOG),
- Heavy metals

DELIVERY METHOD

DBP-2100 may be applied using several delivery methods:

- passive systems
- semi-passive systems
- active treatment systems.

For more information, please contact a qualified HaloKlear sales representative at 1-888-987-8676 or visit the HaloKlear website at www.haloklear.com.

Deployment Method: A 6-foot segmented black sock with a green handle at one end.

Packaging Details: Product is sold as sets of 4 individually wrapped socks packaged within a 5 gallon pail.

U.S. Patent No. 6,749,748
U.S. Patent No. 6,821,427
****additional patent pending***

HaloKlear™
A HaloSource Brand

Distributed By:

HaloSource, Inc.
1631 220th St. SE, Suite 100, Bothell, WA 98021
Phone: 425-881-6464 Fax: 425-556-4120

www.halosource.com • www.haloklear.com

Date: 7/24/2012
Revision: 00

Material Safety Data Sheet

HaloKlear: DBP-2100

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's Name:	HaloSource, Inc.
Corporate Address:	1631 220th St. SE, Suite 100, Bothell, WA 98021
Manufacturer's Telephone:	(425) 881-6464 (Monday-Friday, 8AM-5PM PDT)
Emergency Telephone (24 Hours):	800-424-9300 CHEMTREC (Domestic, North America) 703-527-3887 CHEMTREC (International, collect calls accepted)
Material/Trade/Product Name:	**HaloKlear: DBP-2100**
Synonyms:	Poly X Socks
Chemical Name:	Proprietary
Chemical Formula:	Proprietary
CAS No.:	Proprietary
EPA Registration #:	Not applicable
Product Use:	Flocculant

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

CAS NO.	COMPONENT	%	OSHA HAZARDOUS?
Trade Secret	*Trade Secret*	*Trade Secret*	YES

NOTE: See Section 8 for permissible exposure limits.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Off-white to tan, odorless powder.

May cause irritation to eyes and respiratory tract. May cause drying or chapping or skin.

WARNING! Can contain sufficient fines to cause a combustible dust explosion. Product will burn when in contact with a flame. See Section 5 Fire Fighting Measures for more information.

POTENTIAL HEALTH EFFECTS

EYE: Dry powder may cause foreign body irritation in some individuals.

SKIN: Prolonged contact with the dry powder may cause drying or chapping.

INHALATION: Hygroscopic properties of the product can form a paste or gel in the airway. Inhalation of dust may cause respiratory tract irritation. Excessive inhalation of dust may cause coughing and sneezing.

INGESTION: Not toxic if swallowed (less than a mouthful) based on available information.

CHRONIC EXPOSURE/CARCINOGENICITY: None of the components present in this material at concentrations of equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

AGGRAVATION OF PRE-EXISTING CONDITIONS: None known.

POTENTIAL ENVIRONMENTAL EFFECTS: Contains no substances known to be hazardous to the environment.

SECTION 4: FIRST AID MEASURES

FIRST AID PROCEDURES

EYE CONTACT: Remove contact lenses (if applicable), flush with water for 15 minutes. Call a physician.

SKIN CONTACT: Cleansing the skin after exposure is advisable.

INHALATION: If large amounts are inhaled, remove to fresh air and consult a physician.

INGESTION: Consult a physician if necessary.

NOTE TO PHYSICIANS: None.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: Not applicable
AUTOIGNITION TEMPERATURE: Not available
UPPER FLAMMABLE LIMIT: Not available
LOWER FLAMMABLE LIMIT: Not available
FLAMMABLITY CLASS (OSHA): Not applicable
FLAME PROPAGATION/BURNING RATE: Not available

UNIQUE FIRE PROPERTIES: Combustible dust which can contain sufficient fines to cause a combustible dust explosion.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide.

EXTINGUISHING MEDIA: Water, dry chemical, carbon dioxide.

PROTECTION OF FIREFIGHTERS: Treat as a “Class A” fire. Product will burn when in contact with a flame. Self extinguishers when ignition source is removed. Tends to smolder. As in any fire, wear self-contained breathing apparatus pressure-demand, and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: See Section 8 (Personal Protective Equipment).

ENVIRONMENTAL PRECAUTIONS: None known.

METHODS FOR CLEANING UP: Wet material on walking surfaces will be extremely slipper. Avoid dust formation. Use equipment designed specifically for combustible dust. Take precautionary measures against static discharges.

SECTION 7: HANDLING AND STORAGE

SAFE *HANDLING* RECOMMENDATIONS

VENTILATION: Avoid dust formation. Provide appropriate exhaust ventilation in places where dust is formed.

FIRE PREVENTION: Product may form combustible dust-air mixtures. Keep away from heat, flames, sparks, and other ignition sources. Avoid emptying package in or near flammable vapors. Static charges may cause flash fire.

SPECIAL HANDLING REQUIREMENTS: Remove material from eyes, skin and clothing.

SAFE *STORAGE* RECOMMENDATIONS

CONTAINMENT: No special containment needed.

STORAGE ROOM RECOMMENDATIONS: Store in a cool, dry, well-ventilated area away from direct heat.

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

STORAGE CONDITIONS: Store in cool, dry place. Keep container closed when not in use; keep out of the reach of children.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits in this section.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE/FACE PROTECTION: This product does not cause significant eye irritation or eye toxicity requiring special protection. Where there is significant potential for eye contact, wear chemical goggles and have eye flushing equipment available.

SKIN PROTECTION: Although this product does not present a significant skin concern, minimizes skin contamination by following good industrial practice.

HAND PROTECTION: Chemical resistant gloves are recommended to minimize potential irritation from handling.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Respirator use is not required for this product.

GOOD HYGEIENE/WORK PRACTICES: Always follow good hygiene/work practices by avoiding vapors or mists and contact with eyes and skin. Thoroughly wash hands after handling and before eating or drinking. Always wear the appropriate PPE when repairing or performing maintenance on contaminated equipment.

EXPOSURE GUIDELINES

PERMISSIBLE EXPOSURE LIMITS			
INGREDIENT	OSHA	WISHA	ACGIH (TLV)

CAS NO.	TWA	STEL	TWA	STEL	TWA	STEL
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Off white to tan
PHYSICAL FORM: Solid, powder
pH: Approximately neutral (1% solution)
VAPOR DENSITY: Not known
MELTING POINT: Not known
SOLUBILITY IN WATER: Fully soluble
SHAPE: Powder
ODOR: Odorless
VAPOR PRESSURE: Not known
BOILING POINT: Not known
FREEZING POINT: Not known
SPECIFIC GRAVITY OR DENSITY: Not known

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Values should not be construed as a guaranteed analysis of any specific lot or as specifications.

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended storage conditions

CONDITIONS TO AVOID: Avoid dust formation

MATERIALS TO AVOID (INCOMPATIBILITY): Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

ORAL LD_{50} (rat): >5,000 mg/kg

DERMAL LD_{50} (rabbit): Not available

DERMAL LD_{50} (rat): Not available

SKIN IRRITATION: Non-irritating (rabbit)

EYE IRRITATION: Non-irritating (rabbit)

SKIN SENSITIZATION: No skin allergy observed in gui8nea pig following repeated skin exposure

ADDITIONAL INFORMATION: The dry powder may cause foreign body irritation in some individuals. Prolonged contact with the dry powder may cause drying or chapping of the skin. Excessive inhalation of dust may be annoying and can mechanically impede respiration. Due to the hygroscopic properties, they can form a paste or gel in the airway.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

MOBILITY: Not available

PERSISTENCE AND DEGRADABILITY: This product is biodegradable.

BIOACCUMULATIVE POTENTIAL: Inherently biodegradable.

ADDITIONAL INFORMATION:

- 96 Hour Acute Survival
  - Rainbow Trout: LC_{50} 491 mg/L, LC_{25} 347 mg/L
  - Fathead Minnow: LC_{50} 1110 mg/L, LC_{25} 678 mg/L

- 7-Day Chronic Survival and Growth
  - Rainbow Trout: LC_{50} 510 mg/L, LC_{25} 390 mg/L
  - Fathead Minnow: LC_{50} 605 mg/L, LC_{25} 443 mg/L
  - Ceriodaphnia Dubia: LC_{50} 352 mg/L, LC_{25} 289 mg/L

- Rainbow Trout (Biomass): LC_{50} 386 mg/L, LC_{25} 262 mg/L
- Fathead Minnow (Biomass): LC_{50} 505 mg/L, LC_{25} 256 mg/L

SECTION 13: DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

NOTE: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT):

Proper Shipping Name: Not Regulated
Hazard Class: Not Regulated
Identification Number (UN Number): Not Regulated
Packing Group (PG): Not Regulated

SECTION 15: REGULATORY INFORMATION

TSCA STATUS: Component(s) listed

CERCLA REPORTABLE QUANTITY (RQ):

CHEMICAL NAME	RQ
Not applicable	Not applicable

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (EHS):

CHEMICAL NAME	TPQ	RQ
Not applicable	Not applicable	Not applicable

SARA TITLE III SECTION 311/312 HAZARD CATEGORIES: Does this product/material meet the definition of the following hazard classes according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of SARA Title III?

ACUTE HEALTH HAZARD	CHRONIC HEALTH HAZARD	FIRE HAZARD	REACTIVE HAZARD	SUDDEN RELEASE OF PRESSURE
YES	NO	YES	NO	NO

SARA TITLE III SECTION 313 TOXIC CHEMICALS INFORMATION:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

CALIFORNIA PROPOSITION 65: The following chemical(s) is/are known to the state of California to cause cancer or reproductive toxicity:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

SECTION 16: OTHER INFORMATION

REVISION INFORMATION:
MSDS sections(s) changed since last revision of document:

- None, this is a new MSDS.

DISCLAIMER:
****
The above information is based upon information HaloSource, Inc. believes to be reliable and is supplied for informational purposes only. HaloSource, Inc. disclaims any liability for damage which results from the use of the above information and nothing contained therein shall constitute a guarantee, warranty (including fitness for a particular purpose) or representation with respect to the accuracy or completeness of the data, the product described or their use for any specific purpose even if that purpose is known to HaloSource, Inc. The final determination of the suitability of the information, the manner of use of the information or product and potential infringement is the sole responsibility of the user.
****

MSDS PREPARED BY: Jeremy Heath, EH&S Manager

GelFloc™

HaloKlear™ GelFloc is formulated from natural biopolymers and is 100% biodegradable through enzymatic decomposition, which prevents bioaccumulation in the environment. The patented deployment method and concentrated formula deliver superior and consistent performance at a more economical cost. GelFloc can be used as a stand-alone solution to your problem or in conjunction with HaloKlear DBP-2100™ or LBP-2101™ as part of the Dual Polymer System. GelFloc has a proven track record of treating billions of gallons of stormwater effectively and economically.

SPECIFICATIONS

Appearance:	A fine, off-white powder with no odor
pH:	3.0 - 4.5
Bulk Density:	0.281 g/ml (freely settled)
Tap Density:	0.338 g/ml
Temperature stability:	40˚F to 90˚F

Applications:

- Settling
- Enhanced filtration
- Pretreatment

DELIVERY METHOD

GelFloc may be applied using several delivery methods:

- passive systems
- semi-passive systems
- active treatment systems.

For more information, please contact a qualified HaloKlear sales representative at 1-888-987-8676 or visit the HaloKlear website at www.haloklear.com.

Deployment Method: A 6-foot segmented black sock with a yellow handle at one end.

Packaging Details: Product is sold as sets of 4 individually wrapped socks packaged within a 6 gallon pail.

U.S. Patent No. 6,749,748
U.S. Patent No. 6,821,427
****additional patent pending***

Distributed By:

HaloKlear™
A HaloSource Brand

HaloSource, Inc.
1631 220th St. SE, Suite 100, Bothell, WA 98021
Phone: 425-881-6464 Fax: 425-556-4120

www.halosource.com • www.haloklear.com

Date: 9/27/2011
Revision: 00

Material Safety Data Sheet

HaloKlear: Gel-Floc

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's Name:	HaloSource, Inc.
Corporate Address:	1631 220th St. SE, Suite 100, Bothell, WA 98021
Manufacturer's Telephone:	(425) 881-6464 (Monday-Friday, 8AM-5PM PDT)
Emergency Telephone (24 Hours):	800-424-9300 CHEMTREC (Domestic, North America) 703-527-3887 CHEMTREC (International, collect calls accepted)
Material/Trade/Product Name:	**HaloKlear: Gel-Floc MB**
Synonyms:	Chitosan Lactate
Chemical Name:	Chitosan, 2-hydroxypropanoate (salt)
Chemical Formula:	Not available
CAS No.:	66267-50-3
Product Use:	Flocculates soil contamination in storm water.

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

CAS NO.	HAZARDOUS INGREDIENT (S)	%	OSHA HAZARDOUS?
Trade Secret	*Trade Secret*	85 – 95	YES
Trade Secret	*Trade Secret*	15 – 5	YES

NOTE: See Section 8 for permissible exposure limits.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

A fine, off-white powder with no odor.

This material/product may cause eye or skin irritation.

POTENTIAL HEALTH EFFECTS

EYE: May cause mechanical irritation. Will tend to form film on the surface of the eye causing blurred vision.

SKIN: Possible skin irritation or rash.

INHALATION: May aggravate pre-existing respiratory conditions or allergies. It may accumulate on linings of the nose and lungs resulting in dryness & coughing.

INGESTION: While it is not likely to be hazardous by ingestion, it may start dissolving and form a film on mucous membranes.

CHRONIC EXPOSURE/CARCINOGENICITY: Not known.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: May cause mechanical irritation. Will tend to form film on the surface of the eye causing blurred vision. Skin irritation. It may accumulate on linings of the nose and lungs resulting in dryness & coughing. May start dissolving and form a film on mucous membranes.

AGGRAVATION OF PRE-EXISTING CONDITIONS: May aggravate pre-existing respiratory conditions or allergies.

POTENTIAL ENVIRONMENTAL EFFECTS: Avoid water if material is spilled; water will dissolve chitosan lactate forming a thick viscous solution or gelatinous mass.

SECTION 4: FIRST AID MEASURES

FIRST AID PROCEDURES

EYE CONTACT: Remove contact lenses (when applicable) and flush eyes with water for 15 minutes. Get medical attention if irritation persists.

SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

INHALATION: If exposed to excessive levels of dust, remove to fresh air and get medical attention if cough or other symptoms develop.

INGESTION: Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. If available give several glasses of milk. Call a physician or poison control center immediately.

NOTE TO PHYSICIANS: None.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: Not available
AUTOIGNITION TEMPERATURE: Not available
UPPER FLAMMABLE LIMIT: Not available
LOWER FLAMMABLE LIMIT: Not available
FLAMMABLITY CLASS (OSHA): Not applicable
FLAME PROPAGATION/BURNING RATE: Not available

UNIQUE FIRE PROPERTIES: Keep away from oxidizing agents and avoid open flames. Product may ignite at temperatures in excess of 400°F. Depending on moisture content and particle size, airborne dust of Chitosan lactate might explode in the presence of an ignition source. It is comparable to flour and wood dust.

HAZARDOUS COMBUSTION PRODUCTS: None known

EXTINGUISHING MEDIA: Water spray, CO_2 (carbon dioxide), foam or dry chemical.

PROTECTION OF FIREFIGHTERS: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coat, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Water may be used to keep fire-exposed containers cool until fire is out.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: See Section 8 (Personal Protective Equipment).

ENVIRONMENTAL PRECAUTIONS: AVOID WATER; water will dissolve chitosan lactate forming a thick viscous solution or gelatinous mass.

METHODS FOR CLEANING UP: The material may be vacuumed or collected for recovery or disposal.

SECTION 7: HANDLING AND STORAGE

SAFE *HANDLING* RECOMMENDATIONS

VENTILATION: Use with adequate ventilation.

FIRE PREVENTION: No special requirements.

SPECIAL HANDLING REQUIREMENTS: None.

SAFE *STORAGE* RECOMMENDATIONS

CONTAINMENT: Keep container closed when not in use.

STORAGE ROOM RECOMMENDATIONS: Store in cool, dry areas and away from incompatible substances.

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

STORAGE CONDITIONS: Store in cool, dry areas and away from incompatible substances.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: No special ventilation is required. None required under normal conditions of use.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

EYE/FACE PROTECTION: For operations where eye contact can occur, wear safety glasses.

SKIN PROTECTION: For operations where skin contact can occur, wear impervious rubber or neoprene apron.

HAND PROTECTION: For operations where hand contact can occur, wear impervious rubber or neoprene gloves.

RESPIRATORY PROTECTION: If dust is generated, a dust mask may be needed. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

GOOD HYGEIENE/WORK PRACTICES: Always follow good hygiene/work practices by avoiding vapors or mists and contact with eyes and skin. Thoroughly wash hands after handling and before eating or drinking. Always wear the appropriate PPE when repairing or performing maintenance on contaminated equipment.

EXPOSURE GUIDELINES

PERMISSIBLE EXPOSURE LIMITS						
INGREDIENT CAS NO.	OSHA		WISHA		ACGIH (TLV)	
	TWA	STEL	TWA	STEL	TWA	STEL

Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Off-white.
PHYSICAL FORM: Fine powder.
pH: Not available
VAPOR DENSITY: Not available
MELTING POINT: Not available
SOLUBILITY IN WATER: Soluble

SHAPE: Fine powder.
ODOR: None
VAPOR PRESSURE: Not available
BOILING POINT: Not available
FREEZING POINT: Not available
SPECIFIC GRAVITY OR DENSITY: Not available

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Values should not be construed as a guaranteed analysis of any specific lot or as specifications.

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: None known.

MATERIALS TO AVOID (INCOMPATIBILITY): Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Not known.

SECTION 11: TOXICOLOGICAL INFORMATION

ORAL LD_{50} (mice): >10g/kg

DERMAL LD_{50} (rabbit): Not available.

SKIN IRRITATION: Not available.

EYE IRRITATION: Not available.

SKIN SENSITIZATION: Not available.

ADDITIONAL INFORMATION: Not available.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY (in water):

Acute Toxicity

- Daphnia: LC50 – 135 mg/L
- Daphnia: LC25 – Not Calculable
- Fathead Minnows: LC50 – 22.8 mg/L
- Fathead Minnows: LC25 – 16.9 mg/L

- Rainbow Trout: LC50 – 6.4 mg/L
- Rainbow Trout: LC25 – 4.4 mg/L

Chronic Toxicity
- Rainbow Trout: LC50 (survival) – 5.3 mg/L, 7 days
- Rainbow Trout: LC25 (survival) – 4.8 mg/L, 7 days
- Rainbow Trout: EC25 (biomass) – 3.5 mg/L, 7 days
- Fathead Minnows: LC50 (survival) – 25.4 mg/L, 7 days
- Fathead Minnows: LC25 (survival) – Not Calculable
- Fathead Minnows: EC25 (biomass) – 13.9 mg/L, 7 days

MOBILITY: Not available.

PERSISTENCE AND DEGRADABILITY: Not available.

BIOACCUMULATIVE POTENTIAL: Not available.

ADDITIONAL INFORMATION: Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

NOTE: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT):

Proper Shipping Name: Not Regulated
Hazard Class: Not Regulated
Identification Number (UN Number): Not Regulated
Packing Group (PG): Not Regulated

SECTION 15: REGULATORY INFORMATION

TSCA STATUS: Listed

CERCLA REPORTABLE QUANTITY (RQ):

CHEMICAL NAME	RQ
Not applicable	Not applicable

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (EHS):

CHEMICAL NAME	TPQ	RQ

Not applicable	Not applicable	Not applicable

SARA TITLE III SECTION 311/312 HAZARD CATEGORIES: Does this product/material meet the definition of the following hazard classes according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of SARA Title III?

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****

MSDS PREPARED BY: Jeremy Heath, EH&S Manager

eurofins | Spectrum Analytical

☑ Final Report
☐ Revised Report

Report Date:
10-Jan-18 15:39

Laboratory Report
SC42529

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
Attn: Melissa Cannon

Project: CFI - Littleton, NH
Project #: 60527539

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 # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Rebecca Merz
Quality Services Manager

Rebecca Merz

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York 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 51 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 Eurofins Spectrum Analytical, Inc.

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

Sample Summary

Work Order: SC42529

Project: CFI - Littleton, NH

Project Number: 60527539

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC42529-01	MW-1	Ground Water	14-Dec-17 14:30	15-Dec-17 17:05
SC42529-02	TB	Ground Water	14-Dec-17 14:30	15-Dec-17 17:05

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		

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*

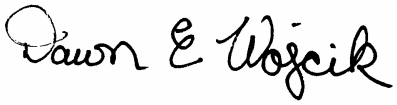
The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

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

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:



Dawn E. Wojcik
Laboratory Director

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 2.7 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. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

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.

EPA 300.0

Samples:

SC42529-01 *MW-1*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Chloride

EPA 524.2

Calibration:

1712060

Analyte quantified by quadratic equation type calibration.

1,1,1,2-Tetrachloroethane
1,1,1-Trichloroethane
1,1-Dichloropropene
1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dibromo-3-chloropropane
1,2-Dibromoethane (EDB)
1,3,5-Trimethylbenzene
2-Hexanone (MBK)
4-Isopropyltoluene
4-Methyl-2-pentanone (MIBK)
Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
cis-1,3-Dichloropropene
Dibromochloromethane
Naphthalene
n-Butylbenzene
n-Propylbenzene
sec-Butylbenzene
Styrene
tert-Butylbenzene
trans-1,3-Dichloropropene

EPA 524.2

Calibration:

1712060

This affected the following samples:

1721131-BLK1
1721131-BS1
MW-1
S711035-CCV1
S711040-ICV1
TB

Laboratory Control Samples:

1721131 BS

2,2-Dichloropropane percent recovery 142 (80-120) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

MW-1
TB

Bromomethane percent recovery 124 (80-120) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

MW-1
TB

Carbon tetrachloride percent recovery 121 (80-120) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

MW-1
TB

Hexachlorobutadiene percent recovery 121 (80-120) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

MW-1
TB

Spikes:

1721131-MSD1 *Source: SC42529-01*

1721131-MSD1 was analyzed outside the 12-hour tune window.

Samples:

S711035-CCV1

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

2,2-Dichloropropane (40.2%)

This affected the following samples:

1721131-BLK1
1721131-BS1
MW-1
TB

SW846 6010C

Samples:

SC42529-01 *MW-1*

SW846 6010C

Samples:

SC42529-01 *MW-1*

MRL raised to correlate to batch QC reporting limits.

Iron

SW846 8260C

Calibration:

1712060

Analyte quantified by quadratic equation type calibration.

1,1,1,2-Tetrachloroethane
1,1,1-Trichloroethane
1,1-Dichloropropene
1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dibromo-3-chloropropane
1,2-Dibromoethane (EDB)
1,3,5-Trichlorobenzene
1,3,5-Trimethylbenzene
2-Hexanone (MBK)
4-Isopropyltoluene
4-Methyl-2-pentanone (MIBK)
Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
cis-1,3-Dichloropropene
Dibromochloromethane
Naphthalene
n-Butylbenzene
n-Propylbenzene
sec-Butylbenzene
Styrene
tert-Butylbenzene
trans-1,3-Dichloropropene
trans-1,4-Dichloro-2-butene

This affected the following samples:

1721131-BLK1
1721131-BS1
1721131-BSD1
1721131-MS1
1721131-MSD1
MW-1
S711035-CCV1
S711040-ICV1
TB

Laboratory Control Samples:

1721131 BS/BSD

2,2-Dichloropropane percent recoveries (142/132) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

MW-1
TB

SW846 8260C

Spikes:

1721131-MSD1 *Source: SC42529-01*

1721131-MSD1 was analyzed outside the 12-hour tune window.

The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

Tert-Butanol / butyl alcohol

Samples:

S711035-CCV1

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

2,2-Dichloropropane (40.2%)

This affected the following samples:

1721131-BLK1
1721131-BS1
1721131-BSD1
1721131-MS1
1721131-MSD1
MW-1
TB

SW846 8270D

Calibration:

1712056

Analyte quantified by quadratic equation type calibration.

2,4-Dinitrophenol
4,6-Dinitro-2-methylphenol
Benzidine
Benzoic acid
Carbazole
Pentachlorophenol

This affected the following samples:

1721033-BLK1
1721033-BS1
1721033-BSD1
MW-1
S711008-ICV1
S711053-CCV1
S711085-CCV1
S711122-CCV1

Laboratory Control Samples:

1721033 BS/BSD

4-Chloroaniline percent recoveries (40/39) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

SW846 8270D

Laboratory Control Samples:

1721033 BS/BSD

Bis(2-chloroethoxy)methane percent recoveries (39/38) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Bis(2-chloroethyl)ether percent recoveries (39/37) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Bis(2-chloroisopropyl)ether percent recoveries (39/37) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

N-Nitrosodimethylamine percent recoveries (40/38) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Phenol percent recoveries (24/25) are outside individual acceptance criteria (30-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Pyridine percent recoveries (39/37) are outside individual acceptance criteria (40-140), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Samples:

S711053-CCV1

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

Benzidine (-22.9%)

This affected the following samples:

1721033-BLK1
1721033-BS1
1721033-BSD1

S711122-CCV1

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

Benzidine (136%)
Pentachlorophenol (51.4%)

This affected the following samples:

MW-1

Sample Acceptance Check Form

Client:	AECOM Environment - Chelmsford, MA
Project:	CFI - Littleton, NH / 60527539
Work Order:	SC42529
Sample(s) received on:	12/15/2017

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 cooled on ice 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?	☑	☐	☐

Summary of Hits

Lab ID: SC42529-01 **Client ID:** MW-1

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ammonia as Nitrogen	0.52		0.25	mg/l	E350.1
Chloride	176	D, GS	17.00	mg/l	EPA 300.0
Total Suspended Solids	2730		50.0	mg/l	SM2540D (11)
Arsenic (dissolved)	0.0072		0.0040	mg/l	SW846 6010C
Chromium (dissolved)	0.0200		0.0050	mg/l	SW846 6010C
Copper (dissolved)	0.0230		0.0050	mg/l	SW846 6010C
Iron (dissolved)	16.8	R06	0.0400	mg/l	SW846 6010C
Lead (dissolved)	0.0132		0.0075	mg/l	SW846 6010C
Nickel (dissolved)	0.0132		0.0050	mg/l	SW846 6010C
Zinc (dissolved)	0.0426		0.0050	mg/l	SW846 6010C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-01				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Purgeable Organic Compounds													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.50		µg/l	0.50	0.35	1	EPA 524.2	21-Dec-17	21-Dec-17	GMA	1721131	
67-64-1	Acetone	< 10.0		µg/l	10.0	0.80	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.44	1	"	"	"	"	"	
71-43-2	Benzene	< 0.50		µg/l	0.50	0.21	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.50		µg/l	0.50	0.30	1	"	"	"	"	"	
75-25-2	Bromoform	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	
74-83-9	Bromomethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 2.00		µg/l	2.00	0.55	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 0.50		µg/l	0.50	0.41	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 0.50		µg/l	0.50	0.26	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
75-00-3	Chloroethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
67-66-3	Chloroform	< 0.50		µg/l	0.50	0.23	1	"	"	"	"	"	
74-87-3	Chloromethane	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 0.50		µg/l	0.50	0.17	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 0.50		µg/l	0.50	0.24	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 0.50		µg/l	0.50	0.48	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.16	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 0.50		µg/l	0.50	0.31	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.50		µg/l	0.50	0.20	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 0.50		µg/l	0.50	0.24	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 0.50		µg/l	0.50	0.27	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 0.50		µg/l	0.50	0.22	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.50		µg/l	0.50	0.23	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.50		µg/l	0.50	0.47	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	< 2.00		µg/l	2.00	0.53	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-01				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
Purgeable Organic Compounds													
98-82-8	Isopropylbenzene	< 0.50		µg/l	0.50	0.23	1	EPA 524.2	21-Dec-17	21-Dec-17	GMA	1721131	
99-87-6	4-Isopropyltoluene	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	< 0.50		µg/l	0.50	0.15	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00	0.35	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.50		µg/l	0.50	0.40	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
100-42-5	Styrene	< 0.50		µg/l	0.50	0.40	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 0.50		µg/l	0.50	0.39	1	"	"	"	"	"	
108-88-3	Toluene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 0.50		µg/l	0.50	0.22	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 0.50		µg/l	0.50	0.43	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 0.50		µg/l	0.50	0.45	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
95-47-6	o-Xylene	< 0.50		µg/l	0.50	0.26	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	0.39	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 0.50		µg/l	0.50	0.16	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	3.55	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*100*			*80-120 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*80-120 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*97*			*80-120 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*101*			*80-120 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00		µg/l	1.00	0.53	1	SW846 8260C	"	"	GMA	"	X
67-64-1	Acetone	< 10.0		µg/l	10.0	0.80	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.47	1	"	"	"	"	"	X
71-43-2	Benzene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 1.00		µg/l	1.00	0.34	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-01				

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													
75-25-2	Bromoform	< 1.00		µg/l	1.00	0.42	1	SW846 8260C	21-Dec-17	21-Dec-17	GMA	1721131	X
74-83-9	Bromomethane	< 2.00		µg/l	2.00	0.90	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 2.00		µg/l	2.00	1.07	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 1.00		µg/l	1.00	0.41	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 2.00		µg/l	2.00	0.41	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 1.00		µg/l	1.00	0.44	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 1.00		µg/l	1.00	0.25	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 2.00		µg/l	2.00	0.59	1	"	"	"	"	"	X
67-66-3	Chloroform	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 2.00		µg/l	2.00	0.37	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 2.00		µg/l	2.00	0.86	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.20	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 1.00		µg/l	1.00	0.31	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.00		µg/l	1.00	0.31	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1.00		µg/l	1.00	0.27	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.00		µg/l	2.00	0.58	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.00		µg/l	1.00	0.69	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 1.00		µg/l	1.00	0.21	1	"	"	"	"	"	X
594-20-7	2,2-Dichloropropane	< 1.00		µg/l	1.00	0.42	1	"	"	"	"	"	X
563-58-6	1,1-Dichloropropene	< 1.00		µg/l	1.00	0.58	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.50		µg/l	0.50	0.47	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 2.00		µg/l	2.00	0.53	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 1.00		µg/l	1.00	0.36	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 1.00		µg/l	1.00	0.24	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00	0.52	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 2.00		µg/l	2.00	0.66	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 1.00		µg/l	1.00	0.35	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 1.00		µg/l	1.00	0.34	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-01				

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													
100-42-5	Styrene	< 1.00		µg/l	1.00	0.40	1	SW846 8260C	21-Dec-17	21-Dec-17	GMA	1721131	X
630-20-6	1,1,1,2-Tetrachloroethane	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 1.00		µg/l	1.00	0.57	1	"	"	"	"	"	X
108-88-3	Toluene	< 1.00		µg/l	1.00	0.30	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 1.00		µg/l	1.00	0.30	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 1.00		µg/l	1.00	0.51	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 1.00		µg/l	1.00	0.50	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.00		µg/l	1.00	0.49	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 1.00		µg/l	1.00	0.36	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 1.00		µg/l	1.00	0.43	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 1.00		µg/l	1.00	0.47	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 2.00		µg/l	2.00	0.38	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	1.06	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 1.00		µg/l	1.00	0.37	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 1.00		µg/l	1.00	0.49	1	"	"	"	"	"	X
637-92-3	Ethyl tert-butyl ether	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
108-20-3	Di-isopropyl ether	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	X
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	5.90	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	11.4	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-buten e	< 5.00		µg/l	5.00	0.82	1	"	"	"	"	"	X
64-17-5	Ethanol	< 200		µg/l	200	30.9	1	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*97*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*101*			*70-130 %*			"	"	"	"	"	
MADEP VPH Prepared by method VPH - EPA 5030C Water													
	C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	2.35	1	MADEP VPH 5/2004 Rev. 1.1	21-Dec-17	21-Dec-17	SD	1720977	
	C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	0.819	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 25.0		µg/l	25.0	0.394	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	1.64	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	1.11	1	"	"	"	"	"	
71-43-2	Benzene	< 1.00		µg/l	1.00	0.453	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.00		µg/l	1.00	0.420	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
MADEP VPH													
1634-04-4	Methyl tert-butyl ether	< 1.00		µg/l	1.00	0.297	1	MADEP VPH 5/2004 Rev. 1.1	21-Dec-17	21-Dec-17	SD	1720977	
91-20-3	Naphthalene	< 1.00		µg/l	1.00	0.491	1	"	"	"	"	"	
108-88-3	Toluene	< 1.00		µg/l	1.00	0.373	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 2.00		µg/l	2.00	0.819	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.00		µg/l	1.00	0.416	1	"	"	"	"	"	
Surrogate recoveries:													
615-59-8	*2,5-Dibromotoluene (FID)*	*118*			*70-130 %*			"	"	"	"	"	
615-59-8	*2,5-Dibromotoluene (PID)*	*116*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3510C													
83-32-9	Acenaphthene	< 5.00		µg/l	5.00	0.691	1	SW846 8270D	20-Dec-17	26-Dec-17	MSL	1721033	X
208-96-8	Acenaphthylene	< 5.00		µg/l	5.00	0.683	1	"	"	"	"	"	X
62-53-3	Aniline	< 5.00		µg/l	5.00	1.77	1	"	"	"	"	"	X
120-12-7	Anthracene	< 5.00		µg/l	5.00	0.608	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 5.00		µg/l	5.00	0.748	1	"	"	"	"	"	
92-87-5	Benzidine	< 5.00		µg/l	5.00	1.15	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 5.00		µg/l	5.00	0.536	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 5.00		µg/l	5.00	0.562	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 5.00		µg/l	5.00	0.437	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 5.00		µg/l	5.00	0.530	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 5.00		µg/l	5.00	0.480	1	"	"	"	"	"	X
65-85-0	Benzoic acid	< 5.00		µg/l	5.00	0.527	1	"	"	"	"	"	X
100-51-6	Benzyl alcohol	< 5.00		µg/l	5.00	0.780	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 5.00		µg/l	5.00	0.666	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 5.00		µg/l	5.00	0.734	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 5.00		µg/l	5.00	0.778	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 5.00		µg/l	5.00	0.638	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 5.00		µg/l	5.00	0.602	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 5.00		µg/l	5.00	0.438	1	"	"	"	"	"	X
86-74-8	Carbazole	< 5.00		µg/l	5.00	1.56	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 5.00		µg/l	5.00	0.501	1	"	"	"	"	"	X
106-47-8	4-Chloroaniline	< 5.00		µg/l	5.00	1.12	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 5.00		µg/l	5.00	0.590	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 5.00		µg/l	5.00	0.748	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 5.00		µg/l	5.00	0.603	1	"	"	"	"	"	X
218-01-9	Chrysene	< 5.00		µg/l	5.00	0.532	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00	0.450	1	"	"	"	"	"	X
132-64-9	Dibenzofuran	< 5.00		µg/l	5.00	0.740	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.00		µg/l	5.00	0.562	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.00		µg/l	5.00	0.647	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 5.00		µg/l	5.00	0.614	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
91-94-1	3,3´-Dichlorobenzidine	< 5.00		µg/l	5.00	1.99	1	SW846 8270D	20-Dec-17	26-Dec-17	MSL	1721033	X
120-83-2	2,4-Dichlorophenol	< 5.00		µg/l	5.00	0.530	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 5.00		µg/l	5.00	0.623	1	"	"	"	"	"	X
131-11-3	Dimethyl phthalate	< 5.00		µg/l	5.00	0.758	1	"	"	"	"	"	X
105-67-9	2,4-Dimethylphenol	< 5.00		µg/l	5.00	0.653	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 5.00		µg/l	5.00	0.457	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 5.00		µg/l	5.00	0.319	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 5.00		µg/l	5.00	0.561	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 5.00		µg/l	5.00	0.673	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 5.00		µg/l	5.00	0.593	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 5.00		µg/l	5.00	0.406	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 5.00		µg/l	5.00	0.638	1	"	"	"	"	"	X
86-73-7	Fluorene	< 5.00		µg/l	5.00	0.612	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 5.00		µg/l	5.00	0.571	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 5.00		µg/l	5.00	0.388	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 5.00		µg/l	5.00	1.04	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 5.00		µg/l	5.00	0.639	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00	0.580	1	"	"	"	"	"	X
78-59-1	Isophorone	< 5.00		µg/l	5.00	0.586	1	"	"	"	"	"	X
91-57-6	2-Methylnaphthalene	< 5.00		µg/l	5.00	0.574	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 5.00		µg/l	5.00	0.665	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 10.0		µg/l	10.0	0.615	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 5.00		µg/l	5.00	0.685	1	"	"	"	"	"	X
88-74-4	2-Nitroaniline	< 5.00		µg/l	5.00	0.606	1	"	"	"	"	"	X
99-09-2	3-Nitroaniline	< 5.00		µg/l	5.00	0.543	1	"	"	"	"	"	X
100-01-6	4-Nitroaniline	< 5.00		µg/l	5.00	0.374	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 5.00		µg/l	5.00	0.690	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 5.00		µg/l	5.00	0.465	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 20.0		µg/l	20.0	0.838	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 5.00		µg/l	5.00	0.673	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 5.00		µg/l	5.00	0.578	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 5.00		µg/l	5.00	0.651	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 20.0		µg/l	20.0	0.373	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 5.00		µg/l	5.00	0.586	1	"	"	"	"	"	X
108-95-2	Phenol	< 5.00		µg/l	5.00	0.645	1	"	"	"	"	"	X
129-00-0	Pyrene	< 5.00		µg/l	5.00	0.610	1	"	"	"	"	"	X
110-86-1	Pyridine	< 5.00		µg/l	5.00	0.819	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.00		µg/l	5.00	0.687	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 5.00		µg/l	5.00	0.733	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 5.00		µg/l	5.00	0.520	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 5.00		µg/l	5.00	0.518	1	"	"	"	"	"	X
82-68-8	Pentachloronitrobenzene	< 5.00		µg/l	5.00	0.696	1	"	"	"	"	"	X
95-94-3	1,2,4,5-Tetrachlorobenzene	< 5.00		µg/l	5.00	0.725	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*47*			*30-130 %*			SW846 8270D	20-Dec-17	26-Dec-17	MSL	1721033	
367-12-4	*2-Fluorophenol*	*31*			*15-110 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*43*			*30-130 %*			"	"	"	"	"	
4165-62-2	*Phenol-d5*	*20*			*15-110 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*54*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*50*			*15-110 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GC													
Polychlorinated Biphenyls Prepared by method SW846 3510C													
12674-11-2	Aroclor-1016	< 0.204		µg/l	0.204	0.106	1	SW846 8082A	19-Dec-17	21-Dec-17	AM	1720951	X
11104-28-2	Aroclor-1221	< 0.204		µg/l	0.204	0.117	1	"	"	"	"	"	X
11141-16-5	Aroclor-1232	< 0.204		µg/l	0.204	0.113	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	< 0.204		µg/l	0.204	0.109	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	< 0.204		µg/l	0.204	0.139	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	< 0.204		µg/l	0.204	0.118	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	< 0.204		µg/l	0.204	0.0868	1	"	"	"	"	"	X
37324-23-5	Aroclor-1262	< 0.204		µg/l	0.204	0.0914	1	"	"	"	"	"	X
11100-14-4	Aroclor-1268	< 0.204		µg/l	0.204	0.0934	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*100*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*95*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*70*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*75*			*30-150 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
MADEP EPH Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 106		µg/l	106	15.9	1	MADEP EPH 5/2004 R	27-Dec-17	02-Jan-18	EDT	1721291	
	C19-C36 Aliphatic Hydrocarbons	< 106		µg/l	106	21.6	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	< 106		µg/l	106	78.8	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 106		µg/l	106	78.8	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.32		µg/l	5.32	1.53	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.32		µg/l	5.32	1.32	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 5.32		µg/l	5.32	1.40	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 5.32		µg/l	5.32	1.77	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.32		µg/l	5.32	1.36	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.32		µg/l	5.32	1.68	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.32		µg/l	5.32	1.35	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 5.32		µg/l	5.32	1.52	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.32		µg/l	5.32	1.67	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 5.32		µg/l	5.32	1.53	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1 SC42529-01	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
MADEP EPH													
218-01-9	Chrysene	< 5.32		µg/l	5.32	1.53	1	MADEP EPH 5/2004 R	27-Dec-17	02-Jan-18	EDT	1721291	
205-99-2	Benzo (b) fluoranthene	< 5.32		µg/l	5.32	1.68	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.32		µg/l	5.32	1.51	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.32		µg/l	5.32	1.40	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.32		µg/l	5.32	1.43	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.32		µg/l	5.32	1.52	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.32		µg/l	5.32	1.33	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*48*			*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*42*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*50*			*40-140 %*			"	"	"	"	"	
Soluble Metals by EPA 200/6000 Series Methods													
Prepared by method General Prep-Metal													
	Filtration	**Field Filtered**		N/A			1	EPA 200.7/3005A/6010			KT	1720940	
Soluble Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3005A													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0006	1	SW846 6010C	02-Jan-18	03-Jan-18	SJR/TBC	1721194	X
7440-38-2	Arsenic	**0.0072**		mg/l	0.0040	0.0014	1	"	"	"	"	"	X
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0003	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0004	1	"	"	"	"	"	X
7440-47-3	Chromium	**0.0200**		mg/l	0.0050	0.0009	1	"	"	"	"	"	X
7440-50-8	Copper	**0.0230**		mg/l	0.0050	0.0023	1	"	"	"	"	"	X
7439-89-6	Iron	**16.8**	R06	mg/l	0.0400	0.0045	1	"	"	"	"	"	X
7440-02-0	Nickel	**0.0132**		mg/l	0.0050	0.0009	1	"	"	"	"	"	X
7439-92-1	Lead	**0.0132**		mg/l	0.0075	0.0062	1	"	"	"	"	"	X
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0016	1	"	"	"	"	"	X
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0042	1	"	"	"	"	"	X
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0021	1	"	"	"	"	"	X
7440-66-6	Zinc	**0.0426**		mg/l	0.0050	0.0016	1	"	"	"	"	"	X
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00013	1	EPA 245.1/7470A	02-Jan-18	02-Jan-18	ABW	1721195	X
General Chemistry Parameters													
7782-50-5	Total Residual Chlorine	< 0.020	CIHT	mg/l	0.020	0.006	1	SM4500-Cl-G (11)	22-Dec-17 10:33	22-Dec-17 11:21	RLT	1721227	
16887-00-6	Chloride	**176**	D, GS1	mg/l	7.00	0.696	7	EPA 300.0	19-Dec-17	19-Dec-17	TN	1720995	X
57-12-5	Cyanide (total)	< 0.00500		mg/l	0.00500	0.00474	1	EPA 335.4 / SW846 9012B	28-Dec-17	28-Dec-17	RLT	1721381	X
	Total Suspended Solids	**2,730**	LIV	mg/l	50.0	21.6	1	SM2540D (11)	19-Dec-17	22-Dec-17	CMB	1720961	X
Subcontracted Analyses													
Prepared by method 413745													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
7664-41-7	Ammonia as Nitrogen	**0.52**		mg/l	0.25	0.25	5	E350.1	14-Dec-17 14:30	20-Dec-17 11:22	13693-A,I413745A		

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TB	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Purgeable Organic Compounds													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.50		µg/l	0.50	0.35	1	EPA 524.2	21-Dec-17	21-Dec-17	GMA	1721131	
67-64-1	Acetone	< 10.0		µg/l	10.0	0.80	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.44	1	"	"	"	"	"	
71-43-2	Benzene	< 0.50		µg/l	0.50	0.21	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.50		µg/l	0.50	0.30	1	"	"	"	"	"	
75-25-2	Bromoform	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	
74-83-9	Bromomethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 2.00		µg/l	2.00	0.55	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 0.50		µg/l	0.50	0.41	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 0.50		µg/l	0.50	0.26	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
75-00-3	Chloroethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
67-66-3	Chloroform	< 0.50		µg/l	0.50	0.23	1	"	"	"	"	"	
74-87-3	Chloromethane	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 0.50		µg/l	0.50	0.17	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 0.50		µg/l	0.50	0.24	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 0.50		µg/l	0.50	0.48	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.16	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 0.50		µg/l	0.50	0.31	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.50		µg/l	0.50	0.20	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 0.50		µg/l	0.50	0.24	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 0.50		µg/l	0.50	0.27	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 0.50		µg/l	0.50	0.22	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.50		µg/l	0.50	0.23	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.50		µg/l	0.50	0.47	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	< 2.00		µg/l	2.00	0.53	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TB SC42529-02	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Purgeable Organic Compounds													
98-82-8	Isopropylbenzene	< 0.50		µg/l	0.50	0.23	1	EPA 524.2	21-Dec-17	21-Dec-17	GMA	1721131	
99-87-6	4-Isopropyltoluene	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	< 0.50		µg/l	0.50	0.15	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00	0.35	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.50		µg/l	0.50	0.40	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
100-42-5	Styrene	< 0.50		µg/l	0.50	0.40	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 0.50		µg/l	0.50	0.39	1	"	"	"	"	"	
108-88-3	Toluene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 0.50		µg/l	0.50	0.22	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 0.50		µg/l	0.50	0.43	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 0.50		µg/l	0.50	0.45	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
95-47-6	o-Xylene	< 0.50		µg/l	0.50	0.26	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	0.39	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 0.50		µg/l	0.50	0.16	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	3.55	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*100*			*80-120 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*80-120 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*99*			*80-120 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*100*			*80-120 %*			"	"	"	"	"	
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00		µg/l	1.00	0.53	1	SW846 8260C	"	"	GMA	"	X
67-64-1	Acetone	< 10.0		µg/l	10.0	0.80	1	"	"	"	"	"	X
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.47	1	"	"	"	"	"	X
71-43-2	Benzene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
108-86-1	Bromobenzene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
74-97-5	Bromochloromethane	< 1.00		µg/l	1.00	0.34	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TB SC42529-02	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17

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													
75-25-2	Bromoform	< 1.00		µg/l	1.00	0.42	1	SW846 8260C	21-Dec-17	21-Dec-17	GMA	1721131	X
74-83-9	Bromomethane	< 2.00		µg/l	2.00	0.90	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 2.00		µg/l	2.00	1.07	1	"	"	"	"	"	X
104-51-8	n-Butylbenzene	< 1.00		µg/l	1.00	0.41	1	"	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
98-06-6	tert-Butylbenzene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 2.00		µg/l	2.00	0.41	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 1.00		µg/l	1.00	0.44	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 1.00		µg/l	1.00	0.25	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 2.00		µg/l	2.00	0.59	1	"	"	"	"	"	X
67-66-3	Chloroform	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 2.00		µg/l	2.00	0.37	1	"	"	"	"	"	X
95-49-8	2-Chlorotoluene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	X
106-43-4	4-Chlorotoluene	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 2.00		µg/l	2.00	0.86	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.20	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 1.00		µg/l	1.00	0.31	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.00		µg/l	1.00	0.31	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1.00		µg/l	1.00	0.27	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.00		µg/l	2.00	0.58	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 1.00		µg/l	1.00	0.32	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.00		µg/l	1.00	0.69	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	X
142-28-9	1,3-Dichloropropane	< 1.00		µg/l	1.00	0.21	1	"	"	"	"	"	X
594-20-7	2,2-Dichloropropane	< 1.00		µg/l	1.00	0.42	1	"	"	"	"	"	X
563-58-6	1,1-Dichloropropene	< 1.00		µg/l	1.00	0.58	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 0.50		µg/l	0.50	0.47	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 2.00		µg/l	2.00	0.53	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 1.00		µg/l	1.00	0.36	1	"	"	"	"	"	X
99-87-6	4-Isopropyltoluene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 1.00		µg/l	1.00	0.24	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00	0.52	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 2.00		µg/l	2.00	0.66	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 1.00		µg/l	1.00	0.35	1	"	"	"	"	"	X
103-65-1	n-Propylbenzene	< 1.00		µg/l	1.00	0.34	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TB	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17
SC42529-02				

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													
100-42-5	Styrene	< 1.00		µg/l	1.00	0.40	1	SW846 8260C	21-Dec-17	21-Dec-17	GMA	1721131	X
630-20-6	1,1,1,2-Tetrachloroethane	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 1.00		µg/l	1.00	0.57	1	"	"	"	"	"	X
108-88-3	Toluene	< 1.00		µg/l	1.00	0.30	1	"	"	"	"	"	X
87-61-6	1,2,3-Trichlorobenzene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1.00		µg/l	1.00	0.38	1	"	"	"	"	"	X
108-70-3	1,3,5-Trichlorobenzene	< 1.00		µg/l	1.00	0.30	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 1.00		µg/l	1.00	0.51	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 1.00		µg/l	1.00	0.50	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.00		µg/l	1.00	0.49	1	"	"	"	"	"	X
96-18-4	1,2,3-Trichloropropane	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	X
95-63-6	1,2,4-Trimethylbenzene	< 1.00		µg/l	1.00	0.36	1	"	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 1.00		µg/l	1.00	0.43	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 1.00		µg/l	1.00	0.47	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 2.00		µg/l	2.00	0.38	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 1.00		µg/l	1.00	0.28	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	1.06	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 1.00		µg/l	1.00	0.37	1	"	"	"	"	"	X
994-05-8	Tert-amyl methyl ether	< 1.00		µg/l	1.00	0.49	1	"	"	"	"	"	X
637-92-3	Ethyl tert-butyl ether	< 1.00		µg/l	1.00	0.33	1	"	"	"	"	"	X
108-20-3	Di-isopropyl ether	< 1.00		µg/l	1.00	0.29	1	"	"	"	"	"	X
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	5.90	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	11.4	1	"	"	"	"	"	X
110-57-6	trans-1,4-Dichloro-2-buten e	< 5.00		µg/l	5.00	0.82	1	"	"	"	"	"	X
64-17-5	Ethanol	< 200		µg/l	200	30.9	1	"	"	"	"	"	X
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*100*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*100*			*70-130 %*			"	"	"	"	"	
MADEP VPH Prepared by method VPH - EPA 5030C Water													
	C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	2.35	1	MADEP VPH 5/2004 Rev. 1.1	21-Dec-17	21-Dec-17	SD	1720977	
	C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	0.819	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 25.0		µg/l	25.0	0.394	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	1.64	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	1.11	1	"	"	"	"	"	
71-43-2	Benzene	< 1.00		µg/l	1.00	0.453	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.00		µg/l	1.00	0.420	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TB SC42529-02	60527539	Ground Water	14-Dec-17 14:30	15-Dec-17

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Volatile Organic Compounds													
MADEP VPH													
1634-04-4	Methyl tert-butyl ether	< 1.00		µg/l	1.00	0.297	1	MADEP VPH 5/2004 Rev. 1.1	21-Dec-17	21-Dec-17	SD	1720977	
91-20-3	Naphthalene	< 1.00		µg/l	1.00	0.491	1	"	"	"	"	"	
108-88-3	Toluene	< 1.00		µg/l	1.00	0.373	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 2.00		µg/l	2.00	0.819	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.00		µg/l	1.00	0.416	1	"	"	"	"	"	
Surrogate recoveries:													
615-59-8	*2,5-Dibromotoluene (FID)*	*120*			*70-130 %*			"	"	"	"	"	
615-59-8	*2,5-Dibromotoluene (PID)*	*119*			*70-130 %*			"	"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch 1721131 - SW846 5030 Water MS										
Blank (1721131-BLK1)					Prepared & Analyzed: 21-Dec-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.50		µg/l	0.50						
Acetone	< 10.0		µg/l	10.0						
Acrylonitrile	< 0.50		µg/l	0.50						
Benzene	< 0.50		µg/l	0.50						
Bromobenzene	< 0.50		µg/l	0.50						
Bromochloromethane	< 0.50		µg/l	0.50						
Bromodichloromethane	< 0.50		µg/l	0.50						
Bromoform	< 0.50		µg/l	0.50						
Bromomethane	< 0.50		µg/l	0.50						
2-Butanone (MEK)	< 2.00		µg/l	2.00						
n-Butylbenzene	< 0.50		µg/l	0.50						
sec-Butylbenzene	< 0.50		µg/l	0.50						
tert-Butylbenzene	< 0.50		µg/l	0.50						
Carbon disulfide	< 0.50		µg/l	0.50						
Carbon tetrachloride	< 0.50		µg/l	0.50						
Chlorobenzene	< 0.50		µg/l	0.50						
Chloroethane	< 0.50		µg/l	0.50						
Chloroform	< 0.50		µg/l	0.50						
Chloromethane	< 0.50		µg/l	0.50						
2-Chlorotoluene	< 0.50		µg/l	0.50						
4-Chlorotoluene	< 0.50		µg/l	0.50						
1,2-Dibromo-3-chloropropane	< 0.50		µg/l	0.50						
Dibromochloromethane	< 0.50		µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50						
Dibromomethane	< 0.50		µg/l	0.50						
1,2-Dichlorobenzene	< 0.50		µg/l	0.50						
1,3-Dichlorobenzene	< 0.50		µg/l	0.50						
1,4-Dichlorobenzene	< 0.50		µg/l	0.50						
Dichlorodifluoromethane (Freon12)	< 0.50		µg/l	0.50						
1,1-Dichloroethane	< 0.50		µg/l	0.50						
1,2-Dichloroethane	< 0.50		µg/l	0.50						
1,1-Dichloroethene	< 0.50		µg/l	0.50						
cis-1,2-Dichloroethene	< 0.50		µg/l	0.50						
trans-1,2-Dichloroethene	< 0.50		µg/l	0.50						
1,2-Dichloropropane	< 0.50		µg/l	0.50						
1,3-Dichloropropane	< 0.50		µg/l	0.50						
2,2-Dichloropropane	< 0.50		µg/l	0.50						
1,1-Dichloropropene	< 0.50		µg/l	0.50						
cis-1,3-Dichloropropene	< 0.50		µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50		µg/l	0.50						
Ethylbenzene	< 0.50		µg/l	0.50						
Hexachlorobutadiene	< 0.50		µg/l	0.50						
2-Hexanone (MBK)	< 2.00		µg/l	2.00						
Isopropylbenzene	< 0.50		µg/l	0.50						
4-Isopropyltoluene	< 0.50		µg/l	0.50						
Methyl tert-butyl ether	< 0.50		µg/l	0.50						
4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00						
Methylene chloride	< 0.50		µg/l	0.50						
Naphthalene	< 0.50		µg/l	0.50						
n-Propylbenzene	< 0.50		µg/l	0.50						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch 1721131 - SW846 5030 Water MS										
Blank (1721131-BLK1)					Prepared & Analyzed: 21-Dec-17					
Styrene	< 0.50		µg/l	0.50						
1,1,1,2-Tetrachloroethane	< 0.50		µg/l	0.50						
1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50						
Tetrachloroethene	< 0.50		µg/l	0.50						
Toluene	< 0.50		µg/l	0.50						
1,2,3-Trichlorobenzene	< 0.50		µg/l	0.50						
1,2,4-Trichlorobenzene	< 0.50		µg/l	0.50						
1,1,1-Trichloroethane	< 0.50		µg/l	0.50						
1,1,2-Trichloroethane	< 0.50		µg/l	0.50						
Trichloroethene	< 0.50		µg/l	0.50						
Trichlorofluoromethane (Freon 11)	< 0.50		µg/l	0.50						
1,2,3-Trichloropropane	< 0.50		µg/l	0.50						
1,2,4-Trimethylbenzene	< 0.50		µg/l	0.50						
1,3,5-Trimethylbenzene	< 0.50		µg/l	0.50						
Vinyl chloride	< 0.50		µg/l	0.50						
m,p-Xylene	< 0.50		µg/l	0.50						
o-Xylene	< 0.50		µg/l	0.50						
Tetrahydrofuran	< 2.00		µg/l	2.00						
Tert-amyl methyl ether	< 0.50		µg/l	0.50						
Ethyl tert-butyl ether	< 0.50		µg/l	0.50						
Di-isopropyl ether	< 0.50		µg/l	0.50						
Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0						
Surrogate: 4-Bromofluorobenzene	*49.3*		µg/l		*50.0*		*99*	*80-120*		
Surrogate: Toluene-d8	*49.7*		µg/l		*50.0*		*99*	*80-120*		
Surrogate: 1,2-Dichloroethane-d4	*48.7*		µg/l		*50.0*		*97*	*80-120*		
Surrogate: Dibromofluoromethane	*49.2*		µg/l		*50.0*		*98*	*80-120*		
LCS (1721131-BS1)					Prepared & Analyzed: 21-Dec-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**23.1**		µg/l		20.0		115	80-120		
Acetone	**21.8**		µg/l		20.0		109	70-130		
Acrylonitrile	**21.2**		µg/l		20.0		106	70-130		
Benzene	**22.8**		µg/l		20.0		114	80-120		
Bromobenzene	**22.3**		µg/l		20.0		112	80-120		
Bromochloromethane	**22.1**		µg/l		20.0		111	80-120		
Bromodichloromethane	**22.0**		µg/l		20.0		110	80-120		
Bromoform	**23.1**		µg/l		20.0		116	80-120		
Bromomethane	**24.9**	QC2	µg/l		20.0		124	80-120		
2-Butanone (MEK)	**20.7**		µg/l		20.0		103	70-130		
n-Butylbenzene	**21.5**		µg/l		20.0		108	80-120		
sec-Butylbenzene	**22.0**		µg/l		20.0		110	80-120		
tert-Butylbenzene	**21.7**		µg/l		20.0		108	80-120		
Carbon disulfide	**23.6**		µg/l		20.0		118	70-130		
Carbon tetrachloride	**24.3**	QC2	µg/l		20.0		121	80-120		
Chlorobenzene	**22.0**		µg/l		20.0		110	80-120		
Chloroethane	**19.3**		µg/l		20.0		97	80-120		
Chloroform	**21.4**		µg/l		20.0		107	80-120		
Chloromethane	**20.2**		µg/l		20.0		101	80-120		
2-Chlorotoluene	**22.4**		µg/l		20.0		112	80-120		
4-Chlorotoluene	**23.2**		µg/l		20.0		116	80-120		
1,2-Dibromo-3-chloropropane	**23.2**		µg/l		20.0		116	80-120		
Dibromochloromethane	**22.8**		µg/l		20.0		114	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch 1721131 - SW846 5030 Water MS										
LCS (1721131-BS1)					Prepared & Analyzed: 21-Dec-17					
1,2-Dibromoethane (EDB)	**21.4**		µg/l		20.0		107	80-120		
Dibromomethane	**22.9**		µg/l		20.0		115	80-120		
1,2-Dichlorobenzene	**20.7**		µg/l		20.0		103	80-120		
1,3-Dichlorobenzene	**21.9**		µg/l		20.0		109	80-120		
1,4-Dichlorobenzene	**21.7**		µg/l		20.0		109	80-120		
Dichlorodifluoromethane (Freon12)	**22.9**		µg/l		20.0		115	80-120		
1,1-Dichloroethane	**22.5**		µg/l		20.0		112	80-120		
1,2-Dichloroethane	**22.0**		µg/l		20.0		110	80-120		
1,1-Dichloroethene	**22.5**		µg/l		20.0		113	80-120		
cis-1,2-Dichloroethene	**21.6**		µg/l		20.0		108	80-120		
trans-1,2-Dichloroethene	**21.7**		µg/l		20.0		108	80-120		
1,2-Dichloropropane	**23.0**		µg/l		20.0		115	80-120		
1,3-Dichloropropane	**22.8**		µg/l		20.0		114	80-120		
2,2-Dichloropropane	**28.5**	QC2	µg/l		20.0		142	80-120		
1,1-Dichloropropene	**22.3**		µg/l		20.0		111	80-120		
cis-1,3-Dichloropropene	**21.6**		µg/l		20.0		108	80-120		
trans-1,3-Dichloropropene	**22.6**		µg/l		20.0		113	80-120		
Ethylbenzene	**23.5**		µg/l		20.0		118	80-120		
Hexachlorobutadiene	**24.2**	QC2	µg/l		20.0		121	80-120		
2-Hexanone (MBK)	**22.7**		µg/l		20.0		113	70-130		
Isopropylbenzene	**22.7**		µg/l		20.0		113	80-120		
4-Isopropyltoluene	**21.2**		µg/l		20.0		106	80-120		
Methyl tert-butyl ether	**22.7**		µg/l		20.0		114	80-120		
4-Methyl-2-pentanone (MIBK)	**23.7**		µg/l		20.0		118	70-130		
Methylene chloride	**21.0**		µg/l		20.0		105	80-120		
Naphthalene	**22.4**		µg/l		20.0		112	80-120		
n-Propylbenzene	**21.6**		µg/l		20.0		108	80-120		
Styrene	**20.8**		µg/l		20.0		104	80-120		
1,1,1,2-Tetrachloroethane	**22.3**		µg/l		20.0		111	80-120		
1,1,2,2-Tetrachloroethane	**24.1**		µg/l		20.0		120	80-120		
Tetrachloroethene	**22.2**		µg/l		20.0		111	80-120		
Toluene	**22.2**		µg/l		20.0		111	80-120		
1,2,3-Trichlorobenzene	**22.0**		µg/l		20.0		110	80-120		
1,2,4-Trichlorobenzene	**21.1**		µg/l		20.0		105	80-120		
1,1,1-Trichloroethane	**23.1**		µg/l		20.0		115	80-120		
1,1,2-Trichloroethane	**23.3**		µg/l		20.0		116	80-120		
Trichloroethene	**22.2**		µg/l		20.0		111	80-120		
Trichlorofluoromethane (Freon 11)	**23.6**		µg/l		20.0		118	80-120		
1,2,3-Trichloropropane	**23.6**		µg/l		20.0		118	80-120		
1,2,4-Trimethylbenzene	**21.0**		µg/l		20.0		105	80-120		
1,3,5-Trimethylbenzene	**21.4**		µg/l		20.0		107	80-120		
Vinyl chloride	**21.5**		µg/l		20.0		108	80-120		
m,p-Xylene	**23.4**		µg/l		20.0		117	80-120		
o-Xylene	**23.4**		µg/l		20.0		117	80-120		
Tetrahydrofuran	**22.6**		µg/l		20.0		113	70-130		
Tert-amyl methyl ether	**21.0**		µg/l		20.0		105	70-130		
Ethyl tert-butyl ether	**23.0**		µg/l		20.0		115	70-130		
Di-isopropyl ether	**22.2**		µg/l		20.0		111	70-130		
Tert-Butanol / butyl alcohol	**254**		µg/l		200		127	70-130		
Surrogate: 4-Bromofluorobenzene	*49.7*		µg/l		*50.0*		*99*	*80-120*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch 1721131 - SW846 5030 Water MS										
LCS (1721131-BS1)					Prepared & Analyzed: 21-Dec-17					
Surrogate: Toluene-d8	*49.2*		µg/l		*50.0*		*98*	*80-120*		
Surrogate: 1,2-Dichloroethane-d4	*49.4*		µg/l		*50.0*		*99*	*80-120*		
Surrogate: Dibromofluoromethane	*49.0*		µg/l		*50.0*		*98*	*80-120*		
Matrix Spike (1721131-MS1)			**Source: SC42529-01**		Prepared & Analyzed: 21-Dec-17					
Benzene	**23.0**	D	µg/l		20.0	0.00	115	80-120		
Chlorobenzene	**22.6**	D	µg/l		20.0	0.00	113	80-120		
1,1-Dichloroethene	**22.9**	D	µg/l		20.0	0.00	115	80-120		
Toluene	**22.4**	D	µg/l		20.0	0.00	112	80-120		
Trichloroethene	**21.8**	D	µg/l		20.0	0.00	109	80-120		
Surrogate: 4-Bromofluorobenzene	*49.7*		µg/l		*50.0*		*99*	*80-120*		
Surrogate: Toluene-d8	*50.2*		µg/l		*50.0*		*100*	*80-120*		
Surrogate: 1,2-Dichloroethane-d4	*49.6*		µg/l		*50.0*		*99*	*80-120*		
Surrogate: Dibromofluoromethane	*49.2*		µg/l		*50.0*		*98*	*80-120*		
Matrix Spike Dup (1721131-MSD1)		Z-2	**Source: SC42529-01**		Prepared & Analyzed: 21-Dec-17					
Benzene	**22.5**	D	µg/l		20.0	0.00	112	80-120	2	20
Chlorobenzene	**21.6**	D	µg/l		20.0	0.00	108	80-120	4	20
1,1-Dichloroethene	**20.8**	D	µg/l		20.0	0.00	104	80-120	10	20
Toluene	**21.5**	D	µg/l		20.0	0.00	108	80-120	4	20
Trichloroethene	**21.4**	D	µg/l		20.0	0.00	107	80-120	1	20
Surrogate: 4-Bromofluorobenzene	*50.6*		µg/l		*50.0*		*101*	*80-120*		
Surrogate: Toluene-d8	*50.7*		µg/l		*50.0*		*101*	*80-120*		
Surrogate: 1,2-Dichloroethane-d4	*51.1*		µg/l		*50.0*		*102*	*80-120*		
Surrogate: Dibromofluoromethane	*50.0*		µg/l		*50.0*		*100*	*80-120*		
MADEP VPH 5/2004 Rev. 1.1										
Batch 1720977 - VPH - EPA 5030C Water										
Blank (1720977-BLK1)					Prepared & Analyzed: 21-Dec-17					
C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0						
C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0						
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	< 1.00		µg/l	1.00						
Ethylbenzene	< 1.00		µg/l	1.00						
Methyl tert-butyl ether	< 1.00		µg/l	1.00						
Naphthalene	< 1.00		µg/l	1.00						
Toluene	< 1.00		µg/l	1.00						
m,p-Xylene	< 2.00		µg/l	2.00						
o-Xylene	< 1.00		µg/l	1.00						
Total Xylenes	< 3.00		µg/l	3.00						
Surrogate: 2,5-Dibromotoluene (FID)	*62.0*		µg/l		*50.0*		*124*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*61.4*		µg/l		*50.0*		*123*	*70-130*		
LCS (1720977-BS1)					Prepared & Analyzed: 21-Dec-17					
C9-C12 Aliphatic Hydrocarbons	**46.7**		µg/l		60.0		78	70-130		
C5-C8 Aliphatic Hydrocarbons	**56.2**		µg/l		60.0		94	70-130		
C9-C10 Aromatic Hydrocarbons	**20.4**		µg/l		20.0		102	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	**195**		µg/l		200		97	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	**67.1**		µg/l		80.0		84	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP VPH 5/2004 Rev. 1.1										
Batch 1720977 - VPH - EPA 5030C Water										
LCS (1720977-BS1)					Prepared & Analyzed: 21-Dec-17					
Benzene	**19.9**		µg/l		20.0		100	70-130		
Ethylbenzene	**19.2**		µg/l		20.0		96	70-130		
Methyl tert-butyl ether	**21.1**		µg/l		20.0		106	70-130		
Naphthalene	**18.6**		µg/l		20.0		93	70-130		
Toluene	**19.7**		µg/l		20.0		98	70-130		
m,p-Xylene	**38.9**		µg/l		40.0		97	70-130		
o-Xylene	**19.6**		µg/l		20.0		98	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	*64.3*		µg/l		*50.0*		*129*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*64.7*		µg/l		*50.0*		*129*	*70-130*		
LCS Dup (1720977-BSD1)					Prepared & Analyzed: 21-Dec-17					
C5-C8 Aliphatic Hydrocarbons	**55.3**		µg/l		60.0		92	70-130	2	25
C9-C12 Aliphatic Hydrocarbons	**49.6**		µg/l		60.0		83	70-130	6	25
C9-C10 Aromatic Hydrocarbons	**21.3**		µg/l		20.0		107	70-130	5	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	**199**		µg/l		200		99	70-130	2	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	**70.9**		µg/l		80.0		89	70-130	6	25
Benzene	**20.6**		µg/l		20.0		103	70-130	3	25
Ethylbenzene	**20.2**		µg/l		20.0		101	70-130	5	25
Methyl tert-butyl ether	**21.0**		µg/l		20.0		105	70-130	0.4	25
Naphthalene	**18.7**		µg/l		20.0		93	70-130	0.4	25
Toluene	**20.5**		µg/l		20.0		103	70-130	4	25
m,p-Xylene	**40.8**		µg/l		40.0		102	70-130	5	25
o-Xylene	**20.4**		µg/l		20.0		102	70-130	4	25
Surrogate: 2,5-Dibromotoluene (FID)	*63.9*		µg/l		*50.0*		*128*	*70-130*		
Surrogate: 2,5-Dibromotoluene (PID)	*63.4*		µg/l		*50.0*		*127*	*70-130*		
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
Blank (1721131-BLK1)					Prepared & Analyzed: 21-Dec-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00		µg/l	1.00						
Acetone	< 10.0		µg/l	10.0						
Acrylonitrile	< 0.50		µg/l	0.50						
Benzene	< 1.00		µg/l	1.00						
Bromobenzene	< 1.00		µg/l	1.00						
Bromochloromethane	< 1.00		µg/l	1.00						
Bromodichloromethane	< 0.50		µg/l	0.50						
Bromoform	< 1.00		µg/l	1.00						
Bromomethane	< 2.00		µg/l	2.00						
2-Butanone (MEK)	< 2.00		µg/l	2.00						
n-Butylbenzene	< 1.00		µg/l	1.00						
sec-Butylbenzene	< 1.00		µg/l	1.00						
tert-Butylbenzene	< 1.00		µg/l	1.00						
Carbon disulfide	< 2.00		µg/l	2.00						
Carbon tetrachloride	< 1.00		µg/l	1.00						
Chlorobenzene	< 1.00		µg/l	1.00						
Chloroethane	< 2.00		µg/l	2.00						
Chloroform	< 1.00		µg/l	1.00						
Chloromethane	< 2.00		µg/l	2.00						
2-Chlorotoluene	< 1.00		µg/l	1.00						
4-Chlorotoluene	< 1.00		µg/l	1.00						
1,2-Dibromo-3-chloropropane	< 2.00		µg/l	2.00						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
Blank (1721131-BLK1)					Prepared & Analyzed: 21-Dec-17					
Dibromochloromethane	< 0.50		µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50						
Dibromomethane	< 1.00		µg/l	1.00						
1,2-Dichlorobenzene	< 1.00		µg/l	1.00						
1,3-Dichlorobenzene	< 1.00		µg/l	1.00						
1,4-Dichlorobenzene	< 1.00		µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00		µg/l	2.00						
1,1-Dichloroethane	< 1.00		µg/l	1.00						
1,2-Dichloroethane	< 1.00		µg/l	1.00						
1,1-Dichloroethene	< 1.00		µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00		µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00		µg/l	1.00						
1,2-Dichloropropane	< 1.00		µg/l	1.00						
1,3-Dichloropropane	< 1.00		µg/l	1.00						
2,2-Dichloropropane	< 1.00		µg/l	1.00						
1,1-Dichloropropene	< 1.00		µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50		µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50		µg/l	0.50						
Ethylbenzene	< 1.00		µg/l	1.00						
Hexachlorobutadiene	< 0.50		µg/l	0.50						
2-Hexanone (MBK)	< 2.00		µg/l	2.00						
Isopropylbenzene	< 1.00		µg/l	1.00						
4-Isopropyltoluene	< 1.00		µg/l	1.00						
Methyl tert-butyl ether	< 1.00		µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00						
Methylene chloride	< 2.00		µg/l	2.00						
Naphthalene	< 1.00		µg/l	1.00						
n-Propylbenzene	< 1.00		µg/l	1.00						
Styrene	< 1.00		µg/l	1.00						
1,1,1,2-Tetrachloroethane	< 1.00		µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50						
Tetrachloroethene	< 1.00		µg/l	1.00						
Toluene	< 1.00		µg/l	1.00						
1,2,3-Trichlorobenzene	< 1.00		µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00		µg/l	1.00						
1,3,5-Trichlorobenzene	< 1.00		µg/l	1.00						
1,1,1-Trichloroethane	< 1.00		µg/l	1.00						
1,1,2-Trichloroethane	< 1.00		µg/l	1.00						
Trichloroethene	< 1.00		µg/l	1.00						
Trichlorofluoromethane (Freon 11)	< 1.00		µg/l	1.00						
1,2,3-Trichloropropane	< 1.00		µg/l	1.00						
1,2,4-Trimethylbenzene	< 1.00		µg/l	1.00						
1,3,5-Trimethylbenzene	< 1.00		µg/l	1.00						
Vinyl chloride	< 1.00		µg/l	1.00						
m,p-Xylene	< 2.00		µg/l	2.00						
o-Xylene	< 1.00		µg/l	1.00						
Tetrahydrofuran	< 2.00		µg/l	2.00						
Ethyl ether	< 1.00		µg/l	1.00						
Tert-amyl methyl ether	< 1.00		µg/l	1.00						
Ethyl tert-butyl ether	< 1.00		µg/l	1.00						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
Blank (1721131-BLK1)					Prepared & Analyzed: 21-Dec-17					
Di-isopropyl ether	< 1.00		µg/l	1.00						
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	< 5.00		µg/l	5.00						
Ethanol	< 200		µg/l	200						
Surrogate: 4-Bromofluorobenzene	*49.3*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*49.7*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*48.7*		µg/l		*50.0*		*97*	*70-130*		
Surrogate: Dibromofluoromethane	*49.2*		µg/l		*50.0*		*98*	*70-130*		
LCS (1721131-BS1)					Prepared & Analyzed: 21-Dec-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**23.1**		µg/l		20.0		115	70-130		
Acetone	**21.8**		µg/l		20.0		109	70-130		
Acrylonitrile	**21.2**		µg/l		20.0		106	70-130		
Benzene	**22.8**		µg/l		20.0		114	70-130		
Bromobenzene	**22.3**		µg/l		20.0		112	70-130		
Bromochloromethane	**22.1**		µg/l		20.0		111	70-130		
Bromodichloromethane	**22.0**		µg/l		20.0		110	70-130		
Bromoform	**23.1**		µg/l		20.0		116	70-130		
Bromomethane	**24.9**		µg/l		20.0		124	70-130		
2-Butanone (MEK)	**20.7**		µg/l		20.0		103	70-130		
n-Butylbenzene	**21.5**		µg/l		20.0		108	70-130		
sec-Butylbenzene	**22.0**		µg/l		20.0		110	70-130		
tert-Butylbenzene	**21.7**		µg/l		20.0		108	70-130		
Carbon disulfide	**23.6**		µg/l		20.0		118	70-130		
Carbon tetrachloride	**24.3**		µg/l		20.0		121	70-130		
Chlorobenzene	**22.0**		µg/l		20.0		110	70-130		
Chloroethane	**19.3**		µg/l		20.0		97	70-130		
Chloroform	**21.4**		µg/l		20.0		107	70-130		
Chloromethane	**20.2**		µg/l		20.0		101	70-130		
2-Chlorotoluene	**22.4**		µg/l		20.0		112	70-130		
4-Chlorotoluene	**23.2**		µg/l		20.0		116	70-130		
1,2-Dibromo-3-chloropropane	**23.2**		µg/l		20.0		116	70-130		
Dibromochloromethane	**22.8**		µg/l		20.0		114	70-130		
1,2-Dibromoethane (EDB)	**21.4**		µg/l		20.0		107	70-130		
Dibromomethane	**22.9**		µg/l		20.0		115	70-130		
1,2-Dichlorobenzene	**20.7**		µg/l		20.0		103	70-130		
1,3-Dichlorobenzene	**21.9**		µg/l		20.0		109	70-130		
1,4-Dichlorobenzene	**21.7**		µg/l		20.0		109	70-130		
Dichlorodifluoromethane (Freon12)	**22.9**		µg/l		20.0		115	70-130		
1,1-Dichloroethane	**22.5**		µg/l		20.0		112	70-130		
1,2-Dichloroethane	**22.0**		µg/l		20.0		110	70-130		
1,1-Dichloroethene	**22.5**		µg/l		20.0		113	70-130		
cis-1,2-Dichloroethene	**21.6**		µg/l		20.0		108	70-130		
trans-1,2-Dichloroethene	**21.7**		µg/l		20.0		108	70-130		
1,2-Dichloropropane	**23.0**		µg/l		20.0		115	70-130		
1,3-Dichloropropane	**22.8**		µg/l		20.0		114	70-130		
2,2-Dichloropropane	**28.5**	QC2	µg/l		20.0		142	70-130		
1,1-Dichloropropene	**22.3**		µg/l		20.0		111	70-130		
cis-1,3-Dichloropropene	**21.6**		µg/l		20.0		108	70-130		
trans-1,3-Dichloropropene	**22.6**		µg/l		20.0		113	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
LCS (1721131-BS1)					Prepared & Analyzed: 21-Dec-17					
Ethylbenzene	**23.5**		µg/l		20.0		118	70-130		
Hexachlorobutadiene	**24.2**		µg/l		20.0		121	70-130		
2-Hexanone (MBK)	**22.7**		µg/l		20.0		113	70-130		
Isopropylbenzene	**22.7**		µg/l		20.0		113	70-130		
4-Isopropyltoluene	**21.2**		µg/l		20.0		106	70-130		
Methyl tert-butyl ether	**22.7**		µg/l		20.0		114	70-130		
4-Methyl-2-pentanone (MIBK)	**23.7**		µg/l		20.0		118	70-130		
Methylene chloride	**21.0**		µg/l		20.0		105	70-130		
Naphthalene	**22.4**		µg/l		20.0		112	70-130		
n-Propylbenzene	**21.6**		µg/l		20.0		108	70-130		
Styrene	**20.8**		µg/l		20.0		104	70-130		
1,1,1,2-Tetrachloroethane	**22.3**		µg/l		20.0		111	70-130		
1,1,2,2-Tetrachloroethane	**24.1**		µg/l		20.0		120	70-130		
Tetrachloroethene	**22.2**		µg/l		20.0		111	70-130		
Toluene	**22.2**		µg/l		20.0		111	70-130		
1,2,3-Trichlorobenzene	**22.0**		µg/l		20.0		110	70-130		
1,2,4-Trichlorobenzene	**21.1**		µg/l		20.0		105	70-130		
1,3,5-Trichlorobenzene	**20.7**		µg/l		20.0		103	70-130		
1,1,1-Trichloroethane	**23.1**		µg/l		20.0		115	70-130		
1,1,2-Trichloroethane	**23.3**		µg/l		20.0		116	70-130		
Trichloroethene	**22.2**		µg/l		20.0		111	70-130		
Trichlorofluoromethane (Freon 11)	**23.6**		µg/l		20.0		118	70-130		
1,2,3-Trichloropropane	**23.6**		µg/l		20.0		118	70-130		
1,2,4-Trimethylbenzene	**21.0**		µg/l		20.0		105	70-130		
1,3,5-Trimethylbenzene	**21.4**		µg/l		20.0		107	70-130		
Vinyl chloride	**21.5**		µg/l		20.0		108	70-130		
m,p-Xylene	**23.4**		µg/l		20.0		117	70-130		
o-Xylene	**23.4**		µg/l		20.0		117	70-130		
Tetrahydrofuran	**22.6**		µg/l		20.0		113	70-130		
Ethyl ether	**21.5**		µg/l		20.0		108	70-130		
Tert-amyl methyl ether	**21.0**		µg/l		20.0		105	70-130		
Ethyl tert-butyl ether	**23.0**		µg/l		20.0		115	70-130		
Di-isopropyl ether	**22.2**		µg/l		20.0		111	70-130		
Tert-Butanol / butyl alcohol	**254**		µg/l		200		127	70-130		
1,4-Dioxane	**207**		µg/l		200		103	70-130		
trans-1,4-Dichloro-2-butene	**23.1**		µg/l		20.0		115	70-130		
Ethanol	**452**		µg/l		400		113	70-130		
Surrogate: 4-Bromofluorobenzene	*49.7*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*49.2*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.4*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*49.0*		µg/l		*50.0*		*98*	*70-130*		
LCS Dup (1721131-BSD1)					Prepared & Analyzed: 21-Dec-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**22.0**		µg/l		20.0		110	70-130	5	20
Acetone	**20.6**		µg/l		20.0		103	70-130	6	20
Acrylonitrile	**20.2**		µg/l		20.0		101	70-130	5	20
Benzene	**22.0**		µg/l		20.0		110	70-130	4	20
Bromobenzene	**21.7**		µg/l		20.0		108	70-130	3	20
Bromochloromethane	**21.1**		µg/l		20.0		106	70-130	5	20
Bromodichloromethane	**21.4**		µg/l		20.0		107	70-130	3	20
Bromoform	**22.7**		µg/l		20.0		114	70-130	2	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
LCS Dup (1721131-BSD1)					Prepared & Analyzed: 21-Dec-17					
Bromomethane	**23.4**		µg/l		20.0		117	70-130	6	20
2-Butanone (MEK)	**21.3**		µg/l		20.0		106	70-130	3	20
n-Butylbenzene	**20.7**		µg/l		20.0		104	70-130	4	20
sec-Butylbenzene	**21.2**		µg/l		20.0		106	70-130	4	20
tert-Butylbenzene	**21.1**		µg/l		20.0		106	70-130	3	20
Carbon disulfide	**21.2**		µg/l		20.0		106	70-130	11	20
Carbon tetrachloride	**23.2**		µg/l		20.0		116	70-130	4	20
Chlorobenzene	**20.9**		µg/l		20.0		104	70-130	5	20
Chloroethane	**19.4**		µg/l		20.0		97	70-130	0.7	20
Chloroform	**20.5**		µg/l		20.0		102	70-130	4	20
Chloromethane	**19.5**		µg/l		20.0		98	70-130	4	20
2-Chlorotoluene	**21.8**		µg/l		20.0		109	70-130	3	20
4-Chlorotoluene	**21.7**		µg/l		20.0		108	70-130	7	20
1,2-Dibromo-3-chloropropane	**23.0**		µg/l		20.0		115	70-130	0.7	20
Dibromochloromethane	**22.1**		µg/l		20.0		110	70-130	3	20
1,2-Dibromoethane (EDB)	**21.0**		µg/l		20.0		105	70-130	1	20
Dibromomethane	**22.0**		µg/l		20.0		110	70-130	4	20
1,2-Dichlorobenzene	**19.8**		µg/l		20.0		99	70-130	4	20
1,3-Dichlorobenzene	**21.0**		µg/l		20.0		105	70-130	4	20
1,4-Dichlorobenzene	**20.4**		µg/l		20.0		102	70-130	6	20
Dichlorodifluoromethane (Freon12)	**21.6**		µg/l		20.0		108	70-130	6	20
1,1-Dichloroethane	**21.6**		µg/l		20.0		108	70-130	4	20
1,2-Dichloroethane	**21.2**		µg/l		20.0		106	70-130	4	20
1,1-Dichloroethene	**21.8**		µg/l		20.0		109	70-130	3	20
cis-1,2-Dichloroethene	**21.2**		µg/l		20.0		106	70-130	1	20
trans-1,2-Dichloroethene	**20.4**		µg/l		20.0		102	70-130	6	20
1,2-Dichloropropane	**21.2**		µg/l		20.0		106	70-130	8	20
1,3-Dichloropropane	**22.4**		µg/l		20.0		112	70-130	2	20
2,2-Dichloropropane	**26.5**	QC2	µg/l		20.0		132	70-130	7	20
1,1-Dichloropropene	**21.0**		µg/l		20.0		105	70-130	6	20
cis-1,3-Dichloropropene	**20.9**		µg/l		20.0		105	70-130	3	20
trans-1,3-Dichloropropene	**22.0**		µg/l		20.0		110	70-130	3	20
Ethylbenzene	**22.4**		µg/l		20.0		112	70-130	5	20
Hexachlorobutadiene	**22.5**		µg/l		20.0		112	70-130	7	20
2-Hexanone (MBK)	**23.2**		µg/l		20.0		116	70-130	2	20
Isopropylbenzene	**21.7**		µg/l		20.0		108	70-130	5	20
4-Isopropyltoluene	**20.4**		µg/l		20.0		102	70-130	4	20
Methyl tert-butyl ether	**22.3**		µg/l		20.0		112	70-130	2	20
4-Methyl-2-pentanone (MIBK)	**22.0**		µg/l		20.0		110	70-130	7	20
Methylene chloride	**21.0**		µg/l		20.0		105	70-130	0	20
Naphthalene	**21.9**		µg/l		20.0		109	70-130	3	20
n-Propylbenzene	**20.3**		µg/l		20.0		102	70-130	6	20
Styrene	**19.3**		µg/l		20.0		96	70-130	8	20
1,1,1,2-Tetrachloroethane	**21.4**		µg/l		20.0		107	70-130	4	20
1,1,2,2-Tetrachloroethane	**23.6**		µg/l		20.0		118	70-130	2	20
Tetrachloroethene	**21.3**		µg/l		20.0		107	70-130	4	20
Toluene	**21.0**		µg/l		20.0		105	70-130	6	20
1,2,3-Trichlorobenzene	**21.3**		µg/l		20.0		107	70-130	3	20
1,2,4-Trichlorobenzene	**20.2**		µg/l		20.0		101	70-130	4	20
1,3,5-Trichlorobenzene	**20.0**		µg/l		20.0		100	70-130	3	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
LCS Dup (1721131-BSD1)					Prepared & Analyzed: 21-Dec-17					
1,1,1-Trichloroethane	**21.8**		µg/l		20.0		109	70-130	6	20
1,1,2-Trichloroethane	**22.9**		µg/l		20.0		115	70-130	2	20
Trichloroethene	**20.8**		µg/l		20.0		104	70-130	6	20
Trichlorofluoromethane (Freon 11)	**21.9**		µg/l		20.0		109	70-130	7	20
1,2,3-Trichloropropane	**23.2**		µg/l		20.0		116	70-130	2	20
1,2,4-Trimethylbenzene	**19.9**		µg/l		20.0		100	70-130	6	20
1,3,5-Trimethylbenzene	**20.0**		µg/l		20.0		100	70-130	6	20
Vinyl chloride	**20.2**		µg/l		20.0		101	70-130	6	20
m,p-Xylene	**21.8**		µg/l		20.0		109	70-130	7	20
o-Xylene	**21.9**		µg/l		20.0		110	70-130	7	20
Tetrahydrofuran	**22.2**		µg/l		20.0		111	70-130	2	20
Ethyl ether	**21.3**		µg/l		20.0		106	70-130	1	20
Tert-amyl methyl ether	**21.0**		µg/l		20.0		105	70-130	0.1	20
Ethyl tert-butyl ether	**22.6**		µg/l		20.0		113	70-130	2	20
Di-isopropyl ether	**22.0**		µg/l		20.0		110	70-130	0.7	20
Tert-Butanol / butyl alcohol	**239**		µg/l		200		119	70-130	6	20
1,4-Dioxane	**214**		µg/l		200		107	70-130	3	20
trans-1,4-Dichloro-2-butene	**23.3**		µg/l		20.0		116	70-130	0.9	20
Ethanol	**434**		µg/l		400		109	70-130	4	20
Surrogate: 4-Bromofluorobenzene	*50.8*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Toluene-d8	*50.4*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50.8*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*49.7*		µg/l		*50.0*		*99*	*70-130*		
Matrix Spike (1721131-MS1)			**Source: SC42529-01**		Prepared & Analyzed: 21-Dec-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**21.8**	D	µg/l		20.0	0.00	109	70-130		
Acetone	**20.7**	D	µg/l		20.0	1.36	97	70-130		
Acrylonitrile	**20.6**	D	µg/l		20.0	0.00	103	70-130		
Benzene	**23.0**	D	µg/l		20.0	0.00	115	70-130		
Bromobenzene	**23.0**	D	µg/l		20.0	0.00	115	70-130		
Bromochloromethane	**22.0**	D	µg/l		20.0	0.00	110	70-130		
Bromodichloromethane	**20.0**	D	µg/l		20.0	0.00	100	70-130		
Bromoform	**18.9**	D	µg/l		20.0	0.00	95	70-130		
Bromomethane	**18.5**	D	µg/l		20.0	0.00	92	70-130		
2-Butanone (MEK)	**20.0**	D	µg/l		20.0	0.00	100	70-130		
n-Butylbenzene	**21.1**	D	µg/l		20.0	0.00	105	70-130		
sec-Butylbenzene	**21.8**	D	µg/l		20.0	0.00	109	70-130		
tert-Butylbenzene	**21.7**	D	µg/l		20.0	0.00	108	70-130		
Carbon disulfide	**22.1**	D	µg/l		20.0	0.00	111	70-130		
Carbon tetrachloride	**17.7**	D	µg/l		20.0	0.00	88	70-130		
Chlorobenzene	**22.6**	D	µg/l		20.0	0.00	113	70-130		
Chloroethane	**19.9**	D	µg/l		20.0	0.00	100	70-130		
Chloroform	**21.9**	D	µg/l		20.0	0.00	109	70-130		
Chloromethane	**21.2**	D	µg/l		20.0	0.00	106	70-130		
2-Chlorotoluene	**23.0**	D	µg/l		20.0	0.00	115	70-130		
4-Chlorotoluene	**23.8**	D	µg/l		20.0	0.00	119	70-130		
1,2-Dibromo-3-chloropropane	**16.7**	D	µg/l		20.0	0.00	84	70-130		
Dibromochloromethane	**19.0**	D	µg/l		20.0	0.00	95	70-130		
1,2-Dibromoethane (EDB)	**19.9**	D	µg/l		20.0	0.00	99	70-130		
Dibromomethane	**23.2**	D	µg/l		20.0	0.00	116	70-130		
1,2-Dichlorobenzene	**20.8**	D	µg/l		20.0	0.00	104	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
Matrix Spike (1721131-MS1)			**Source: SC42529-01**		Prepared & Analyzed: 21-Dec-17					
1,3-Dichlorobenzene	**22.9**	D	µg/l		20.0	0.00	114	70-130		
1,4-Dichlorobenzene	**22.0**	D	µg/l		20.0	0.00	110	70-130		
Dichlorodifluoromethane (Freon12)	**21.0**	D	µg/l		20.0	0.00	105	70-130		
1,1-Dichloroethane	**23.6**	D	µg/l		20.0	0.00	118	70-130		
1,2-Dichloroethane	**22.5**	D	µg/l		20.0	0.00	112	70-130		
1,1-Dichloroethene	**22.9**	D	µg/l		20.0	0.00	115	70-130		
cis-1,2-Dichloroethene	**22.9**	D	µg/l		20.0	0.00	114	70-130		
trans-1,2-Dichloroethene	**21.8**	D	µg/l		20.0	0.00	109	70-130		
1,2-Dichloropropane	**22.4**	D	µg/l		20.0	0.00	112	70-130		
1,3-Dichloropropane	**23.7**	D	µg/l		20.0	0.00	118	70-130		
2,2-Dichloropropane	**22.6**	D	µg/l		20.0	0.00	113	70-130		
1,1-Dichloropropene	**20.9**	D	µg/l		20.0	0.00	104	70-130		
cis-1,3-Dichloropropene	**19.6**	D	µg/l		20.0	0.00	98	70-130		
trans-1,3-Dichloropropene	**19.4**	D	µg/l		20.0	0.00	97	70-130		
Ethylbenzene	**23.2**	D	µg/l		20.0	0.00	116	70-130		
Hexachlorobutadiene	**22.6**	D	µg/l		20.0	0.00	113	70-130		
2-Hexanone (MBK)	**21.6**	D	µg/l		20.0	0.00	108	70-130		
Isopropylbenzene	**22.7**	D	µg/l		20.0	0.00	114	70-130		
4-Isopropyltoluene	**20.5**	D	µg/l		20.0	0.00	102	70-130		
Methyl tert-butyl ether	**22.6**	D	µg/l		20.0	0.00	113	70-130		
4-Methyl-2-pentanone (MIBK)	**20.3**	D	µg/l		20.0	0.00	101	70-130		
Methylene chloride	**22.7**	D	µg/l		20.0	0.00	114	70-130		
Naphthalene	**20.2**	D	µg/l		20.0	0.00	101	70-130		
n-Propylbenzene	**21.7**	D	µg/l		20.0	0.00	108	70-130		
Styrene	**21.2**	D	µg/l		20.0	0.00	106	70-130		
1,1,1,2-Tetrachloroethane	**18.3**	D	µg/l		20.0	0.00	91	70-130		
1,1,2,2-Tetrachloroethane	**23.2**	D	µg/l		20.0	0.00	116	70-130		
Tetrachloroethene	**21.7**	D	µg/l		20.0	0.00	108	70-130		
Toluene	**22.4**	D	µg/l		20.0	0.00	112	70-130		
1,2,3-Trichlorobenzene	**20.6**	D	µg/l		20.0	0.00	103	70-130		
1,2,4-Trichlorobenzene	**20.0**	D	µg/l		20.0	0.00	100	70-130		
1,3,5-Trichlorobenzene	**20.4**	D	µg/l		20.0	0.00	102	70-130		
1,1,1-Trichloroethane	**19.4**	D	µg/l		20.0	0.00	97	70-130		
1,1,2-Trichloroethane	**23.1**	D	µg/l		20.0	0.00	115	70-130		
Trichloroethene	**21.8**	D	µg/l		20.0	0.00	109	70-130		
Trichlorofluoromethane (Freon 11)	**21.7**	D	µg/l		20.0	0.00	108	70-130		
1,2,3-Trichloropropane	**22.6**	D	µg/l		20.0	0.00	113	70-130		
1,2,4-Trimethylbenzene	**21.6**	D	µg/l		20.0	0.00	108	70-130		
1,3,5-Trimethylbenzene	**21.3**	D	µg/l		20.0	0.00	107	70-130		
Vinyl chloride	**22.3**	D	µg/l		20.0	0.00	111	70-130		
m,p-Xylene	**23.0**	D	µg/l		20.0	0.00	115	70-130		
o-Xylene	**23.7**	D	µg/l		20.0	0.00	119	70-130		
Tetrahydrofuran	**21.3**	D	µg/l		20.0	0.00	106	70-130		
Ethyl ether	**22.1**	D	µg/l		20.0	0.00	111	70-130		
Tert-amyl methyl ether	**19.3**	D	µg/l		20.0	0.00	97	70-130		
Ethyl tert-butyl ether	**21.5**	D	µg/l		20.0	0.00	107	70-130		
Di-isopropyl ether	**23.2**	D	µg/l		20.0	0.00	116	70-130		
Tert-Butanol / butyl alcohol	**171**	D	µg/l		200	0.00	86	70-130		
1,4-Dioxane	**155**	D	µg/l		200	0.00	78	70-130		
trans-1,4-Dichloro-2-butene	**16.9**	D	µg/l		20.0	0.00	84	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
Matrix Spike (1721131-MS1)			**Source: SC42529-01**		Prepared & Analyzed: 21-Dec-17					
Ethanol	**367**	D	µg/l		400	0.00	92	70-130		
Surrogate: 4-Bromofluorobenzene	*49.7*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*50.2*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.6*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*49.2*		µg/l		*50.0*		*98*	*70-130*		
Matrix Spike Dup (1721131-MSD1)		Z-2	**Source: SC42529-01**		Prepared & Analyzed: 21-Dec-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**21.0**	D	µg/l		20.0	0.00	105	70-130	4	20
Acetone	**23.5**	D	µg/l		20.0	1.36	111	70-130	13	20
Acrylonitrile	**22.0**	D	µg/l		20.0	0.00	110	70-130	6	20
Benzene	**22.5**	D	µg/l		20.0	0.00	112	70-130	2	20
Bromobenzene	**21.9**	D	µg/l		20.0	0.00	110	70-130	5	20
Bromochloromethane	**22.0**	D	µg/l		20.0	0.00	110	70-130	0.05	20
Bromodichloromethane	**19.7**	D	µg/l		20.0	0.00	98	70-130	2	20
Bromoform	**19.9**	D	µg/l		20.0	0.00	100	70-130	5	20
Bromomethane	**21.3**	D	µg/l		20.0	0.00	107	70-130	14	20
2-Butanone (MEK)	**22.9**	D	µg/l		20.0	0.00	115	70-130	14	20
n-Butylbenzene	**19.9**	D	µg/l		20.0	0.00	99	70-130	6	20
sec-Butylbenzene	**20.7**	D	µg/l		20.0	0.00	103	70-130	5	20
tert-Butylbenzene	**20.3**	D	µg/l		20.0	0.00	101	70-130	7	20
Carbon disulfide	**21.0**	D	µg/l		20.0	0.00	105	70-130	5	20
Carbon tetrachloride	**18.8**	D	µg/l		20.0	0.00	94	70-130	6	20
Chlorobenzene	**21.6**	D	µg/l		20.0	0.00	108	70-130	4	20
Chloroethane	**18.4**	D	µg/l		20.0	0.00	92	70-130	8	20
Chloroform	**21.1**	D	µg/l		20.0	0.00	105	70-130	4	20
Chloromethane	**19.4**	D	µg/l		20.0	0.00	97	70-130	9	20
2-Chlorotoluene	**21.6**	D	µg/l		20.0	0.00	108	70-130	6	20
4-Chlorotoluene	**22.2**	D	µg/l		20.0	0.00	111	70-130	7	20
1,2-Dibromo-3-chloropropane	**18.7**	D	µg/l		20.0	0.00	94	70-130	11	20
Dibromochloromethane	**19.7**	D	µg/l		20.0	0.00	98	70-130	4	20
1,2-Dibromoethane (EDB)	**20.8**	D	µg/l		20.0	0.00	104	70-130	4	20
Dibromomethane	**22.3**	D	µg/l		20.0	0.00	111	70-130	4	20
1,2-Dichlorobenzene	**20.1**	D	µg/l		20.0	0.00	100	70-130	4	20
1,3-Dichlorobenzene	**21.6**	D	µg/l		20.0	0.00	108	70-130	5	20
1,4-Dichlorobenzene	**20.9**	D	µg/l		20.0	0.00	104	70-130	5	20
Dichlorodifluoromethane (Freon12)	**19.6**	D	µg/l		20.0	0.00	98	70-130	7	20
1,1-Dichloroethane	**22.0**	D	µg/l		20.0	0.00	110	70-130	7	20
1,2-Dichloroethane	**22.0**	D	µg/l		20.0	0.00	110	70-130	2	20
1,1-Dichloroethene	**20.8**	D	µg/l		20.0	0.00	104	70-130	10	20
cis-1,2-Dichloroethene	**21.9**	D	µg/l		20.0	0.00	109	70-130	5	20
trans-1,2-Dichloroethene	**22.0**	D	µg/l		20.0	0.00	110	70-130	0.6	20
1,2-Dichloropropane	**22.1**	D	µg/l		20.0	0.00	111	70-130	1	20
1,3-Dichloropropane	**23.0**	D	µg/l		20.0	0.00	115	70-130	3	20
2,2-Dichloropropane	**22.5**	D	µg/l		20.0	0.00	113	70-130	0.6	20
1,1-Dichloropropene	**20.0**	D	µg/l		20.0	0.00	100	70-130	4	20
cis-1,3-Dichloropropene	**19.7**	D	µg/l		20.0	0.00	98	70-130	0.3	20
trans-1,3-Dichloropropene	**19.6**	D	µg/l		20.0	0.00	98	70-130	0.7	20
Ethylbenzene	**22.6**	D	µg/l		20.0	0.00	113	70-130	3	20
Hexachlorobutadiene	**21.3**	D	µg/l		20.0	0.00	106	70-130	6	20
2-Hexanone (MBK)	**23.4**	D	µg/l		20.0	0.00	117	70-130	8	20
Isopropylbenzene	**21.8**	D	µg/l		20.0	0.00	109	70-130	4	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1721131 - SW846 5030 Water MS										
Matrix Spike Dup (1721131-MSD1)		Z-2	**Source: SC42529-01**		Prepared & Analyzed: 21-Dec-17					
4-Isopropyltoluene	**19.8**	D	µg/l		20.0	0.00	99	70-130	3	20
Methyl tert-butyl ether	**22.8**	D	µg/l		20.0	0.00	114	70-130	1	20
4-Methyl-2-pentanone (MIBK)	**23.1**	D	µg/l		20.0	0.00	116	70-130	13	20
Methylene chloride	**21.6**	D	µg/l		20.0	0.00	108	70-130	5	20
Naphthalene	**21.4**	D	µg/l		20.0	0.00	107	70-130	6	20
n-Propylbenzene	**20.4**	D	µg/l		20.0	0.00	102	70-130	6	20
Styrene	**20.6**	D	µg/l		20.0	0.00	103	70-130	3	20
1,1,1,2-Tetrachloroethane	**19.1**	D	µg/l		20.0	0.00	95	70-130	4	20
1,1,2,2-Tetrachloroethane	**23.6**	D	µg/l		20.0	0.00	118	70-130	2	20
Tetrachloroethene	**20.4**	D	µg/l		20.0	0.00	102	70-130	6	20
Toluene	**21.5**	D	µg/l		20.0	0.00	108	70-130	4	20
1,2,3-Trichlorobenzene	**20.3**	D	µg/l		20.0	0.00	101	70-130	1	20
1,2,4-Trichlorobenzene	**19.5**	D	µg/l		20.0	0.00	98	70-130	2	20
1,3,5-Trichlorobenzene	**19.8**	D	µg/l		20.0	0.00	99	70-130	3	20
1,1,1-Trichloroethane	**19.6**	D	µg/l		20.0	0.00	98	70-130	0.7	20
1,1,2-Trichloroethane	**23.0**	D	µg/l		20.0	0.00	115	70-130	0.3	20
Trichloroethene	**21.4**	D	µg/l		20.0	0.00	107	70-130	1	20
Trichlorofluoromethane (Freon 11)	**20.9**	D	µg/l		20.0	0.00	105	70-130	3	20
1,2,3-Trichloropropane	**23.2**	D	µg/l		20.0	0.00	116	70-130	3	20
1,2,4-Trimethylbenzene	**20.5**	D	µg/l		20.0	0.00	102	70-130	5	20
1,3,5-Trimethylbenzene	**20.3**	D	µg/l		20.0	0.00	102	70-130	5	20
Vinyl chloride	**20.0**	D	µg/l		20.0	0.00	100	70-130	11	20
m,p-Xylene	**22.1**	D	µg/l		20.0	0.00	110	70-130	4	20
o-Xylene	**22.7**	D	µg/l		20.0	0.00	113	70-130	5	20
Tetrahydrofuran	**22.0**	D	µg/l		20.0	0.00	110	70-130	3	20
Ethyl ether	**22.0**	D	µg/l		20.0	0.00	110	70-130	0.6	20
Tert-amyl methyl ether	**19.5**	D	µg/l		20.0	0.00	97	70-130	0.9	20
Ethyl tert-butyl ether	**21.7**	D	µg/l		20.0	0.00	109	70-130	1	20
Di-isopropyl ether	**22.1**	D	µg/l		20.0	0.00	111	70-130	5	20
Tert-Butanol / butyl alcohol	**246**	QR2, D	µg/l		200	0.00	123	70-130	36	20
1,4-Dioxane	**157**	D	µg/l		200	0.00	79	70-130	1	20
trans-1,4-Dichloro-2-butene	**18.1**	D	µg/l		20.0	0.00	90	70-130	7	20
Ethanol	**411**	D	µg/l		400	0.00	103	70-130	11	20
Surrogate: 4-Bromofluorobenzene	*50.6*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: Toluene-d8	*50.7*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.1*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*50.0*		µg/l		*50.0*		*100*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1721033 - SW846 3510C										
Blank (1721033-BLK1)					Prepared: 20-Dec-17 Analyzed: 21-Dec-17					
Acenaphthene	< 5.21		µg/l	5.21						
Acenaphthylene	< 5.21		µg/l	5.21						
Aniline	< 5.21		µg/l	5.21						
Anthracene	< 5.21		µg/l	5.21						
Azobenzene/Diphenyldiazene	< 5.21		µg/l	5.21						
Benzidine	< 5.21		µg/l	5.21						
Benzo (a) anthracene	< 5.21		µg/l	5.21						
Benzo (a) pyrene	< 5.21		µg/l	5.21						
Benzo (b) fluoranthene	< 5.21		µg/l	5.21						
Benzo (g,h,i) perylene	< 5.21		µg/l	5.21						
Benzo (k) fluoranthene	< 5.21		µg/l	5.21						
Benzoic acid	< 5.21		µg/l	5.21						
Benzyl alcohol	< 5.21		µg/l	5.21						
Bis(2-chloroethoxy)methane	< 5.21		µg/l	5.21						
Bis(2-chloroethyl)ether	< 5.21		µg/l	5.21						
Bis(2-chloroisopropyl)ether	< 5.21		µg/l	5.21						
Bis(2-ethylhexyl)phthalate	< 5.21		µg/l	5.21						
4-Bromophenyl phenyl ether	< 5.21		µg/l	5.21						
Butyl benzyl phthalate	< 5.21		µg/l	5.21						
Carbazole	< 5.21		µg/l	5.21						
4-Chloro-3-methylphenol	< 5.21		µg/l	5.21						
4-Chloroaniline	< 5.21		µg/l	5.21						
2-Chloronaphthalene	< 5.21		µg/l	5.21						
2-Chlorophenol	< 5.21		µg/l	5.21						
4-Chlorophenyl phenyl ether	< 5.21		µg/l	5.21						
Chrysene	< 5.21		µg/l	5.21						
Dibenzo (a,h) anthracene	< 5.21		µg/l	5.21						
Dibenzofuran	< 5.21		µg/l	5.21						
1,2-Dichlorobenzene	< 5.21		µg/l	5.21						
1,3-Dichlorobenzene	< 5.21		µg/l	5.21						
1,4-Dichlorobenzene	< 5.21		µg/l	5.21						
3,3´-Dichlorobenzidine	< 5.21		µg/l	5.21						
2,4-Dichlorophenol	< 5.21		µg/l	5.21						
Diethyl phthalate	< 5.21		µg/l	5.21						
Dimethyl phthalate	< 5.21		µg/l	5.21						
2,4-Dimethylphenol	< 5.21		µg/l	5.21						
Di-n-butyl phthalate	< 5.21		µg/l	5.21						
4,6-Dinitro-2-methylphenol	< 5.21		µg/l	5.21						
2,4-Dinitrophenol	< 5.21		µg/l	5.21						
2,4-Dinitrotoluene	< 5.21		µg/l	5.21						
2,6-Dinitrotoluene	< 5.21		µg/l	5.21						
Di-n-octyl phthalate	< 5.21		µg/l	5.21						
Fluoranthene	< 5.21		µg/l	5.21						
Fluorene	< 5.21		µg/l	5.21						
Hexachlorobenzene	< 5.21		µg/l	5.21						
Hexachlorobutadiene	< 5.21		µg/l	5.21						
Hexachlorocyclopentadiene	< 5.21		µg/l	5.21						
Hexachloroethane	< 5.21		µg/l	5.21						
Indeno (1,2,3-cd) pyrene	< 5.21		µg/l	5.21						
Isophorone	< 5.21		µg/l	5.21						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1721033 - SW846 3510C										
Blank (1721033-BLK1)						Prepared: 20-Dec-17 Analyzed: 21-Dec-17				
2-Methylnaphthalene	< 5.21		µg/l	5.21						
2-Methylphenol	< 5.21		µg/l	5.21						
3 & 4-Methylphenol	< 10.4		µg/l	10.4						
Naphthalene	< 5.21		µg/l	5.21						
2-Nitroaniline	< 5.21		µg/l	5.21						
3-Nitroaniline	< 5.21		µg/l	5.21						
4-Nitroaniline	< 5.21		µg/l	5.21						
Nitrobenzene	< 5.21		µg/l	5.21						
2-Nitrophenol	< 5.21		µg/l	5.21						
4-Nitrophenol	< 20.8		µg/l	20.8						
N-Nitrosodimethylamine	< 5.21		µg/l	5.21						
N-Nitrosodi-n-propylamine	< 5.21		µg/l	5.21						
N-Nitrosodiphenylamine	< 5.21		µg/l	5.21						
Pentachlorophenol	< 20.8		µg/l	20.8						
Phenanthrene	< 5.21		µg/l	5.21						
Phenol	< 5.21		µg/l	5.21						
Pyrene	< 5.21		µg/l	5.21						
Pyridine	< 5.21		µg/l	5.21						
1,2,4-Trichlorobenzene	< 5.21		µg/l	5.21						
1-Methylnaphthalene	< 5.21		µg/l	5.21						
2,4,5-Trichlorophenol	< 5.21		µg/l	5.21						
2,4,6-Trichlorophenol	< 5.21		µg/l	5.21						
Pentachloronitrobenzene	< 5.21		µg/l	5.21						
1,2,4,5-Tetrachlorobenzene	< 5.21		µg/l	5.21						
Surrogate: 2-Fluorobiphenyl	*26.1*		µg/l		*52.1*		*50*	*30-130*		
Surrogate: 2-Fluorophenol	*23.0*		µg/l		*52.1*		*44*	*15-110*		
Surrogate: Nitrobenzene-d5	*25.0*		µg/l		*52.1*		*48*	*30-130*		
Surrogate: Phenol-d5	*17.2*		µg/l		*52.1*		*33*	*15-110*		
Surrogate: Terphenyl-dl4	*38.6*		µg/l		*52.1*		*74*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*32.6*		µg/l		*52.1*		*63*	*15-110*		
LCS (1721033-BS1)						Prepared: 20-Dec-17 Analyzed: 21-Dec-17				
Acenaphthene	**23.6**		µg/l	5.00	50.0		47	40-140		
Acenaphthylene	**23.4**		µg/l	5.00	50.0		47	40-140		
Aniline	**20.0**		µg/l	5.00	50.0		40	40-140		
Anthracene	**29.2**		µg/l	5.00	50.0		58	40-140		
Azobenzene/Diphenyldiazene	**26.0**		µg/l	5.00	50.0		52	40-140		
Benzidine	**32.3**		µg/l	5.00	50.0		65	40-140		
Benzo (a) anthracene	**31.4**		µg/l	5.00	50.0		63	40-140		
Benzo (a) pyrene	**29.6**		µg/l	5.00	50.0		59	40-140		
Benzo (b) fluoranthene	**31.6**		µg/l	5.00	50.0		63	40-140		
Benzo (g,h,i) perylene	**28.2**		µg/l	5.00	50.0		56	40-140		
Benzo (k) fluoranthene	**31.2**		µg/l	5.00	50.0		62	40-140		
Benzoic acid	**15.8**		µg/l	5.00	50.0		32	30-130		
Benzyl alcohol	**26.4**		µg/l	5.00	50.0		53	40-140		
Bis(2-chloroethoxy)methane	**19.7**	QC2	µg/l	5.00	50.0		39	40-140		
Bis(2-chloroethyl)ether	**19.7**	QC2	µg/l	5.00	50.0		39	40-140		
Bis(2-chloroisopropyl)ether	**19.7**	QC2	µg/l	5.00	50.0		39	40-140		
Bis(2-ethylhexyl)phthalate	**31.3**		µg/l	5.00	50.0		63	40-140		
4-Bromophenyl phenyl ether	**28.6**		µg/l	5.00	50.0		57	40-140		
Butyl benzyl phthalate	**28.9**		µg/l	5.00	50.0		58	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1721033 - SW846 3510C										
LCS (1721033-BS1)						Prepared: 20-Dec-17 Analyzed: 21-Dec-17				
Carbazole	**35.0**		µg/l	5.00	50.0		70	40-140		
4-Chloro-3-methylphenol	**27.1**		µg/l	5.00	50.0		54	30-130		
4-Chloroaniline	**19.8**		µg/l	5.00	50.0		40	40-140		
2-Chloronaphthalene	**25.5**		µg/l	5.00	50.0		51	40-140		
2-Chlorophenol	**22.6**		µg/l	5.00	50.0		45	30-130		
4-Chlorophenyl phenyl ether	**26.3**		µg/l	5.00	50.0		53	40-140		
Chrysene	**29.2**		µg/l	5.00	50.0		58	40-140		
Dibenzo (a,h) anthracene	**30.2**		µg/l	5.00	50.0		60	40-140		
Dibenzofuran	**27.6**		µg/l	5.00	50.0		55	40-140		
1,2-Dichlorobenzene	**23.0**		µg/l	5.00	50.0		46	40-140		
1,3-Dichlorobenzene	**22.5**		µg/l	5.00	50.0		45	40-140		
1,4-Dichlorobenzene	**22.6**		µg/l	5.00	50.0		45	40-140		
3,3´-Dichlorobenzidine	**34.2**		µg/l	5.00	50.0		68	40-140		
2,4-Dichlorophenol	**23.6**		µg/l	5.00	50.0		47	30-130		
Diethyl phthalate	**29.4**		µg/l	5.00	50.0		59	40-140		
Dimethyl phthalate	**26.5**		µg/l	5.00	50.0		53	40-140		
2,4-Dimethylphenol	**22.8**		µg/l	5.00	50.0		46	30-130		
Di-n-butyl phthalate	**30.2**		µg/l	5.00	50.0		60	40-140		
4,6-Dinitro-2-methylphenol	**26.7**		µg/l	5.00	50.0		53	30-130		
2,4-Dinitrophenol	**20.6**		µg/l	5.00	50.0		41	30-130		
2,4-Dinitrotoluene	**35.6**		µg/l	5.00	50.0		71	40-140		
2,6-Dinitrotoluene	**34.0**		µg/l	5.00	50.0		68	40-140		
Di-n-octyl phthalate	**30.6**		µg/l	5.00	50.0		61	40-140		
Fluoranthene	**30.7**		µg/l	5.00	50.0		61	40-140		
Fluorene	**25.2**		µg/l	5.00	50.0		50	40-140		
Hexachlorobenzene	**32.8**		µg/l	5.00	50.0		66	40-140		
Hexachlorobutadiene	**22.6**		µg/l	5.00	50.0		45	40-140		
Hexachlorocyclopentadiene	**24.2**		µg/l	5.00	50.0		48	40-140		
Hexachloroethane	**23.5**		µg/l	5.00	50.0		47	40-140		
Indeno (1,2,3-cd) pyrene	**29.3**		µg/l	5.00	50.0		59	40-140		
Isophorone	**22.9**		µg/l	5.00	50.0		46	40-140		
2-Methylnaphthalene	**25.7**		µg/l	5.00	50.0		51	40-140		
2-Methylphenol	**22.5**		µg/l	5.00	50.0		45	30-130		
3 & 4-Methylphenol	**21.7**		µg/l	10.0	50.0		43	30-130		
Naphthalene	**20.9**		µg/l	5.00	50.0		42	40-140		
2-Nitroaniline	**28.1**		µg/l	5.00	50.0		56	40-140		
3-Nitroaniline	**27.1**		µg/l	5.00	50.0		54	40-140		
4-Nitroaniline	**32.6**		µg/l	5.00	50.0		65	40-140		
Nitrobenzene	**23.4**		µg/l	5.00	50.0		47	40-140		
2-Nitrophenol	**21.7**		µg/l	5.00	50.0		43	30-130		
4-Nitrophenol	**18.2**		µg/l	20.0	50.0		36	30-130		
N-Nitrosodimethylamine	**19.9**		µg/l	5.00	50.0		40	40-140		
N-Nitrosodi-n-propylamine	**24.1**		µg/l	5.00	50.0		48	40-140		
N-Nitrosodiphenylamine	**29.4**		µg/l	5.00	50.0		59	40-140		
Pentachlorophenol	**27.6**		µg/l	20.0	50.0		55	30-130		
Phenanthrene	**27.6**		µg/l	5.00	50.0		55	40-140		
Phenol	**12.2**	QC2	µg/l	5.00	50.0		24	30-130		
Pyrene	**28.4**		µg/l	5.00	50.0		57	40-140		
Pyridine	**19.3**	QC2	µg/l	5.00	50.0		39	40-140		
1,2,4-Trichlorobenzene	**23.8**		µg/l	5.00	50.0		48	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1721033 - SW846 3510C										
LCS (1721033-BS1)					Prepared: 20-Dec-17 Analyzed: 21-Dec-17					
1-Methylnaphthalene	**21.3**		µg/l	5.00	50.0		43	40-140		
2,4,5-Trichlorophenol	**27.9**		µg/l	5.00	50.0		56	30-130		
2,4,6-Trichlorophenol	**24.0**		µg/l	5.00	50.0		48	30-130		
Pentachloronitrobenzene	**30.2**		µg/l	5.00	50.0		60	40-140		
1,2,4,5-Tetrachlorobenzene	**21.1**		µg/l	5.00	50.0		42	40-140		
Surrogate: 2-Fluorobiphenyl	*31.2*		µg/l		*50.0*		*62*	*30-130*		
Surrogate: 2-Fluorophenol	*28.4*		µg/l		*50.0*		*57*	*15-110*		
Surrogate: Nitrobenzene-d5	*29.7*		µg/l		*50.0*		*59*	*30-130*		
Surrogate: Phenol-d5	*23.7*		µg/l		*50.0*		*47*	*15-110*		
Surrogate: Terphenyl-dl4	*40.3*		µg/l		*50.0*		*81*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*44.0*		µg/l		*50.0*		*88*	*15-110*		
LCS Dup (1721033-BSD1)					Prepared: 20-Dec-17 Analyzed: 21-Dec-17					
Acenaphthene	**22.9**		µg/l	5.00	50.0		46	40-140	3	20
Acenaphthylene	**22.4**		µg/l	5.00	50.0		45	40-140	5	20
Aniline	**20.2**		µg/l	5.00	50.0		40	40-140	1	20
Anthracene	**28.2**		µg/l	5.00	50.0		56	40-140	4	20
Azobenzene/Diphenyldiazene	**24.7**		µg/l	5.00	50.0		49	40-140	5	20
Benzidine	**35.5**		µg/l	5.00	50.0		71	40-140	10	20
Benzo (a) anthracene	**29.9**		µg/l	5.00	50.0		60	40-140	5	20
Benzo (a) pyrene	**28.2**		µg/l	5.00	50.0		56	40-140	5	20
Benzo (b) fluoranthene	**28.1**		µg/l	5.00	50.0		56	40-140	12	20
Benzo (g,h,i) perylene	**27.3**		µg/l	5.00	50.0		55	40-140	3	20
Benzo (k) fluoranthene	**26.8**		µg/l	5.00	50.0		54	40-140	15	20
Benzoic acid	**15.3**		µg/l	5.00	50.0		31	30-130	3	20
Benzyl alcohol	**24.8**		µg/l	5.00	50.0		50	40-140	6	20
Bis(2-chloroethoxy)methane	**18.9**	QC2	µg/l	5.00	50.0		38	40-140	4	20
Bis(2-chloroethyl)ether	**18.4**	QC2	µg/l	5.00	50.0		37	40-140	7	20
Bis(2-chloroisopropyl)ether	**18.5**	QC2	µg/l	5.00	50.0		37	40-140	6	20
Bis(2-ethylhexyl)phthalate	**30.4**		µg/l	5.00	50.0		61	40-140	3	20
4-Bromophenyl phenyl ether	**27.2**		µg/l	5.00	50.0		54	40-140	5	20
Butyl benzyl phthalate	**29.3**		µg/l	5.00	50.0		59	40-140	1	20
Carbazole	**35.6**		µg/l	5.00	50.0		71	40-140	2	20
4-Chloro-3-methylphenol	**25.4**		µg/l	5.00	50.0		51	30-130	7	20
4-Chloroaniline	**19.3**	QC2	µg/l	5.00	50.0		39	40-140	2	20
2-Chloronaphthalene	**23.9**		µg/l	5.00	50.0		48	40-140	6	20
2-Chlorophenol	**21.4**		µg/l	5.00	50.0		43	30-130	5	20
4-Chlorophenyl phenyl ether	**24.8**		µg/l	5.00	50.0		50	40-140	6	20
Chrysene	**27.3**		µg/l	5.00	50.0		55	40-140	7	20
Dibenzo (a,h) anthracene	**29.3**		µg/l	5.00	50.0		59	40-140	3	20
Dibenzofuran	**26.7**		µg/l	5.00	50.0		53	40-140	3	20
1,2-Dichlorobenzene	**21.9**		µg/l	5.00	50.0		44	40-140	5	20
1,3-Dichlorobenzene	**21.6**		µg/l	5.00	50.0		43	40-140	4	20
1,4-Dichlorobenzene	**21.5**		µg/l	5.00	50.0		43	40-140	5	20
3,3´-Dichlorobenzidine	**33.3**		µg/l	5.00	50.0		67	40-140	3	20
2,4-Dichlorophenol	**22.6**		µg/l	5.00	50.0		45	30-130	4	20
Diethyl phthalate	**28.2**		µg/l	5.00	50.0		56	40-140	4	20
Dimethyl phthalate	**25.3**		µg/l	5.00	50.0		51	40-140	5	20
2,4-Dimethylphenol	**21.6**		µg/l	5.00	50.0		43	30-130	5	20
Di-n-butyl phthalate	**29.7**		µg/l	5.00	50.0		59	40-140	2	20
4,6-Dinitro-2-methylphenol	**25.6**		µg/l	5.00	50.0		51	30-130	4	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1721033 - SW846 3510C										
LCS Dup (1721033-BSD1)					Prepared: 20-Dec-17 Analyzed: 21-Dec-17					
2,4-Dinitrophenol	**19.0**		µg/l	5.00	50.0		38	30-130	8	20
2,4-Dinitrotoluene	**35.7**		µg/l	5.00	50.0		71	40-140	0.4	20
2,6-Dinitrotoluene	**31.8**		µg/l	5.00	50.0		64	40-140	7	20
Di-n-octyl phthalate	**28.5**		µg/l	5.00	50.0		57	40-140	7	20
Fluoranthene	**28.3**		µg/l	5.00	50.0		57	40-140	8	20
Fluorene	**24.4**		µg/l	5.00	50.0		49	40-140	3	20
Hexachlorobenzene	**33.0**		µg/l	5.00	50.0		66	40-140	0.7	20
Hexachlorobutadiene	**21.6**		µg/l	5.00	50.0		43	40-140	4	20
Hexachlorocyclopentadiene	**22.9**		µg/l	5.00	50.0		46	40-140	6	20
Hexachloroethane	**22.1**		µg/l	5.00	50.0		44	40-140	6	20
Indeno (1,2,3-cd) pyrene	**26.3**		µg/l	5.00	50.0		53	40-140	11	20
Isophorone	**22.2**		µg/l	5.00	50.0		44	40-140	3	20
2-Methylnaphthalene	**23.9**		µg/l	5.00	50.0		48	40-140	7	20
2-Methylphenol	**21.2**		µg/l	5.00	50.0		42	30-130	6	20
3 & 4-Methylphenol	**20.3**		µg/l	10.0	50.0		41	30-130	7	20
Naphthalene	**20.1**		µg/l	5.00	50.0		40	40-140	4	20
2-Nitroaniline	**26.3**		µg/l	5.00	50.0		53	40-140	7	20
3-Nitroaniline	**26.7**		µg/l	5.00	50.0		53	40-140	1	20
4-Nitroaniline	**31.9**		µg/l	5.00	50.0		64	40-140	2	20
Nitrobenzene	**22.6**		µg/l	5.00	50.0		45	40-140	3	20
2-Nitrophenol	**21.4**		µg/l	5.00	50.0		43	30-130	1	20
4-Nitrophenol	**18.5**		µg/l	20.0	50.0		37	30-130	1	20
N-Nitrosodimethylamine	**19.0**	QC2	µg/l	5.00	50.0		38	40-140	5	20
N-Nitrosodi-n-propylamine	**22.3**		µg/l	5.00	50.0		45	40-140	8	20
N-Nitrosodiphenylamine	**28.2**		µg/l	5.00	50.0		56	40-140	4	20
Pentachlorophenol	**26.0**		µg/l	20.0	50.0		52	30-130	6	20
Phenanthrene	**26.6**		µg/l	5.00	50.0		53	40-140	4	20
Phenol	**12.7**	QC2	µg/l	5.00	50.0		25	30-130	4	20
Pyrene	**28.2**		µg/l	5.00	50.0		56	40-140	0.6	20
Pyridine	**18.7**	QC2	µg/l	5.00	50.0		37	40-140	3	20
1,2,4-Trichlorobenzene	**22.9**		µg/l	5.00	50.0		46	40-140	4	20
1-Methylnaphthalene	**20.4**		µg/l	5.00	50.0		41	40-140	5	20
2,4,5-Trichlorophenol	**26.0**		µg/l	5.00	50.0		52	30-130	7	20
2,4,6-Trichlorophenol	**22.8**		µg/l	5.00	50.0		46	30-130	5	20
Pentachloronitrobenzene	**29.0**		µg/l	5.00	50.0		58	40-140	4	20
1,2,4,5-Tetrachlorobenzene	**20.3**		µg/l	5.00	50.0		41	40-140	4	20
Surrogate: 2-Fluorobiphenyl	*30.8*		µg/l		*50.0*		*62*	*30-130*		
Surrogate: 2-Fluorophenol	*29.4*		µg/l		*50.0*		*59*	*15-110*		
Surrogate: Nitrobenzene-d5	*30.8*		µg/l		*50.0*		*62*	*30-130*		
Surrogate: Phenol-d5	*25.3*		µg/l		*50.0*		*51*	*15-110*		
Surrogate: Terphenyl-dl4	*41.4*		µg/l		*50.0*		*83*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*44.8*		µg/l		*50.0*		*90*	*15-110*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8082A										
Batch 1720951 - SW846 3510C										
Blank (1720951-BLK1)						Prepared: 19-Dec-17 Analyzed: 21-Dec-17				
Aroclor-1016	< 0.204		µg/l	0.204						
Aroclor-1016 [2C]	< 0.204		µg/l	0.204						
Aroclor-1221	< 0.204		µg/l	0.204						
Aroclor-1221 [2C]	< 0.204		µg/l	0.204						
Aroclor-1232	< 0.204		µg/l	0.204						
Aroclor-1232 [2C]	< 0.204		µg/l	0.204						
Aroclor-1242	< 0.204		µg/l	0.204						
Aroclor-1242 [2C]	< 0.204		µg/l	0.204						
Aroclor-1248	< 0.204		µg/l	0.204						
Aroclor-1248 [2C]	< 0.204		µg/l	0.204						
Aroclor-1254	< 0.204		µg/l	0.204						
Aroclor-1254 [2C]	< 0.204		µg/l	0.204						
Aroclor-1260	< 0.204		µg/l	0.204						
Aroclor-1260 [2C]	< 0.204		µg/l	0.204						
Aroclor-1262	< 0.204		µg/l	0.204						
Aroclor-1262 [2C]	< 0.204		µg/l	0.204						
Aroclor-1268	< 0.204		µg/l	0.204						
Aroclor-1268 [2C]	< 0.204		µg/l	0.204						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.153*		µg/l		*0.204*		*75*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.163*		µg/l		*0.204*		*80*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.255*		µg/l		*0.204*		*125*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.245*		µg/l		*0.204*		*120*	*30-150*		
LCS (1720951-BS1)						Prepared: 19-Dec-17 Analyzed: 21-Dec-17				
Aroclor-1016	**2.55**		µg/l	0.204	2.55		100	40-140		
Aroclor-1016 [2C]	**2.61**		µg/l	0.204	2.55		102	40-140		
Aroclor-1260	**2.73**		µg/l	0.204	2.55		107	40-140		
Aroclor-1260 [2C]	**2.46**		µg/l	0.204	2.55		96	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.153*		µg/l		*0.204*		*75*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.163*		µg/l		*0.204*		*80*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.245*		µg/l		*0.204*		*120*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.265*		µg/l		*0.204*		*130*	*30-150*		
LCS Dup (1720951-BSD1)						Prepared: 19-Dec-17 Analyzed: 21-Dec-17				
Aroclor-1016	**2.57**		µg/l	0.204	2.55		101	40-140	0.8	20
Aroclor-1016 [2C]	**2.58**		µg/l	0.204	2.55		101	40-140	1	20
Aroclor-1260	**2.58**		µg/l	0.204	2.55		101	40-140	6	20
Aroclor-1260 [2C]	**2.39**		µg/l	0.204	2.55		94	40-140	3	20
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.153*		µg/l		*0.204*		*75*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.153*		µg/l		*0.204*		*75*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.255*		µg/l		*0.204*		*125*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.245*		µg/l		*0.204*		*120*	*30-150*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1721291 - SW846 3510C										
Blank (1721291-BLK1)					Prepared: 27-Dec-17 Analyzed: 28-Dec-17					
C9-C18 Aliphatic Hydrocarbons	< 103		µg/l	103						
C19-C36 Aliphatic Hydrocarbons	< 103		µg/l	103						
C11-C22 Aromatic Hydrocarbons	< 103		µg/l	103						
Unadjusted C11-C22 Aromatic Hydrocarbons	< 103		µg/l	103						
Total Petroleum Hydrocarbons	< 309		µg/l	309						
Unadjusted Total Petroleum Hydrocarbons	< 309		µg/l	309						
Naphthalene	< 5.15		µg/l	5.15						
2-Methylnaphthalene	< 5.15		µg/l	5.15						
Acenaphthylene	< 5.15		µg/l	5.15						
Acenaphthene	< 5.15		µg/l	5.15						
Fluorene	< 5.15		µg/l	5.15						
Phenanthrene	< 5.15		µg/l	5.15						
Anthracene	< 5.15		µg/l	5.15						
Fluoranthene	< 5.15		µg/l	5.15						
Pyrene	< 5.15		µg/l	5.15						
Benzo (a) anthracene	< 5.15		µg/l	5.15						
Chrysene	< 5.15		µg/l	5.15						
Benzo (b) fluoranthene	< 5.15		µg/l	5.15						
Benzo (k) fluoranthene	< 5.15		µg/l	5.15						
Benzo (a) pyrene	< 5.15		µg/l	5.15						
Indeno (1,2,3-cd) pyrene	< 5.15		µg/l	5.15						
Dibenzo (a,h) anthracene	< 5.15		µg/l	5.15						
Benzo (g,h,i) perylene	< 5.15		µg/l	5.15						
n-Nonane (C9)	< 5.15		µg/l	5.15						
n-Decane	< 5.15		µg/l	5.15						
n-Dodecane	< 5.15		µg/l	5.15						
n-Tetradecane	< 5.15		µg/l	5.15						
n-Hexadecane	< 5.15		µg/l	5.15						
n-Octadecane	< 5.15		µg/l	5.15						
n-Nonadecane	< 5.15		µg/l	5.15						
n-Eicosane	< 5.15		µg/l	5.15						
n-Docosane	< 5.15		µg/l	5.15						
n-Tetracosane	< 5.15		µg/l	5.15						
n-Hexacosane	< 5.15		µg/l	5.15						
n-Octacosane	< 5.15		µg/l	5.15						
n-Triacontane	< 5.15		µg/l	5.15						
n-Hexatriacontane	< 5.15		µg/l	5.15						
Naphthalene (aliphatic fraction)	**0.00**		µg/l							
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l							
Surrogate: 1-Chlorooctadecane	*30.2*		µg/l		*51.5*		*59*	*40-140*		
Surrogate: Ortho-Terphenyl	*28.3*		µg/l		*51.5*		*55*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*27.3*		µg/l		*41.2*		*66*	*40-140*		
LCS (1721291-BS1)					Prepared: 27-Dec-17 Analyzed: 28-Dec-17					
C9-C18 Aliphatic Hydrocarbons	**362**		µg/l	102	612		59	40-140		
C19-C36 Aliphatic Hydrocarbons	**807**		µg/l	102	816		99	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**393**		µg/l	102	694		57	40-140		
Naphthalene	**18.4**		µg/l	5.10	40.8		45	40-140		
2-Methylnaphthalene	**16.4**		µg/l	5.10	40.8		40	40-140		
Acenaphthylene	**16.5**		µg/l	5.10	40.8		41	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1721291 - SW846 3510C										
LCS (1721291-BS1)						Prepared: 27-Dec-17 Analyzed: 28-Dec-17				
Acenaphthene	**17.0**		µg/l	5.10	40.8		42	40-140		
Fluorene	**19.2**		µg/l	5.10	40.8		47	40-140		
Phenanthrene	**21.6**		µg/l	5.10	40.8		53	40-140		
Anthracene	**21.9**		µg/l	5.10	40.8		54	40-140		
Fluoranthene	**24.8**		µg/l	5.10	40.8		61	40-140		
Pyrene	**23.3**		µg/l	5.10	40.8		57	40-140		
Benzo (a) anthracene	**24.8**		µg/l	5.10	40.8		61	40-140		
Chrysene	**24.3**		µg/l	5.10	40.8		60	40-140		
Benzo (b) fluoranthene	**24.7**		µg/l	5.10	40.8		60	40-140		
Benzo (k) fluoranthene	**25.2**		µg/l	5.10	40.8		62	40-140		
Benzo (a) pyrene	**24.2**		µg/l	5.10	40.8		59	40-140		
Indeno (1,2,3-cd) pyrene	**23.7**		µg/l	5.10	40.8		58	40-140		
Dibenzo (a,h) anthracene	**23.0**		µg/l	5.10	40.8		56	40-140		
Benzo (g,h,i) perylene	**23.6**		µg/l	5.10	40.8		58	40-140		
n-Nonane (C9)	**44.5**		µg/l	5.10	102		44	30-140		
n-Decane	**44.9**		µg/l	5.10	102		44	40-140		
n-Dodecane	**48.4**		µg/l	5.10	102		47	40-140		
n-Tetradecane	**49.7**		µg/l	5.10	102		49	40-140		
n-Hexadecane	**55.6**		µg/l	5.10	102		54	40-140		
n-Octadecane	**64.9**		µg/l	5.10	102		64	40-140		
n-Nonadecane	**67.8**		µg/l	5.10	102		66	40-140		
n-Eicosane	**70.1**		µg/l	5.10	102		69	40-140		
n-Docosane	**73.9**		µg/l	5.10	102		72	40-140		
n-Tetracosane	**74.4**		µg/l	5.10	102		73	40-140		
n-Hexacosane	**73.9**		µg/l	5.10	102		72	40-140		
n-Octacosane	**74.4**		µg/l	5.10	102		73	40-140		
n-Triacontane	**76.6**		µg/l	5.10	102		75	40-140		
n-Hexatriacontane	**113**		µg/l	5.10	102		111	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		
Surrogate: 1-Chlorooctadecane	*29.2*		µg/l		*51.0*		*57*	*40-140*		
Surrogate: Ortho-Terphenyl	*29.2*		µg/l		*51.0*		*57*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*26.9*		µg/l		*40.8*		*66*	*40-140*		
LCS (1721291-BS2)						Prepared: 27-Dec-17 Analyzed: 28-Dec-17				
C9-C18 Aliphatic Hydrocarbons	**376**		µg/l	100	600		63	40-140		
C19-C36 Aliphatic Hydrocarbons	**573**		µg/l	100	800		72	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**588**		µg/l	100	680		86	40-140		
Naphthalene	**21.5**		µg/l	5.00	40.0		54	40-140		
2-Methylnaphthalene	**23.2**		µg/l	5.00	40.0		58	40-140		
Acenaphthylene	**25.5**		µg/l	5.00	40.0		64	40-140		
Acenaphthene	**26.0**		µg/l	5.00	40.0		65	40-140		
Fluorene	**29.6**		µg/l	5.00	40.0		74	40-140		
Phenanthrene	**32.3**		µg/l	5.00	40.0		81	40-140		
Anthracene	**34.7**		µg/l	5.00	40.0		87	40-140		
Fluoranthene	**35.1**		µg/l	5.00	40.0		88	40-140		
Pyrene	**34.2**		µg/l	5.00	40.0		85	40-140		
Benzo (a) anthracene	**34.0**		µg/l	5.00	40.0		85	40-140		
Chrysene	**33.3**		µg/l	5.00	40.0		83	40-140		
Benzo (b) fluoranthene	**35.7**		µg/l	5.00	40.0		89	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1721291 - SW846 3510C										
LCS (1721291-BS2)						Prepared: 27-Dec-17 Analyzed: 28-Dec-17				
Benzo (k) fluoranthene	**35.5**		µg/l	5.00	40.0		89	40-140		
Benzo (a) pyrene	**33.3**		µg/l	5.00	40.0		83	40-140		
Indeno (1,2,3-cd) pyrene	**32.6**		µg/l	5.00	40.0		82	40-140		
Dibenzo (a,h) anthracene	**31.5**		µg/l	5.00	40.0		79	40-140		
Benzo (g,h,i) perylene	**33.2**		µg/l	5.00	40.0		83	40-140		
n-Nonane (C9)	**41.1**		µg/l	5.00	100		41	30-140		
n-Decane	**44.1**		µg/l	5.00	100		44	40-140		
n-Dodecane	**43.2**		µg/l	5.00	100		43	40-140		
n-Tetradecane	**50.3**		µg/l	5.00	100		50	40-140		
n-Hexadecane	**62.8**		µg/l	5.00	100		63	40-140		
n-Octadecane	**70.1**		µg/l	5.00	100		70	40-140		
n-Nonadecane	**72.0**		µg/l	5.00	100		72	40-140		
n-Eicosane	**73.4**		µg/l	5.00	100		73	40-140		
n-Docosane	**74.6**		µg/l	5.00	100		75	40-140		
n-Tetracosane	**73.1**		µg/l	5.00	100		73	40-140		
n-Hexacosane	**71.5**		µg/l	5.00	100		71	40-140		
n-Octacosane	**71.4**		µg/l	5.00	100		71	40-140		
n-Triacontane	**73.4**		µg/l	5.00	100		73	40-140		
n-Hexatriacontane	**91.3**		µg/l	5.00	100		91	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.0			0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.0			0-200		
Surrogate: 1-Chlorooctadecane	*23.2*		µg/l		*50.0*		*46*	*40-140*		
Surrogate: Ortho-Terphenyl	*43.9*		µg/l		*50.0*		*88*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*31.8*		µg/l		*40.0*		*79*	*40-140*		
LCS Dup (1721291-BSD1)						Prepared: 27-Dec-17 Analyzed: 28-Dec-17				
C9-C18 Aliphatic Hydrocarbons	**321**		µg/l	102	612		52	40-140	12	25
C19-C36 Aliphatic Hydrocarbons	**780**		µg/l	102	816		96	40-140	3	25
Unadjusted C11-C22 Aromatic Hydrocarbons	**374**		µg/l	102	694		54	40-140	5	25
Naphthalene	**17.1**		µg/l	5.10	40.8		42	40-140	7	25
2-Methylnaphthalene	**17.8**		µg/l	5.10	40.8		44	40-140	8	25
Acenaphthylene	**17.7**		µg/l	5.10	40.8		43	40-140	7	25
Acenaphthene	**18.2**		µg/l	5.10	40.8		44	40-140	6	25
Fluorene	**19.9**		µg/l	5.10	40.8		49	40-140	4	25
Phenanthrene	**21.9**		µg/l	5.10	40.8		54	40-140	2	25
Anthracene	**22.0**		µg/l	5.10	40.8		54	40-140	0.2	25
Fluoranthene	**23.9**		µg/l	5.10	40.8		59	40-140	3	25
Pyrene	**22.8**		µg/l	5.10	40.8		56	40-140	2	25
Benzo (a) anthracene	**22.9**		µg/l	5.10	40.8		56	40-140	8	25
Chrysene	**22.5**		µg/l	5.10	40.8		55	40-140	8	25
Benzo (b) fluoranthene	**23.1**		µg/l	5.10	40.8		56	40-140	7	25
Benzo (k) fluoranthene	**23.3**		µg/l	5.10	40.8		57	40-140	8	25
Benzo (a) pyrene	**22.5**		µg/l	5.10	40.8		55	40-140	7	25
Indeno (1,2,3-cd) pyrene	**22.3**		µg/l	5.10	40.8		55	40-140	6	25
Dibenzo (a,h) anthracene	**21.3**		µg/l	5.10	40.8		52	40-140	7	25
Benzo (g,h,i) perylene	**22.5**		µg/l	5.10	40.8		55	40-140	5	25
n-Nonane (C9)	**47.0**		µg/l	5.10	102		46	30-140	5	25
n-Decane	**41.5**		µg/l	5.10	102		41	40-140	8	25
n-Dodecane	**43.5**		µg/l	5.10	102		43	40-140	11	25
n-Tetradecane	**46.3**		µg/l	5.10	102		45	40-140	7	25

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1721291 - SW846 3510C										
LCS Dup (1721291-BSD1)					Prepared: 27-Dec-17 Analyzed: 28-Dec-17					
n-Hexadecane	**52.5**		µg/l	5.10	102		51	40-140	6	25
n-Octadecane	**63.6**		µg/l	5.10	102		62	40-140	2	25
n-Nonadecane	**66.4**		µg/l	5.10	102		65	40-140	2	25
n-Eicosane	**67.9**		µg/l	5.10	102		67	40-140	3	25
n-Docosane	**69.0**		µg/l	5.10	102		68	40-140	7	25
n-Tetracosane	**67.8**		µg/l	5.10	102		66	40-140	9	25
n-Hexacosane	**67.2**		µg/l	5.10	102		66	40-140	10	25
n-Octacosane	**68.2**		µg/l	5.10	102		67	40-140	9	25
n-Triacontane	**70.4**		µg/l	5.10	102		69	40-140	9	25
n-Hexatriacontane	**108**		µg/l	5.10	102		106	40-140	5	25
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		200
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		200
Surrogate: 1-Chlorooctadecane	*31.1*		µg/l		*51.0*		*61*	*40-140*		
Surrogate: Ortho-Terphenyl	*29.5*		µg/l		*51.0*		*58*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*25.7*		µg/l		*40.8*		*63*	*40-140*		
Duplicate (1721291-DUP1)			**Source: SC42529-01**		Prepared: 27-Dec-17 Analyzed: 29-Dec-17					
C9-C18 Aliphatic Hydrocarbons	< 106		µg/l	106		BRL				50
C19-C36 Aliphatic Hydrocarbons	< 106		µg/l	106		BRL				50
C11-C22 Aromatic Hydrocarbons	< 106		µg/l	106		BRL				50
Unadjusted C11-C22 Aromatic Hydrocarbons	< 106		µg/l	106		BRL				50
Naphthalene	< 5.32		µg/l	5.32		BRL				50
2-Methylnaphthalene	< 5.32		µg/l	5.32		BRL				50
Acenaphthylene	< 5.32		µg/l	5.32		BRL				50
Acenaphthene	< 5.32		µg/l	5.32		BRL				50
Fluorene	< 5.32		µg/l	5.32		BRL				50
Phenanthrene	< 5.32		µg/l	5.32		BRL				50
Anthracene	< 5.32		µg/l	5.32		BRL				50
Fluoranthene	< 5.32		µg/l	5.32		BRL				50
Pyrene	< 5.32		µg/l	5.32		BRL				50
Benzo (a) anthracene	< 5.32		µg/l	5.32		BRL				50
Chrysene	< 5.32		µg/l	5.32		BRL				50
Benzo (b) fluoranthene	< 5.32		µg/l	5.32		BRL				50
Benzo (k) fluoranthene	< 5.32		µg/l	5.32		BRL				50
Benzo (a) pyrene	< 5.32		µg/l	5.32		BRL				50
Indeno (1,2,3-cd) pyrene	< 5.32		µg/l	5.32		BRL				50
Dibenzo (a,h) anthracene	< 5.32		µg/l	5.32		BRL				50
Benzo (g,h,i) perylene	< 5.32		µg/l	5.32		BRL				50
Surrogate: 1-Chlorooctadecane	*23.6*		µg/l		*53.2*		*44*	*40-140*		
Surrogate: Ortho-Terphenyl	*23.1*		µg/l		*53.2*		*43*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*22.8*		µg/l		*42.6*		*54*	*40-140*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 6010C										
Batch 1721194 - SW846 3005A										
Blank (1721194-BLK1)					Prepared: 02-Jan-18 Analyzed: 03-Jan-18					
Iron	< 0.0400		mg/l	0.0400						
Chromium	< 0.0050		mg/l	0.0050						
Arsenic	< 0.0040		mg/l	0.0040						
Cadmium	< 0.0025		mg/l	0.0025						
Copper	< 0.0050		mg/l	0.0050						
Beryllium	< 0.0020		mg/l	0.0020						
Zinc	< 0.0050		mg/l	0.0050						
Lead	< 0.0075		mg/l	0.0075						
Antimony	< 0.0060		mg/l	0.0060						
Selenium	< 0.0150		mg/l	0.0150						
Nickel	< 0.0050		mg/l	0.0050						
Thallium	< 0.0050		mg/l	0.0050						
Silver	< 0.0050		mg/l	0.0050						
LCS (1721194-BS1)					Prepared: 02-Jan-18 Analyzed: 09-Jan-18					
Iron	**1.38**		mg/l	0.0400	1.25		111	85-115		
Selenium	**1.30**		mg/l	0.0150	1.25		104	85-115		
Zinc	**1.33**		mg/l	0.0050	1.25		106	85-115		
Arsenic	**1.30**		mg/l	0.0040	1.25		104	85-115		
Thallium	**1.35**		mg/l	0.0050	1.25		108	85-115		
Beryllium	**1.40**		mg/l	0.0020	1.25		112	85-115		
Cadmium	**1.29**		mg/l	0.0025	1.25		103	85-115		
Chromium	**1.34**		mg/l	0.0050	1.25		107	85-115		
Copper	**1.38**		mg/l	0.0050	1.25		110	85-115		
Silver	**1.22**		mg/l	0.0050	1.25		98	85-115		
Antimony	**1.27**		mg/l	0.0060	1.25		102	85-115		
Nickel	**1.30**		mg/l	0.0050	1.25		104	85-115		
Lead	**1.38**		mg/l	0.0075	1.25		110	85-115		
LCS Dup (1721194-BSD1)					Prepared: 02-Jan-18 Analyzed: 09-Jan-18					
Iron	**1.39**		mg/l	0.0400	1.25		111	85-115	0.4	20
Thallium	**1.35**		mg/l	0.0050	1.25		108	85-115	0.1	20
Zinc	**1.33**		mg/l	0.0050	1.25		106	85-115	0.2	20
Silver	**1.21**		mg/l	0.0050	1.25		97	85-115	0.9	20
Nickel	**1.29**		mg/l	0.0050	1.25		103	85-115	0.6	20
Arsenic	**1.30**		mg/l	0.0040	1.25		104	85-115	0.08	20
Beryllium	**1.39**		mg/l	0.0020	1.25		111	85-115	1	20
Copper	**1.37**		mg/l	0.0050	1.25		110	85-115	0.4	20
Chromium	**1.33**		mg/l	0.0050	1.25		107	85-115	0.07	20
Lead	**1.38**		mg/l	0.0075	1.25		110	85-115	0.1	20
Selenium	**1.29**		mg/l	0.0150	1.25		103	85-115	0.7	20
Antimony	**1.28**		mg/l	0.0060	1.25		102	85-115	0.2	20
Cadmium	**1.28**		mg/l	0.0025	1.25		102	85-115	0.6	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 245.1/7470A										
Batch 1721195 - EPA200/SW7000 Series										
Blank (1721195-BLK1)						Prepared & Analyzed: 02-Jan-18				
Mercury	< 0.00020		mg/l	0.00020						
LCS (1721195-BS1)						Prepared & Analyzed: 02-Jan-18				
Mercury	**0.00499**		mg/l	0.00020	0.00500		100	85-115		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 300.0										
Batch 1720995 - General Preparation										
Blank (1720995-BLK1)					Prepared & Analyzed: 19-Dec-17					
Chloride	< 1.00		mg/l	1.00						
LCS (1720995-BS1)					Prepared & Analyzed: 19-Dec-17					
Chloride	**19.6**		mg/l	1.00	20.0		98	90-110		
Reference (1720995-SRM1)					Prepared & Analyzed: 19-Dec-17					
Chloride	**24.6**		mg/l	1.00	25.0		98	90-110		
EPA 335.4 / SW846 9012B										
Batch 1721381 - General Preparation										
Blank (1721381-BLK1)					Prepared & Analyzed: 28-Dec-17					
Cyanide (total)	< 0.00500		mg/l	0.00500						
Blank (1721381-BLK2)					Prepared & Analyzed: 28-Dec-17					
Cyanide (total)	< 0.00500		mg/l	0.00500						
LCS (1721381-BS1)					Prepared & Analyzed: 28-Dec-17					
Cyanide (total)	**0.246**		mg/l	0.00500	0.250		98	90-110		
LCS (1721381-BS2)					Prepared & Analyzed: 28-Dec-17					
Cyanide (total)	**0.230**		mg/l	0.00500	0.250		92	90-110		
Reference (1721381-SRM1)					Prepared & Analyzed: 28-Dec-17					
Cyanide (total)	**0.242**		mg/l	0.00500	0.288		84	76-123		
SM2540D (11)										
Batch 1720961 - General Preparation										
Blank (1720961-BLK1)					Prepared: 19-Dec-17 Analyzed: 22-Dec-17					
Total Suspended Solids	< 0.5		mg/l	0.5						
LCS (1720961-BS1)					Prepared: 19-Dec-17 Analyzed: 22-Dec-17					
Total Suspended Solids	**106**		mg/l	10.0	100		106	90-110		
SM4500-Cl-G (11)										
Batch 1721227 - General Preparation										
Blank (1721227-BLK1)					Prepared & Analyzed: 22-Dec-17					
Total Residual Chlorine	< 0.020		mg/l	0.020						
LCS (1721227-BS1)					Prepared & Analyzed: 22-Dec-17					
Total Residual Chlorine	**0.047**		mg/l	0.020	0.0500		94	90-110		
Duplicate (1721227-DUP1)			**Source: SC42529-01**		Prepared & Analyzed: 22-Dec-17					
Total Residual Chlorine	< 0.020		mg/l	0.020		BRL				20
Matrix Spike (1721227-MS1)			**Source: SC42529-01**		Prepared & Analyzed: 22-Dec-17					
Total Residual Chlorine	**0.049**		mg/l	0.020	0.0500	BRL	97	80-120		
Matrix Spike Dup (1721227-MSD1)			**Source: SC42529-01**		Prepared & Analyzed: 22-Dec-17					
Total Residual Chlorine	**0.048**		mg/l	0.020	0.0500	BRL	97	80-120	0.2	200
Reference (1721227-SRM1)					Prepared & Analyzed: 22-Dec-17					
Total Residual Chlorine	**0.126**		mg/l	0.020	0.119		106	85-115		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
E350.1										
Batch 413745A - 413745										
BLK (BZ61268-BLK)						Prepared & Analyzed: 20-Dec-17				
Ammonia as Nitrogen	< 0.05		mg/l	0.05				-		
DUP (BZ61268-DUP)			**Source: BZ61268**			Prepared & Analyzed: 20-Dec-17				
Ammonia as Nitrogen	**0.28**		mg/l	0.05				-	3.6	20
LCS (BZ61268-LCS)						Prepared & Analyzed: 20-Dec-17				
Ammonia as Nitrogen	**4.020**		mg/l	0.05	3.74		107	90-110		20
MS (BZ61268-MS)			**Source: BZ61268**			Prepared & Analyzed: 20-Dec-17				
Ammonia as Nitrogen	**2.300**		mg/l	0.05	2		102	90-110		20

Notes and Definitions

D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
R06	MRL raised to correlate to batch QC reporting limits.
Z-2	1721131-MSD1 was analyzed outside the 12-hour tune window.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
[2C]	Indicates concentration was reported from the secondary, confirmation column.
ClHT	The method for residual chlorine indicates that samples should be analyzed immediately. 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous residual chlorine samples not analyzed in the field are considered out of hold time at the time of sample receipt.
LIV	The initial volume for this sample has been reduced due to sample matrix and/or historical data therefore elevating the reporting limit.

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.

SC42529

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CHAIN OF CUSTODY RECORD

Page 1 of 1

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

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: AECOM
Telephone #: 978 400 1213
Project Mgr: MELISSA CANNON

Invoice To: CEI
P.O No.: 308774 Quote #: _____

Project No: 60527539
Site Name: 831 MEADOW ST.
Location: LITTLETON State: NH
Sampler(s): J. SHEEHAN

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=_____

List Preservative Code below:

QA/QC Reporting Notes:
* additional charges may appply

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

DW=Drinking 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

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: EPH	VPH	8260	8270	524.2	8082 PCBs	6010 B [illegible]	PP13 METALS + IRON	TSS	Check if chlorinated
SC42529-01	MW-1	12/14/17	1430	G	GW	5	4		5										[ ]

* ALSO FOR ANALYSIS AMMONIA, CHLORIDE, CYANIDE & TOTAL CHLORINE
* FIELD FILTERED

Relinquished by:	Received by:	Date:	Time:	Temp °C
		12-15-17	1425	Observed 9.7
		12/15/17	1705	Correction Factor 0
				Corrected 9.7
				IR ID # 02

[X] EDD format: _____
[X] E-mail to: MELISSA.CANNON@AECOM.COM

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

Batch Summary

1720940

Soluble Metals by EPA 200/6000 Series Methods

SC42529-01 (MW-1)

1720951

Semivolatile Organic Compounds by GC

1720951-BLK1
1720951-BS1
1720951-BSD1
SC42529-01 (MW-1)

1720961

General Chemistry Parameters

1720961-BLK1
1720961-BS1
SC42529-01 (MW-1)

1720977

Volatile Organic Compounds

1720977-BLK1
1720977-BS1
1720977-BSD1
SC42529-01 (MW-1)
SC42529-02 (TB)

1720995

General Chemistry Parameters

1720995-BLK1
1720995-BS1
1720995-SRM1
SC42529-01 (MW-1)

1721033

Semivolatile Organic Compounds by GCMS

1721033-BLK1
1721033-BS1
1721033-BSD1
SC42529-01 (MW-1)

1721131

Volatile Organic Compounds

1721131-BLK1
1721131-BS1
1721131-BSD1
1721131-MS1
1721131-MSD1
SC42529-01 (MW-1)
SC42529-02 (TB)

1721194

Soluble Metals by EPA 6000/7000 Series Methods

1721194-BLK1
1721194-BS1
1721194-BSD1
SC42529-01 (MW-1)

1721195

Soluble Metals by EPA 200 Series Methods

1721195-BLK1
1721195-BS1
SC42529-01 (MW-1)

1721227

General Chemistry Parameters

1721227-BLK1
1721227-BS1
1721227-DUP1
1721227-MS1
1721227-MSD1
1721227-SRM1
SC42529-01 (MW-1)

1721291

Extractable Petroleum Hydrocarbons

1721291-BLK1
1721291-BS1
1721291-BS2
1721291-BSD1
1721291-DUP1
SC42529-01 (MW-1)

1721381

General Chemistry Parameters

1721381-BLK1
1721381-BLK2
1721381-BS1
1721381-BS2
1721381-SRM1
SC42529-01 (MW-1)

413745A

Subcontracted Analyses

BZ61268-BLK
BZ61268-DUP
BZ61268-LCS
BZ61268-MS
SC42529-01 (MW-1)

S710445

Semivolatile Organic Compounds by GC

S710445-CAL1
S710445-CAL2
S710445-CAL3
S710445-CAL4
S710445-CAL5
S710445-CAL6
S710445-CAL7
S710445-CAL8
S710445-CAL9
S710445-CALA
S710445-CALB
S710445-CALC
S710445-CALD
S710445-CALE
S710445-CALF
S710445-CALG
S710445-CALH
S710445-CALI
S710445-CALJ
S710445-CALK
S710445-CALL
S710445-CALM
S710445-CALN
S710445-CALO
S710445-CALP
S710445-CALQ
S710445-CALR
S710445-CALS
S710445-CALT
S710445-CALU
S710445-ICV1
S710445-ICV2
S710445-ICV3
S710445-ICV4
S710445-ICV5
S710445-ICV6
S710445-LCV1
S710445-LCV2
S710445-LCV3
S710445-LCV4
S710445-LCV5
S710445-LCV6

S710975

Volatile Organic Compounds

S710975-CCV1
S710975-CCV2

S710989

Extractable Petroleum Hydrocarbons

S710989-CAL1
S710989-CAL2
S710989-CAL3
S710989-CAL4
S710989-CAL5
S710989-CAL6
S710989-CAL7
S710989-CAL8
S710989-CAL9
S710989-CALA
S710989-CALB
S710989-CALC
S710989-ICV1
S710989-LCV1

S711008

Semivolatile Organic Compounds by GCMS

S711008-CAL1
S711008-CAL2
S711008-CAL3
S711008-CAL4
S711008-CAL5
S711008-CAL6
S711008-CAL7
S711008-CAL8
S711008-CAL9
S711008-CALA
S711008-ICV1
S711008-LCV1
S711008-LCV2
S711008-TUN1

S711030

Volatile Organic Compounds

S711030-CAL1
S711030-CAL2
S711030-CAL3
S711030-CAL4
S711030-CAL5
S711030-CAL6
S711030-CAL7
S711030-ICV1
S711030-LCV1

S711035

Volatile Organic Compounds

S711035-CCV1
S711035-TUN1

S711040

Volatile Organic Compounds

S711040-CAL1
S711040-CAL2
S711040-CAL3
S711040-CAL4
S711040-CAL5
S711040-CAL6
S711040-CAL7
S711040-CAL8
S711040-CAL9
S711040-ICV1
S711040-LCV1
S711040-LCV2
S711040-TUN1

S711053

Semivolatile Organic Compounds by GCMS

S711053-CCV1
S711053-TUN1

S711058

Semivolatile Organic Compounds by GC

S711058-CCV1
S711058-CCV2
S711058-CCV3
S711058-CCV4
S711058-CCV5
S711058-IBL1
S711058-IBL2
S711058-IBL3
S711058-IBL4
S711058-IBL5

S711085

Semivolatile Organic Compounds by GCMS

S711085-CCV1
S711085-TUN1

S711122

Semivolatile Organic Compounds by GCMS

S711122-CCV1
S711122-TUN1

S711158

Extractable Petroleum Hydrocarbons

S711158-CCV1

S815556

Extractable Petroleum Hydrocarbons

S815556-CCV1
S815556-CCV2

S815571

Extractable Petroleum Hydrocarbons

S815571-CCV1

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☑ Final Report
☐ Revised Report

Report Date:
19-Feb-18 14:20

Laboratory Report
SC44006

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824
Attn: Jeffrey Dvorak

Project: CFI - Littleton, NH
Project #: 60562121

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 # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Dawn Wojcik
Laboratory Director

Dawn E Wojcik

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York 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 11 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 Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. 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 Eurofins 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 (PA-68-04426).

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

Sample Summary

Work Order: SC44006

Project: CFI - Littleton, NH

Project Number: 60562121

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC44006-01	Parker Brook_021518	Surface Water	15-Feb-18 10:00	15-Feb-18 16:12

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. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

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.

E350.1

BZ89115-MS

This parameter is outside laboratory ms/msd specified recovery limits.

Ammonia as Nitrogen

EPA 200.7

Blanks:

1802261-BLK1

The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.

Zinc

Sample Acceptance Check Form

Client:	AECOM Environment - Chelmsford, MA
Project:	CFI - Littleton, NH / 60562121
Work Order:	SC44006
Sample(s) received on:	2/15/2018

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 cooled on ice 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?	☑	☐	☐

Summary of Hits

Lab ID: SC44006-01 **Client ID:** Parker Brook_021518

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ammonia as Nitrogen	110		50	ug/l	E350.1
Calcium	24200		100	µg/l	EPA 200.7
Iron	276		15.0	µg/l	EPA 200.7
Magnesium	2430		10.0	µg/l	EPA 200.7
Hardness	70.4		0.291	mg/l CaCO3	SM 2340B (11)

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Parker Brook_021518 SC44006-01	60562121	Surface Water	15-Feb-18 10:00	15-Feb-18

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Metals by EPA 200/6000 Series Methods													
Prepared by method General Prep-Metal													
	Preservation	**Field Preserved; pH<2 confirmed**		N/A			1	EPA 200/6000 methods	15-Feb-18		JS	1802265	
Total Metals by EPA 200 Series Methods													
7440-22-4	Silver	< 5.0		µg/l	5.0	3.5	1	EPA 200.7	15-Feb-18	16-Feb-18	TBC	1802261	X
7440-38-2	Arsenic	< 4.0		µg/l	4.0	2.8	1	"	"	"	"	"	X
7440-70-2	Calcium	**24,200**		µg/l	100	34.0	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 2.5		µg/l	2.5	0.4	1	"	"	"	"	"	X
7440-47-3	Chromium	< 5.0		µg/l	5.0	1.9	1	"	"	"	"	"	X
7440-50-8	Copper	< 5.0		µg/l	5.0	2.9	1	"	"	"	"	"	X
7439-89-6	Iron	**276**		µg/l	15.0	10.0	1	"	"	16-Feb-18	"	"	X
7439-97-6	Mercury	< 0.20		µg/l	0.20	0.13	1	EPA 245.1/7470A	"	16-Feb-18	ABW	1802264	X
7439-95-4	Magnesium	**2,430**		µg/l	10.0	7.4	1	EPA 200.7	"	16-Feb-18	TBC	1802261	X
7440-02-0	Nickel	< 5.0		µg/l	5.0	1.0	1	"	"	"	"	"	X
7439-92-1	Lead	< 7.5		µg/l	7.5	3.4	1	"	"	"	"	"	X
7440-36-0	Antimony	< 6.0		µg/l	6.0	2.6	1	"	"	"	"	"	X
7782-49-2	Selenium	< 15.0		µg/l	15.0	7.2	1	"	"	"	"	"	X
7440-66-6	Zinc	< 5.0		µg/l	5.0	2.7	1	"	"	"	"	"	X
General Chemistry Parameters													
16065-83-1	Trivalent Chromium	< 10.0		µg/l	10.0	5.3	1	Calculation	15-Feb-18	16-Feb-18	TBC	1802261	
	Hardness	**70.4**	HD	mg/l CaCO3	0.291	0.115	1	SM 2340B (11)	"	"	TBC	[CALC]	
18540-29-9	Hexavalent Chromium	< 5		µg/l	5	2	1	SM3500-Cr-B (11)/7196A	15-Feb-18 16:57	15-Feb-18 17:29	TN	1802263	X
Subcontracted Analyses													
Prepared by method 420249													
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*													
7664-41-7	Ammonia as Nitrogen	**110**		ug/l	50	50	1	E350.1	15-Feb-18 10:00	19-Feb-18 10:28	13693-A,I420249A		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 200.7										
Batch 1802261 - EPA 200 Series										
Blank (1802261-BLK1)					Prepared: 15-Feb-18 Analyzed: 16-Feb-18					
Selenium	< 15.0		µg/l	15.0						
Iron	< 15.0		µg/l	15.0						
Antimony	< 6.0		µg/l	6.0						
Arsenic	< 4.0		µg/l	4.0						
Zinc	**17.2**	QB2	µg/l	5.0						
Calcium	< 100		µg/l	100						
Silver	< 5.0		µg/l	5.0						
Lead	< 7.5		µg/l	7.5						
Nickel	< 5.0		µg/l	5.0						
Magnesium	< 10.0		µg/l	10.0						
Copper	< 5.0		µg/l	5.0						
Chromium	< 5.0		µg/l	5.0						
Cadmium	< 2.5		µg/l	2.5						
LCS (1802261-BS1)					Prepared: 15-Feb-18 Analyzed: 16-Feb-18					
Iron	**1290**		µg/l	15.0	1250		104	85-115		
Selenium	**1250**		µg/l	15.0	1250		100	85-115		
Antimony	**1230**		µg/l	6.0	1250		98	85-115		
Nickel	**1280**		µg/l	5.0	1250		102	85-115		
Lead	**1260**		µg/l	7.5	1250		101	85-115		
Zinc	**1270**		µg/l	5.0	1250		101	85-115		
Copper	**1250**		µg/l	5.0	1250		100	85-115		
Cadmium	**1220**		µg/l	2.5	1250		97	85-115		
Calcium	**6580**		µg/l	100	6250		105	85-115		
Silver	**1220**		µg/l	5.0	1250		98	85-115		
Magnesium	**1300**		µg/l	10.0	1250		104	85-115		
Arsenic	**1230**		µg/l	4.0	1250		98	85-115		
Chromium	**1260**		µg/l	5.0	1250		101	85-115		
Duplicate (1802261-DUP1)			**Source: SC44006-01**		Prepared: 15-Feb-18 Analyzed: 16-Feb-18					
Antimony	< 6.0		µg/l	6.0		BRL				20
Selenium	< 15.0		µg/l	15.0		BRL				20
Iron	**258**		µg/l	15.0		276			7	20
Nickel	< 5.0		µg/l	5.0		BRL				20
Silver	< 5.0		µg/l	5.0		BRL				20
Arsenic	< 4.0		µg/l	4.0		BRL				20
Calcium	**23600**		µg/l	100		24200			2	20
Cadmium	< 2.5		µg/l	2.5		BRL				20
Chromium	< 5.0		µg/l	5.0		BRL				20
Magnesium	**2380**		µg/l	10.0		2430			2	20
Lead	< 7.5		µg/l	7.5		BRL				20
Zinc	**2.9**	J	µg/l	5.0		3.2			10	20
Copper	< 5.0		µg/l	5.0		BRL				20
Matrix Spike (1802261-MS1)			**Source: SC44006-01**		Prepared: 15-Feb-18 Analyzed: 16-Feb-18					
Antimony	**1280**		µg/l	6.0	1250	BRL	102	70-130		
Selenium	**1320**		µg/l	15.0	1250	BRL	106	70-130		
Iron	**1610**		µg/l	15.0	1250	276	107	70-130		
Copper	**1290**		µg/l	5.0	1250	BRL	103	70-130		
Arsenic	**1290**		µg/l	4.0	1250	BRL	103	70-130		
Silver	**1270**		µg/l	5.0	1250	BRL	102	70-130		
Zinc	**1290**		µg/l	5.0	1250	3.2	103	70-130		
Calcium	**29500**		µg/l	100	6250	24200	85	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 200.7										
Batch 1802261 - EPA 200 Series										
Matrix Spike (1802261-MS1)			**Source: SC44006-01**			Prepared: 15-Feb-18 Analyzed: 16-Feb-18				
Chromium	**1280**		µg/l	5.0	1250	BRL	102	70-130		
Lead	**1270**		µg/l	7.5	1250	BRL	102	70-130		
Magnesium	**3610**		µg/l	10.0	1250	2430	94	70-130		
Nickel	**1280**		µg/l	5.0	1250	BRL	103	70-130		
Cadmium	**1230**		µg/l	2.5	1250	BRL	99	70-130		
Post Spike (1802261-PS1)			**Source: SC44006-01**			Prepared: 15-Feb-18 Analyzed: 16-Feb-18				
Antimony	**1270**		µg/l	6.0	1250	BRL	102	85-115		
Selenium	**1320**		µg/l	15.0	1250	BRL	106	85-115		
Iron	**1560**		µg/l	15.0	1250	276	103	85-115		
Magnesium	**3640**		µg/l	10.0	1250	2430	96	85-115		
Copper	**1290**		µg/l	5.0	1250	BRL	103	85-115		
Chromium	**1290**		µg/l	5.0	1250	BRL	103	85-115		
Lead	**1280**		µg/l	7.5	1250	BRL	102	85-115		
Silver	**1270**		µg/l	5.0	1250	BRL	102	85-115		
Cadmium	**1230**		µg/l	2.5	1250	BRL	99	85-115		
Calcium	**29800**		µg/l	100	6250	24200	89	85-115		
Zinc	**1300**		µg/l	5.0	1250	3.2	104	85-115		
Arsenic	**1290**		µg/l	4.0	1250	BRL	103	85-115		
Nickel	**1280**		µg/l	5.0	1250	BRL	103	85-115		
EPA 245.1/7470A										
Batch 1802264 - EPA200/SW7000 Series										
Blank (1802264-BLK1)						Prepared: 15-Feb-18 Analyzed: 16-Feb-18				
Mercury	< 0.20		µg/l	0.20						
LCS (1802264-BS1)						Prepared: 15-Feb-18 Analyzed: 16-Feb-18				
Mercury	**4.26**		µg/l	0.20	5.00		85	85-115		
Duplicate (1802264-DUP1)			**Source: SC44006-01**			Prepared: 15-Feb-18 Analyzed: 16-Feb-18				
Mercury	< 0.20		µg/l	0.20		BRL				20
Matrix Spike (1802264-MS1)			**Source: SC44006-01**			Prepared: 15-Feb-18 Analyzed: 16-Feb-18				
Mercury	**4.99**		µg/l	0.20	5.00	BRL	100	80-120		
Post Spike (1802264-PS1)			**Source: SC44006-01**			Prepared: 15-Feb-18 Analyzed: 16-Feb-18				
Mercury	**4.48**		µg/l	0.20	5.00	BRL	90	85-115		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SM3500-Cr-B (11)/7196A										
Batch 1802263 - General Preparation										
Blank (1802263-BLK1)						Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	< 5		µg/l	5						
LCS (1802263-BS1)						Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	**51**		µg/l	5	50.0		102	90-111		
Calibration Blank (1802263-CCB1)						Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	**-0.0007**		µg/l							
Calibration Blank (1802263-CCB2)						Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	**-0.0009**		µg/l							
Calibration Check (1802263-CCV1)						Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	**51**		µg/l	5	50.0		103	90-110		
Calibration Check (1802263-CCV2)						Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	**51**		µg/l	5	50.0		103	90-110		
Duplicate (1802263-DUP1)			**Source: SC44006-01**			Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	< 5		µg/l	5		BRL				20
Matrix Spike (1802263-MS1)			**Source: SC44006-01**			Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	**51**		µg/l	5	50.0	BRL	102	85-115		
Matrix Spike Dup (1802263-MSD1)			**Source: SC44006-01**			Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	**51**		µg/l	5	50.0	BRL	102	85-115	0.2	20
Reference (1802263-SRM1)						Prepared & Analyzed: 15-Feb-18				
Hexavalent Chromium	**26**		µg/l	5	25.0		105	85-115		

Subcontracted Analyses - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
E350.1										
Batch 420249A - 420249										
BLK (BZ89115-BLK)					Prepared: 16-Feb-18 Analyzed: 19-Feb-18					
Ammonia as Nitrogen	< 50		ug/l	50				-		
DUP (BZ89115-DUP)			**Source: BZ89115**		Prepared: 16-Feb-18 Analyzed: 19-Feb-18					
Ammonia as Nitrogen	**44900**		ug/l	500				-	1.6	20
LCS (BZ89115-LCS)					Prepared: 16-Feb-18 Analyzed: 19-Feb-18					
Ammonia as Nitrogen	**3580**		ug/l	50	3.74		95.7	90-110		20
MS (BZ89115-MS)			**Source: BZ89115**		Prepared: 16-Feb-18 Analyzed: 19-Feb-18					
Ammonia as Nitrogen	**61700**	m	ug/l	50	20		87.5	90-110		20

Notes and Definitions

m	This parameter is outside laboratory ms/msd specified recovery limits.
QB2	The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.
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).
HD	Total Hardness is a calculation based on the reported values of Ca and Mg.

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.

√ SC 449006

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☐ Standard TAT - 7 to 10 business days

☑ Rush TAT - Date Needed: 48 Hrs (24 hrs for CrVI)

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Jeff Dvorak
250 Apollo Drive
Chelmsford, MA 01824
Telephone #: 978-905-2100
Project Mgr: Jeff Dvorak

Invoice To: Same
P.O No.: Quote #:

Project No: 60562121
Site Name: Cumberland Farms #NH3160
Location: Littleton State: NH
Sampler(s): Bobby Hoch

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**= None **12**=

DW=Drinking 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

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: Hardness via SM 2340B	Ammonia via SM 4500 B	Metals (Sb, As, Cd,Cr III, Cu, Fe) via EPA 200	Metals (Pb, Ni, Se, Ag, Zn) via EPA 200	Mercury via 245.1 7470 A	Cr VI via 7196 A			Check if chlorinated
	List Preservative Code below:									4	3	4	4	4	11			
449006-01	Parker Brook_021518	2/15/2018	1000	G	SW				6	X	X	X	X	X	X			☐
																		☐
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																		☐
																		☐
																		☐
																		☐
																		☐
																		☐

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:

Relinquished by:	Received by:	Date:	Time:
Bob Hoch	[illegible]	2-15-18	1350
DBR	[illegible]	2/15/18	1612

Temp °C: Observed 0.1 | Correction Factor | Corrected 0.1 | IR ID # 01

☑ EDD format: Jeff.Dvorak@aecom.com
☑ E-mail to:

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

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 48 Hrs (24 hrs for CrVI)

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Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

SC 44006 @ √

Report To: Jeff Dvorak
250 Apollo Drive
Chelmsford, MA 01824
Telephone #: 978-905-2100
Project Mgr: Jeff Dvorak

Invoice To: Same
P.O No.: Quote #:

Project No: 60562121
Site Name: Cumberland Farms #NH3160
Location: Littleton State: NH
Sampler(s): Bobby Hoch

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**= None **12**=

DW=Drinking 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

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: Hardness via ~~SM 2340B~~ 200.7	Ammonia via SM ~~4500 B~~ 350.1	Metals (Sb, As, Cd,Cr III, Cu, Fe) via EPA 200	Metals (Pb, Ni, Se, Ag, Zn) via EPA 200	Mercury via 245.1 7470 A	Cr VI via 7196 A	Check if chlorinated	QA/QC Reporting Notes: * additional charges may appply
										List Preservative Code below: 4	3	4	4	4	11		
44006-01	Parker Brook_021518	2/15/2018	1000	G	SW				6	X	X	X	X	X	X	☐	Methods per client req 2/16/18 e
																☐	
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																☐	

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:

Relinquished by:	Received by:	Date:	Time:
Bob Hoch		2-15-18	1350
DSR		2/15/18	1612

Temp °C: Observed 0.9 | Correction Factor | Corrected 0.9 | IR ID # 01

☑ EDD format: Jeff.Dvorak@aecom.com
☑ E-mail to:

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

Batch Summary

[CALC]

General Chemistry Parameters

SC44006-01 (Parker Brook_021518)

1802261

Total Metals by EPA 200 Series Methods

1802261-BLK1
1802261-BS1
1802261-DUP1
1802261-MS1
1802261-PS1
SC44006-01 (Parker Brook_021518)
SC44006-01 (Parker Brook_021518)

1802263

General Chemistry Parameters

1802263-BLK1
1802263-BS1
1802263-CCB1
1802263-CCB2
1802263-CCV1
1802263-CCV2
1802263-DUP1
1802263-MS1
1802263-MSD1
1802263-SRM1
SC44006-01 (Parker Brook_021518)

1802264

Total Metals by EPA 200 Series Methods

1802264-BLK1
1802264-BS1
1802264-DUP1
1802264-MS1
1802264-PS1
SC44006-01 (Parker Brook_021518)

1802265

Total Metals by EPA 200/6000 Series Methods

SC44006-01 (Parker Brook_021518)

420249A

Subcontracted Analyses

BZ89115-BLK
BZ89115-DUP
BZ89115-LCS
BZ89115-MS
SC44006-01 (Parker Brook_021518)