



Certified Mail #70111570000163098728

March 31, 2015

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912

Re: Notice of Intent for Application of a Remediation General Permit
Cumberland Farms, Inc. Property #MA8035
357 and 381 Main Street
Southbridge, Massachusetts

To Whom it May Concern:

Kleinfelder, on behalf of Cumberland Farms, Inc. (CFI), has prepared the enclosed Notice of Intent (NOI) for application of a Remediation General Permit (RGP) for upcoming activities at Cumberland Farms, Inc. Property #MA8035, located at 357 and 381 Main Street, in Southbridge, Massachusetts. This NOI is for the discharge generated during groundwater dewatering activities associated with the excavation for the installation of two 20,000 gallon compartmentalized (gasoline/diesel) underground storage tanks (USTs). During these activities, the above referenced site will be excavated to approximately sixteen feet below grade for the installation of the new USTs.

In preparation for groundwater dewatering activities, representative groundwater samples were collected on June 25, 2013 and February 27, 2015. Groundwater samples collected during these sampling events indicated concentrations of total metals (specifically arsenic, chromium III, copper, lead, nickel, and zinc) above the Appendix III permissible discharge limits; however, dissolved metals concentrations from the same samples were below permissible discharge limits. Based on these analytical results, it is anticipated that the detected metals are representative of the suspended sediment and will, therefore, be successfully filtered out in the bag filters of the proposed treatment system. In addition, Kleinfelder is proposing to include granular activated carbon as part of the treatment system as a conservative measure based on a detection of methyl tert-butyl ether and historical property use as an automotive repair facility. Other historical site uses include residential and commercial restaurant operations.

Please refer to the attached application for a full description of the proposed groundwater discharge and treatment.

This location is subject to the Massachusetts Contingency Plan (MCP) and 310 CMR 40.000, under release tracking number (RTN) 2-19462, therefore no State Application Form BRPWM 12 or state fee is required.

The excavation, dewatering, and discharge are anticipated to begin in April 2015 and last for approximately three weeks.

If you have any questions please do not hesitate to contact the undersigned at 508-370-8256.

Sincerely,
KLEINFELDER



Samantha Slater
Project Geologist



Emily M. Straley
Project Manager

CC: Matthew Young, Cumberland Farms, Inc. (file)
Heather Blakeley, Southbridge Public Works Department, 185 Guelphwood Road,
Southbridge, MA 01550 (email)



Certified Mail #70111570000163098735
March 31, 2015

Massachusetts Department of Environmental Protection
Division of Watershed Management
8 New Bond Road
Worcester, MA 01606

Re: Notice of Intent for Application of a Remediation General Permit
Cumberland Farms, Inc. Property #MA8035
357 and 381 Main Street
Southbridge, Massachusetts

To Whom it May Concern:

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In preparation for groundwater dewatering activities, representative groundwater samples were collected on June 25, 2013 and February 27, 2015. Groundwater samples collected during these sampling events indicated concentrations of total metals (specifically arsenic, chromium III, copper, lead, nickel, and zinc) above the Appendix III permissible discharge limits; however, dissolved metals concentrations from the same samples were below permissible discharge limits. Based on these analytical results, it is anticipated that the detected metals are representative of the suspended sediment and will, therefore, be successfully filtered out in the bag filters of the proposed treatment system. In addition, Kleinfelder is proposing to include granular activated carbon as part of the treatment system as a conservative measure based on a detection of methyl tert-butyl ether and historical property use as an automotive repair facility. Other historical site uses included residential and commercial restaurant operations.

Please refer to the attached application for a full description of the proposed groundwater discharge and treatment.

The NOI was submitted to the Environmental Protection Agency (EPA) on March 31, 2015. This location is subject to the Massachusetts Contingency Plan (MCP) and 310 CMR 40.000, under release tracking number (RTN) 2-19462, therefore no State Application Form BRPWM 12 or state fee is required.

The excavation, dewatering, and discharge are anticipated to begin in April 2015 and last for approximately three weeks.

If you have any questions please do not hesitate to contact the undersigned at 508-370-8256.

Sincerely,
KLEINFELDER



Samantha Slater
Project Geologist



Emily M. Straley
Project Manager

CC: Matthew Young, Cumberland Farms, Inc. (file)

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

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

a) Name of facility/site :		Facility/site mailing address:	
Location of facility/site : longitude: _____ latitude: _____	Facility SIC code(s):	Street:	
b) Name of facility/site owner : Cumberland Farms, Inc.		Town:	
Email address of facility/site owner:	State:	Zip:	County:
Telephone no. of facility/site owner :			
Fax no. of facility/site owner :	Owner is (check one): 1. Federal____ 2. State/Tribal____ 3. Private____ 4. Other ____ if so, describe:		
Address of owner (if different from site):			
Street:			
Town:	State:	Zip:	County:
c) Legal name of operator :	Operator telephone no:		
	Operator fax no.:		Operator email:
Operator contact name and title:			
Address of operator (if different from owner):	Street:		
Town:	State:	Zip:	County:

d) Check Y for “yes” or N for “no” for the following: 1. Has a prior NPDES permit exclusion been granted for the discharge? Y___ N___, if Y, number: _____ 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Y___ N___, if Y, date and tracking #: _____ 3. Is the discharge a “new discharge” as defined by 40 CFR 122.2? Y___ N___ 4. For sites in Massachusetts, is the discharge covered under the Massachusetts Contingency Plan (MCP) and exempt from state permitting? Y___ N___	
e) Is site/facility subject to any State permitting, license, or other action which is causing the generation of discharge? Y___ N___ If Y, please list: 1. site identification # assigned by the state of NH or MA: _____ 2. permit or license # assigned: _____ 3. state agency contact information: name, location, and telephone number: _____	f) Is the site/facility covered by any other EPA permit, including: 1. Multi-Sector General Permit? Y___ N___, if Y, number: _____ 2. Final Dewatering General Permit? Y___ N___, if Y, number: _____ 3. EPA Construction General Permit? Y___ N___, if Y, number: _____ 4. Individual NPDES permit? Y___ N___, if Y, number: _____ 5. Any other water quality related individual or general permit? Y___ N___, if Y, number: _____
g) Is the site/facility located within or does it discharge to an Area of Critical Environmental Concern (ACEC)? Y___ N___	
h) Based on the facility/site information and any historical sampling data, identify the sub-category into which the potential discharge falls.	
<u>Activity Category</u>	<u>Activity Sub-Category</u>
I - Petroleum Related Site Remediation	A. Gasoline Only Sites _____ B. Fuel Oils and Other Oil Sites (including Residential Non-Business Remediation Discharges) _____ C. Petroleum Sites with Additional Contamination _____
II - Non Petroleum Site Remediation	A. Volatile Organic Compound (VOC) Only Sites _____ B. VOC Sites with Additional Contamination _____ C. Primarily Heavy Metal Sites _____
III - Contaminated Construction Dewatering	A. General Urban Fill Sites _____ B. Known Contaminated Sites _____

IV - Miscellaneous Related Discharges	A. Aquifer Pump Testing to Evaluate Formerly Contaminated Sites ____ B. Well Development/Rehabilitation at Contaminated/Formerly Contaminated Sites ____ C. Hydrostatic Testing of Pipelines and Tanks ____ D. Long-Term Remediation of Contaminated Sumps and Dikes ____ E. Short-term Contaminated Dredging Drain Back Waters (if not covered by 401/404 permit) ____
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as necessary) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:	
b) Provide the following information about each discharge:	
1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow _____ Is maximum flow a design value ? Y ____ N ____ Average flow (include units) _____ Is average flow a design value or estimate? _____
3) Latitude and longitude of each discharge within 100 feet: pt.1: lat. _____ long. _____; pt.2: lat. _____ long. _____; pt.3: lat. _____ long. _____; pt.4: lat. _____ long. _____; pt.5: lat. _____ long. _____; pt.6: lat. _____ long. _____; pt.7: lat. _____ long. _____; pt.8: lat. _____ long. _____; etc.	
4) If hydrostatic testing, total volume of the discharge (gals): _____	5) Is the discharge intermittent ____ or seasonal ____? Is discharge ongoing? Y ____ N ____
c) Expected dates of discharge (mm/dd/yy): start _____ end _____	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).	

3. Contaminant information.

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

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

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

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

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

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

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

⁴ The sum of individual phthalate compounds.

<u>Parameter *</u>	<u>CAS Number</u>	<u>Believed Absent</u>	<u>Believed Present</u>	<u># of Samples</u>	<u>Sample Type (e.g., grab)</u>	<u>Analytical Method Used (method #)</u>	<u>Minimum Level (ML) of Test Method</u>	<u>Maximum daily value</u>		<u>Average daily value</u>	
								<u>concentration (ug/l)</u>	<u>mass (kg)</u>	<u>concentration (ug/l)</u>	<u>mass (kg)</u>
h. Acenaphthene	83329										
i. Acenaphthylene	208968										
j. Anthracene	120127										
k. Benzo(ghi) Perylene	191242										
l. Fluoranthene	206440										
m. Fluorene	86737										
n. Naphthalene	91203										
o. Phenanthrene	85018										
p. Pyrene	129000										
37. Total Polychlorinated Biphenyls (PCBs)	85687; 84742; 117840; 84662; 131113; 117817.										
38. Chloride	16887006										
39. Antimony	7440360										
40. Arsenic	7440382										
41. Cadmium	7440439										
42. Chromium III (trivalent)	16065831										
43. Chromium VI (hexavalent)	18540299										
44. Copper	7440508										
45. Lead	7439921										
46. Mercury	7439976										
47. Nickel	7440020										
48. Selenium	7782492										
49. Silver	7440224										
50. Zinc	7440666										
51. Iron	7439896										
Barium	7440393										

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

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

<i>Step 1:</i> Do any of the metals in the influent exceed the effluent limits in Appendix III (i.e., the limits set at zero dilution)? Y _____ N _____	If yes, which metals?
<i>Step 2:</i> For any metals which exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metal: _____ DF: _____ Metal: _____ DF: _____ Metal: _____ DF: _____ Metal: _____ DF: _____ Etc.	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y _____ N _____ If Y, list which metals:

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

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank	Air stripper	Oil/water separator	Equalization tanks	Bag filter	GAC filter
	Chlorination	De-chlorination	Other (please describe):			

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

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

Design flow rate of treatment system _____ gpm

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

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

a) Identify the discharge pathway:	Direct to receiving water _____	Within facility (sewer) _____	Storm drain _____	Wetlands _____	Other (describe): _____
b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:					
c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water: 1. For multiple discharges, number the discharges sequentially. 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.					
d) Provide the state water quality classification of the receiving water _____					
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _____ cfs Please attach any calculation sheets used to support stream flow and dilution calculations.					
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Y _____ N _____ If yes, for which pollutant(s)? Debris/Floatables/Trash; Excess Algal Growth; Turbidity _____					
Is there a final TMDL? Y _____ N _____ If yes, for which pollutant(s)? _____					

6. ESA and NHPA Eligibility.

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

- a) Using the instructions in Appendix VII and information on Appendix II, under which criterion listed in Part I.C are you eligible for coverage under this general permit?
A ____ B ____ C ____ D ____ E ____ F ____
- b) If you selected Criterion D or F, has consultation with the federal services been completed? Y ____ N ____ Underway ____
- c) If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is “not likely to adversely affect” listed species or critical habitat received? Y ____ N ____
- d) Attach documentation of ESA eligibility as described in the NOI instructions and required by Appendix VII, Part I.C, Step 4.
- e) Using the instructions in Appendix VII, under which criterion listed in Part II.C are you eligible for coverage under this general permit?
1 ____ 2 ____ 3 ____
- f) If Criterion 3 was selected, attach all written correspondence with the State or Tribal historic preservation officers, including any terms and conditions that outline measures the applicant must follow to mitigate or prevent adverse effects due to activities regulated by the RGP.

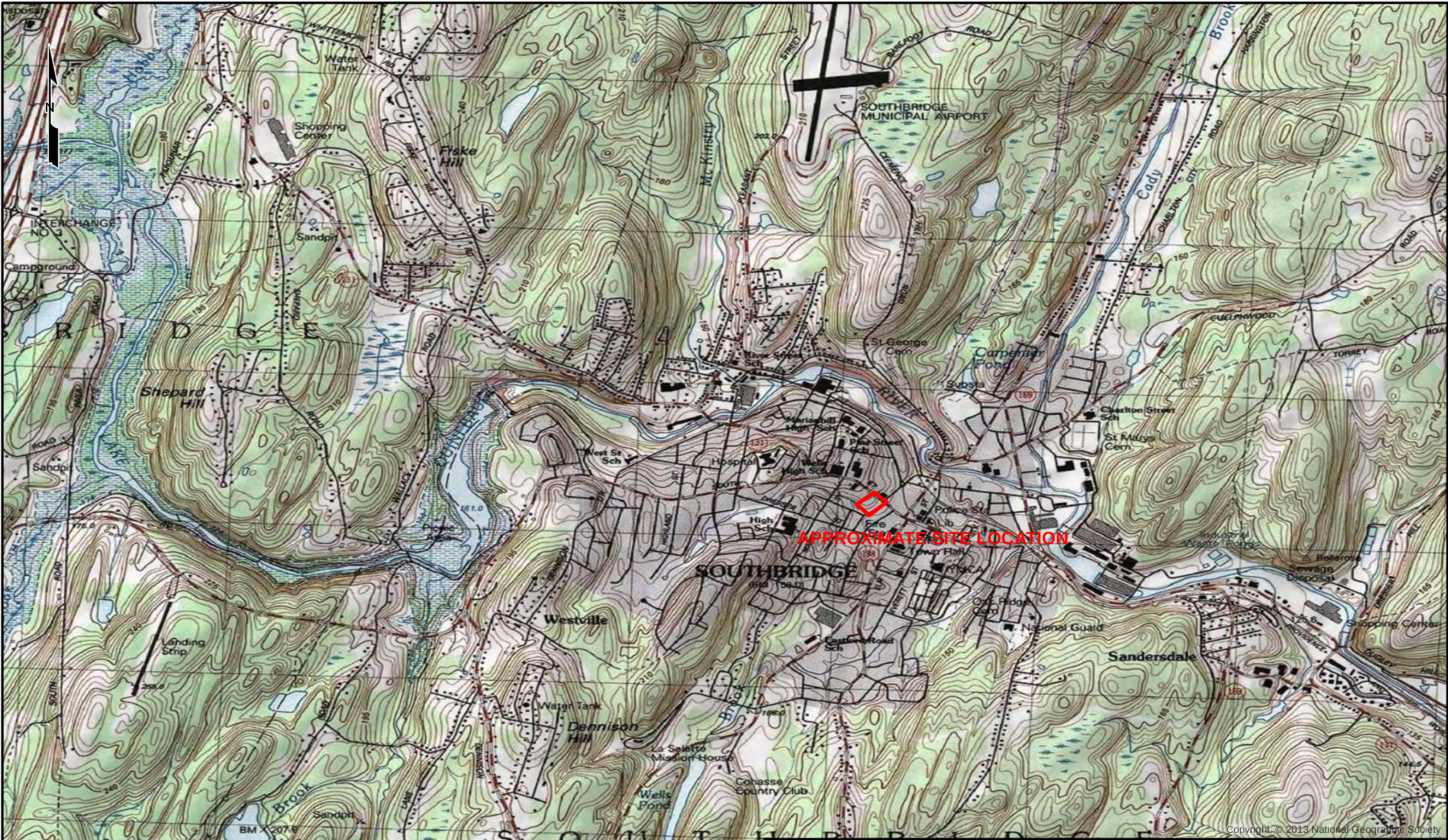
7. Supplemental information.

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

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name:	Cumberland Farms, Inc. Southbridge Project # MA8035		
Operator signature:			
Printed Name & Title:	Matthew D. Young Senior Project Manager		
Date:	March 31, 2015		



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NOTES: 1. Plan originated on 11x17 paper.
2. Base plan from 1:24,000 USGS topographic plan accessed through ArcGIS base map server.



PROJECT NO.	134167	SITE LOCATION MAP	FIGURE 1
DRAWN:	11/8/13		
DRAWN BY:	ESB		
CHECKED BY:	JKM	CUMBERLAND FARMS 357 and 381 MAIN STREET SOUTHBRIDGE, MASSACHUSETTS	
FILE NAME:	PLATE1-SITELOCATION		

GENERAL NOTES

1. BASE PLAN OBTAINED FROM DRAWING TITLED, "CONCEPTUAL SITE PLAN", PREPARED BY VANASSE HANGEN BRUSTLIN, INC., DATED 8/27/2013.

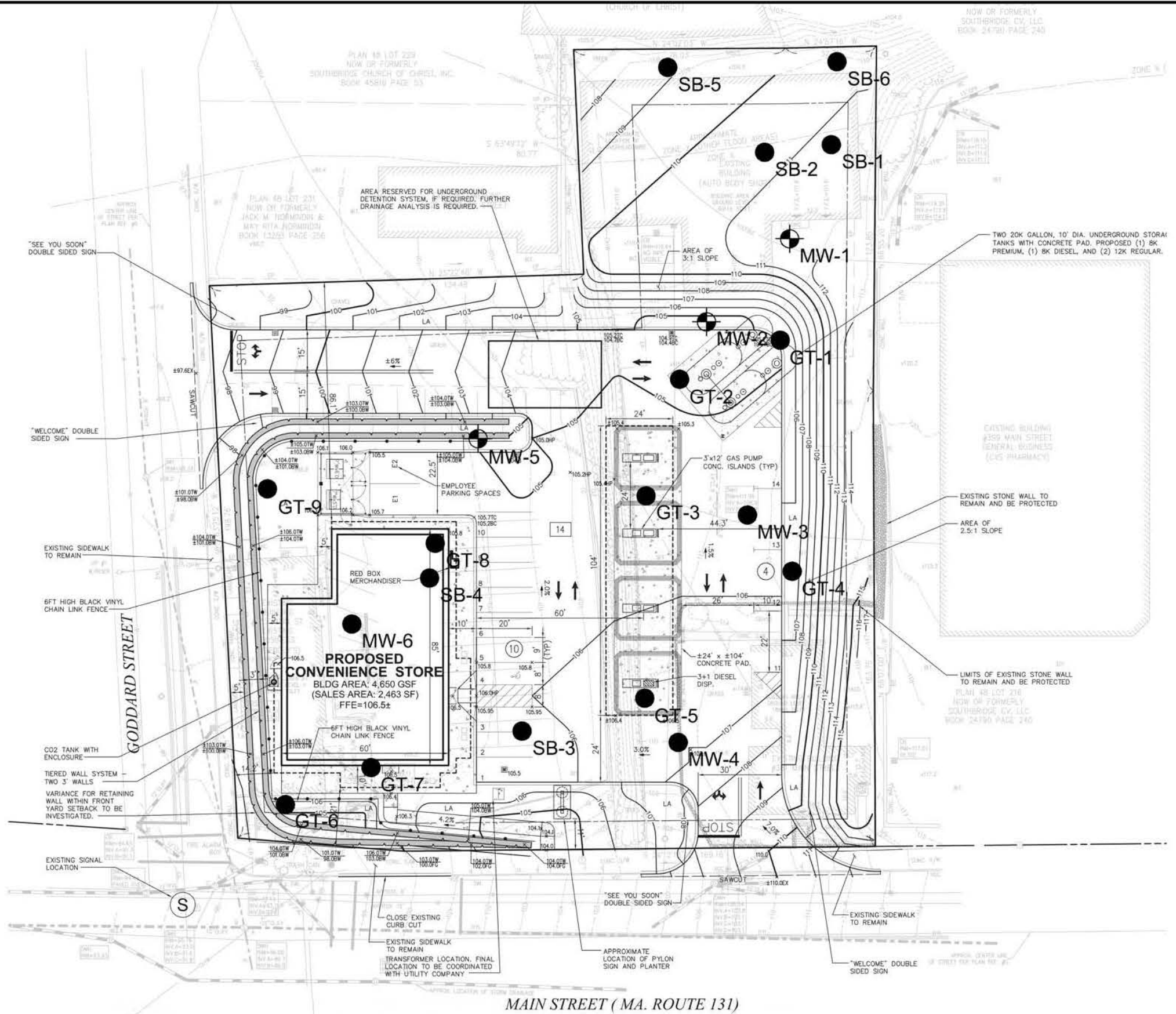
LEGEND

- SB-1 - SOIL BORING
- ⊕ GT-7 - MONITORING WELL

40' 20' 10' 0 40'

1 INCH = 40 FEET

The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.



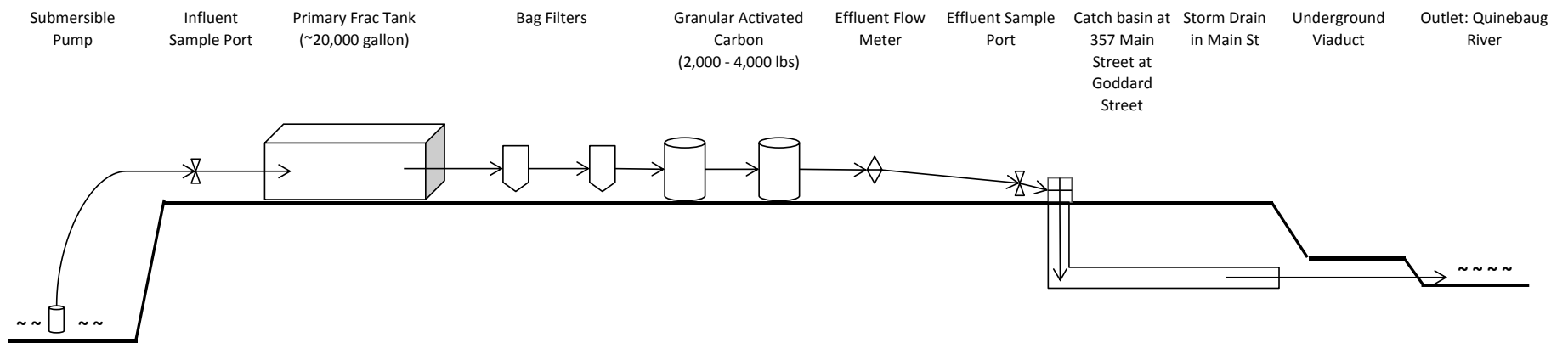
PROJECT NO.	134167
DRAWN:	11/7/2013
DRAWN BY:	ESB
CHECKED BY:	JKM
FILE NAME:	134167 BLP.dwg

SITE PLAN

CUMBERLAND FARMS - PROPOSED GAS STATION
AND CONVENIENCE STORE
357 AND 381 MAIN STREET
SOUTHBRIDGE, MA

FIGURE

2



Treatment System Schematic
 Cumberland Farms
 357 and 381 Main Street
 Southbridge, MA

FIGURE
3



Legend

- ◆ Catchbasins
- ◇ Outfalls
- Drain Manholes
- Drain Pipes
- Sanitary Sewer Manholes
- Sanitary Sewer Pipes



0 25 50 100 150 200
Feet



PROJECT NO. 134167

DRAWN: 3/23/2015

DRAWN BY: HRB

CHECKED BY: EMS

RECEIVING WATER PLAN

CUMBERLAND FARMS
357 and 381 MAIN STREET
SOUTHBRIDGE, MASSACHUSETTS

FIGURE

4

Dilution Factor Calculation

Cumberland Farms, Inc. Property #MA8035

357 and 381 Main Street

Southbridge, MA

Equation used for calculating the dilution factor: $DF = (Q_d + Q_s)/Q_d$

Where:

DF= Dilution Factor

Q_d= Maximum flow rate of the discharge in cubic feet per second (cfs) (1.0 gpm = 0.00223cfs)

Q_s= Receiving water 7Q₁₀ flow (cfs) where 7Q₁₀ is the minimum flow (cfs) for 7 consecutive days with a recurrence interval of 10 years

Q_d= 0.334

Q_s= 10.4 Value from the USGS Stream Stats site for Streamgage 01123600 QUINEBAUG R BL
WESTVILLE DAM NR SOUTHBRIDGE, MA

DF= 32.13772455

Metal	Max. Detection (ug/L)	Appendix IV Recoverable Metal Limitation (ug/L) by DF Range - >10 -50
Arsenic	20.70	100
Chrome III	233	489
Copper	117	52
Iron	83,800	5,000
Lead	51.70	13
Nickel	164	290
Zinc	213	666



StreamStats Data-Collection Station Report

USGS Station Number 01123600
Station Name QUINEBAUG R BL WESTVILLE DAM NR SOUTHBRIDGE, MA

[Click here to link to available data on NWIS-Web for this site.](#)

Descriptive Information

Station Type	Gaging Station, continuous record
Location	
Gage	
Regulation and Diversions	
Regulated?	True
Period of Record	1963-80
Remarks	Regulated by East Brimfield and Westville Lakes and other reservoirs.
Latitude (degrees NAD83)	42.08287306
Longitude (degrees NAD83)	-72.05702
Hydrologic unit code	01100001
County	027-Worcester
HCDN2009	No

Physical Characteristics

Characteristic Name	Value	Units	Citation Number
Descriptive Information			
State_Code	25	dimensionless	30
Datum_of_Latitude_Longitude	NAD83	dimensionless	30
District_Code	25	dimensionless	30
Begin_date_of_record	10/1/1962	days	41
End_date_of_record	9/30/2003	days	41
Number_of_days_of_record	10592	days	41
Number_of_days_GT_0	10592	days	41
Basin Dimensional Characteristics			
Drainage_Area	99	square miles	30

Streamflow Statistics

Statistic Name	Value	Units	Citation Number	Preferred?	Years of Record	Standard Error, percent	Variance log-10	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Start Date	End Date	Remarks
Low-Flow Statistics												
7_Day_2_Year_Low_Flow	17.3	cubic feet per second	05	Y								
7_Day_10_Year_Low_Flow	10.4	cubic feet per second	05	Y								
Flow-Duration Statistics												
1_Percent_Duration	977.58	cubic feet per second	41	Y	30							
5_Percent_Duration	523.7	cubic feet per second	41	Y	30							
10_Percent_Duration	377.3	cubic feet per	41	Y	30							

		second											
20_Percent_Duration	264	cubic feet per second	41	Y	30								
25_Percent_Duration	230	cubic feet per second	41	Y	30								
30_Percent_Duration	199	cubic feet per second	41	Y	30								
40_Percent_Duration	152.7	cubic feet per second	41	Y	30								
50_Percent_Duration	115	cubic feet per second	41	Y	30								
60_Percent_Duration	84	cubic feet per second	41	Y	30								
70_Percent_Duration	60	cubic feet per second	41	Y	30								
75_Percent_Duration	49.5	cubic feet per second	41	Y	30								
80_Percent_Duration	42	cubic feet per second	41	Y	30								
90_Percent_Duration	27	cubic feet per second	41	Y	30								
95_Percent_Duration	20	cubic feet per second	41	Y	30								
99_Percent_Duration	13	cubic feet per second	41	Y	30								
General Flow Statistics													
Minimum_daily_flow	7.3	cubic feet per second	41	Y	30								
Maximum_daily_flow	1620	cubic feet per second	41	Y	30								
Std_Dev_of_daily_flows	187.694	cubic feet per second	41	Y	30								
Average_daily_streamflow	174.021	cubic feet per second	41	Y	30								
Base Flow Statistics													
Number_of_years_to_compute_BFI	29	years	42	Y	30								
Average_BFI_value	0.557	dimensionless	42	Y	30								
Std_dev_of_annual_BFI_values	0.068	dimensionless	42	Y	30								

Citations

Citation Number	Citation Name and URL
05	Eames, V.A., and Epstein, V.J., 1988, Water Resources in the French-Quinebaug Rivers Basin, Massachusetts: U.S. Geological Survey Hydrologic Investigations Atlas HA-700
30	Imported from NWIS file
41	Wolock, D.M., 2003, Flow characteristics at U.S. Geological Survey streamgages in the conterminous United States: U.S. Geological Survey Open-File Report 03-146, digital data set
42	Wolock, D.M., 2003, Base-flow index grid for the conterminous United States: U.S. Geological Survey Open-File Report 03-263, digital data set

Report Date:
03-Jul-13 16:22



SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

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

Kleinfelder, Inc.
1 Speen Street, Suite 200
Framingham, MA 01701
Attn: Moira Johnson

Project: 357-381 Main Street - Southbridge, MA
Project #: CFI ASTM Southbridge, MA

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB72315-01	MW-1	Ground Water	25-Jun-13 12:00	27-Jun-13 13:10
SB72315-02	MW-2	Ground Water	25-Jun-13 11:00	27-Jun-13 13:10
SB72315-03	MW-5	Ground Water	25-Jun-13 12:30	27-Jun-13 13:10
SB72315-04	Trip Blank	Ground Water	25-Jun-13 00:00	27-Jun-13 13:10
SB72315-05	Field Blank	Ground Water	25-Jun-13 12:00	27-Jun-13 13:10

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

All applicable NELAC requirements have been met.

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



Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 36 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

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

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

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 °C ✓ Other: 0.2°C		

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 °C ✓ Other: 0.2°C		

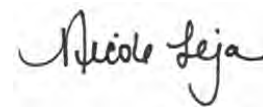
Were all QA/QC procedures followed as required by the EPH method? *Yes*

Were any significant modifications made to the EPH method as specified in Section 11.3? *No*

Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

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

Authorized by:



Nicole Leja
Laboratory Director

CASE NARRATIVE:

The samples were received 0.2 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.

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

MADEP EPH 5/2004 R**Calibration:**

1305062

Analyte quantified by quadratic equation type calibration.

Dibenzo (a,h) anthracene

Indeno (1,2,3-cd) pyrene

This affected the following samples:

1315399-BLK1

1315399-BS1

1315399-BS3

1315399-BSD1

MW-1

MW-2

MW-5

S305722-ICV1

S307806-CCV1

S307809-CCV1

S307809-CCV2

MADEP VPH 5/2004 Rev. 1.1**Samples:**

SB72315-03

MW-5

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

SW846 8260C**Calibration:**

1306100

Analyte quantified by quadratic equation type calibration.

1,2,3-Trichlorobenzene

Acrylonitrile

Naphthalene

This affected the following samples:

1315441-BLK1

1315441-BS1

1315441-BSD1

MW-1

MW-2

MW-5

S307414-ICV1

S307677-CCV1

SW846 8260C

Calibration:

S307414-ICV1

Analyte percent recovery is outside individual acceptance criteria (80-120).

trans-1,4-Dichloro-2-butene (124%)

This affected the following samples:

1315441-BLK1

1315441-BS1

1315441-BSD1

MW-1

MW-2

MW-5

S307677-CCV1

Laboratory Control Samples:

1315441 BS/BSD

Acetone percent recoveries (57/60) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

MW-2

MW-5

Acrylonitrile percent recoveries (61/65) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

MW-2

MW-5

Ethanol percent recoveries (69/67) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

MW-2

MW-5

Trichlorofluoromethane (Freon 11) percent recoveries (137/133) 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

MW-2

MW-5

Samples:

S307677-CCV1

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

Acetone (-39.8%)

Dichlorodifluoromethane (Freon12) (21.2%)

Ethanol (-32.9%)

Trichlorofluoromethane (Freon 11) (33.2%)

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

Acrylonitrile (-34.6%)

SW846 8260C

Samples:

S307677-CCV1

This affected the following samples:

1315441-BLK1

1315441-BS1

1315441-BSD1

MW-1

MW-2

MW-5

SB72315-03

MW-5

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

Sample Acceptance Check Form

Client: Kleinfelder, Inc. - Framingham, MA
 Project: 357-381 Main Street - Southbridge, MA / CFI ASTM Southbridge, MA
 Work Order: SB72315
 Sample(s) received on: 6/27/2013
 Received by: Jessica Hoffman

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

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
1. Were custody seals present?	☐	☒	☐
2. Were custody seals intact?	☐	☐	☒
3. Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	☒	☐	☐
4. Were samples cooled on ice upon transfer to laboratory representative?	☐	☒	☐
5. Were samples refrigerated upon transfer to laboratory representative?	☒	☐	☐
6. Were sample containers received intact?	☒	☐	☐
7. Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☐	☒	☐
8. Were samples accompanied by a Chain of Custody document?	☒	☐	☐
9. 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?	☒	☐	☐
10. Did sample container labels agree with Chain of Custody document?	☒	☐	☐
11. Were samples received within method-specific holding times?	☒	☐	☐

Sample Identification

MW-1
SB72315-01

Client Project #

CFI ASTM
Southbridge, MA

Matrix

Ground Water

Collection Date/Time

25-Jun-13 12:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00		µg/l	1.00	0.65	1	SW846 8260C	01-Jul-13	02-Jul-13	GMA	1315441	
67-64-1	Acetone	< 10.0		µg/l	10.0	2.56	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.46	1	"	"	"	"	"	
71-43-2	Benzene	< 1.00		µg/l	1.00	0.67	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 1.00		µg/l	1.00	0.72	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 1.00		µg/l	1.00	0.71	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.50		µg/l	0.50	0.48	1	"	"	"	"	"	
75-25-2	Bromoform	< 1.00		µg/l	1.00	0.60	1	"	"	"	"	"	
74-83-9	Bromomethane	< 2.00		µg/l	2.00	1.14	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 10.0		µg/l	10.0	1.73	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1.00		µg/l	1.00	0.56	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 1.00		µg/l	1.00	0.82	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 1.00		µg/l	1.00	0.74	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 2.00		µg/l	2.00	0.63	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 1.00		µg/l	1.00	0.55	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1.00		µg/l	1.00	0.65	1	"	"	"	"	"	
75-00-3	Chloroethane	< 2.00		µg/l	2.00	1.03	1	"	"	"	"	"	
67-66-3	Chloroform	1.24		µg/l	1.00	0.69	1	"	"	"	"	"	
74-87-3	Chloromethane	< 2.00		µg/l	2.00	1.47	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 1.00		µg/l	1.00	0.79	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 1.00		µg/l	1.00	0.73	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 2.00		µg/l	2.00	0.93	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.29	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1.00		µg/l	1.00	0.67	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.00		µg/l	1.00	0.67	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 1.00		µg/l	1.00	0.71	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 1.00		µg/l	1.00	0.62	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.00		µg/l	2.00	0.45	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1.00		µg/l	1.00	0.68	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1.00		µg/l	1.00	0.78	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1.00		µg/l	1.00	0.49	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.72	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.68	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1.00		µg/l	1.00	0.71	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1.00		µg/l	1.00	0.81	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1.00		µg/l	1.00	0.60	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 1.00		µg/l	1.00	0.64	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.50	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.00		µg/l	1.00	0.73	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.50		µg/l	0.50	0.45	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	< 10.0		µg/l	10.0	0.54	1	"	"	"	"	"	

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

Sample Identification

MW-1

SB72315-01

Client Project #CFI ASTM
Southbridge, MAMatrix

Ground Water

Collection Date/Time

25-Jun-13 12:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5030 Water MS

98-82-8	Isopropylbenzene	< 1.00		µg/l	1.00	0.62	1	SW846 8260C	01-Jul-13	02-Jul-13	GMA	1315441	
99-87-6	4-Isopropyltoluene	< 1.00		µg/l	1.00	0.61	1						
1634-04-4	Methyl tert-butyl ether	13.1		µg/l	1.00	0.65	1						
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0	0.93	1						
75-09-2	Methylene chloride	< 2.00		µg/l	2.00	0.69	1						
91-20-3	Naphthalene	< 1.00		µg/l	1.00	0.33	1						
103-65-1	n-Propylbenzene	< 1.00		µg/l	1.00	0.76	1						
100-42-5	Styrene	< 1.00		µg/l	1.00	0.62	1						
630-20-6	1,1,1,2-Tetrachloroethane	< 1.00		µg/l	1.00	0.63	1						
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.35	1						
127-18-4	Tetrachloroethene	< 1.00		µg/l	1.00	0.74	1						
108-88-3	Toluene	< 1.00		µg/l	1.00	0.81	1						
87-61-6	1,2,3-Trichlorobenzene	< 1.00		µg/l	1.00	0.38	1						
120-82-1	1,2,4-Trichlorobenzene	< 1.00		µg/l	1.00	0.36	1						
108-70-3	1,3,5-Trichlorobenzene	< 1.00		µg/l	1.00	0.78	1						
71-55-6	1,1,1-Trichloroethane	< 1.00		µg/l	1.00	0.58	1						
79-00-5	1,1,2-Trichloroethane	< 1.00		µg/l	1.00	0.64	1						
79-01-6	Trichloroethene	< 1.00		µg/l	1.00	0.76	1						
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.00		µg/l	1.00	0.63	1						
96-18-4	1,2,3-Trichloropropane	< 1.00		µg/l	1.00	0.74	1						
95-63-6	1,2,4-Trimethylbenzene	< 1.00		µg/l	1.00	0.76	1						
108-67-8	1,3,5-Trimethylbenzene	< 1.00		µg/l	1.00	0.74	1						
75-01-4	Vinyl chloride	< 1.00		µg/l	1.00	0.81	1						
179601-23-1	m,p-Xylene	< 2.00		µg/l	2.00	1.64	1						
95-47-6	o-Xylene	< 1.00		µg/l	1.00	0.88	1						
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	1.44	1						
60-29-7	Ethyl ether	< 1.00		µg/l	1.00	0.69	1						
994-05-8	Tert-amyl methyl ether	4.74		µg/l	1.00	0.72	1						
637-92-3	Ethyl tert-butyl ether	< 1.00		µg/l	1.00	0.78	1						
108-20-3	Di-isopropyl ether	< 1.00		µg/l	1.00	0.73	1						
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	8.64	1						
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	14.0	1						
110-57-6	trans-1,4-Dichloro-2-butene	< 5.00		µg/l	5.00	0.77	1						
64-17-5	Ethanol	< 400		µg/l	400	35.7	1						

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	97	70-130 %
2037-26-5	Toluene-d8	96	70-130 %
17060-07-0	1,2-Dichloroethane-d4	113	70-130 %
1868-53-7	Dibromofluoromethane	102	70-130 %

MADEP VPHPrepared by method VPH - EPA 5030C Water*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

MW-1

SB72315-01

Client Project #

CFI ASTM

Southbridge, MA

Matrix

Ground Water

Collection Date/Time

25-Jun-13 12:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsMADEP VPHPrepared by method VPH - EPA 5030C Water

	C5-C8 Aliphatic Hydrocarbons	< 75.0	D	µg/l	75.0	5.55	5	MADEP VPH 5/2004 Rev. 1.1	01-Jul-13	02-Jul-13	MP	1315452	
	C9-C12 Aliphatic Hydrocarbons	< 25.0	D	µg/l	25.0	4.22	5						
	C9-C10 Aromatic Hydrocarbons	< 25.0	D	µg/l	25.0	1.12	5						
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0	D	µg/l	75.0	7.10	5						
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0	D	µg/l	25.0	4.68	5						
71-43-2	Benzene	< 5.00	D	µg/l	5.00	1.26	5						
100-41-4	Ethylbenzene	< 5.00	D	µg/l	5.00	1.41	5						
1634-04-4	Methyl tert-butyl ether	14.3	D	µg/l	5.00	1.55	5						
91-20-3	Naphthalene	< 5.00	D	µg/l	5.00	1.17	5						
108-88-3	Toluene	< 5.00	D	µg/l	5.00	1.28	5						
179601-23-1	m,p-Xylene	< 10.0	D	µg/l	10.0	2.76	5						
95-47-6	o-Xylene	< 5.00	D	µg/l	5.00	1.12	5						

Surrogate recoveries:

615-59-8	2,5-Dibromotoluene (FID)	99			70-130 %								
615-59-8	2,5-Dibromotoluene (PID)	98			70-130 %								

Semivolatile Organic Compounds by GCPolychlorinated BiphenylsPrepared by method SW846 3510C

12674-11-2	Aroclor-1016	< 0.233		µg/l	0.233	0.0100	1	SW846 8082A	29-Jun-13	01-Jul-13	IMR	1315397	
11104-28-2	Aroclor-1221	< 0.233		µg/l	0.233	0.0166	1						
11141-16-5	Aroclor-1232	< 0.233		µg/l	0.233	0.0156	1						
53469-21-9	Aroclor-1242	< 0.233		µg/l	0.233	0.00849	1						
12672-29-6	Aroclor-1248	< 0.233		µg/l	0.233	0.0131	1						
11097-69-1	Aroclor-1254	< 0.233		µg/l	0.233	0.0115	1						
11096-82-5	Aroclor-1260	< 0.233		µg/l	0.233	0.00674	1						
37324-23-5	Aroclor-1262	< 0.233		µg/l	0.233	0.0101	1						
11100-14-4	Aroclor-1268	< 0.233		µg/l	0.233	0.0110	1						

Surrogate recoveries:

10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	65			30-150 %								
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	70			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr)	30			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr) [2C]	30			30-150 %								

Extractable Petroleum HydrocarbonsMADEP EPHPrepared by method SW846 3510C

	C9-C18 Aliphatic Hydrocarbons	< 118		µg/l	118	38.0	1	MADEP EPH 5/2004 R	29-Jun-13	03-Jul-13	MWP	1315399	
	C19-C36 Aliphatic Hydrocarbons	< 118		µg/l	118	36.7	1						

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Sample IdentificationMW-1
SB72315-01Client Project #CFI ASTM
Southbridge, MAMatrix

Ground Water

Collection Date/Time

25-Jun-13 12:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Extractable Petroleum Hydrocarbons**MADEP EPH**Prepared by method SW846 3510C

	C11-C22 Aromatic Hydrocarbons	< 118		µg/l	118	83.9	1	MADEP EPH 5/2004 R	29-Jun-13	03-Jul-13	MWP	1315399	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 118		µg/l	118	83.9	1						
91-20-3	Naphthalene	< 5.88		µg/l	5.88	1.99	1						
91-57-6	2-Methylnaphthalene	< 5.88		µg/l	5.88	3.96	1						
208-96-8	Acenaphthylene	< 5.88		µg/l	5.88	4.21	1						
83-32-9	Acenaphthene	< 5.88		µg/l	5.88	4.31	1						
86-73-7	Fluorene	< 5.88		µg/l	5.88	2.99	1						
85-01-8	Phenanthrene	< 5.88		µg/l	5.88	2.96	1						
120-12-7	Anthracene	< 5.88		µg/l	5.88	2.42	1						
206-44-0	Fluoranthene	< 5.88		µg/l	5.88	3.21	1						
129-00-0	Pyrene	< 5.88		µg/l	5.88	3.09	1						
56-55-3	Benzo (a) anthracene	< 5.88		µg/l	5.88	4.08	1						
218-01-9	Chrysene	< 5.88		µg/l	5.88	2.65	1						
205-99-2	Benzo (b) fluoranthene	< 5.88		µg/l	5.88	4.04	1						
207-08-9	Benzo (k) fluoranthene	< 5.88		µg/l	5.88	4.71	1						
50-32-8	Benzo (a) pyrene	< 5.88		µg/l	5.88	4.26	1						
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.88		µg/l	5.88	4.28	1						
53-70-3	Dibenzo (a,h) anthracene	< 5.88		µg/l	5.88	3.92	1						
191-24-2	Benzo (g,h,i) perylene	< 5.88		µg/l	5.88	3.79	1						

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	46			40-140 %								
84-15-1	Ortho-Terphenyl	70			40-140 %								
321-60-8	2-Fluorobiphenyl	78			40-140 %								

Soluble Metals by EPA 200/6000 Series Methods

	Filtration	Field Filtered		N/A			1	EPA 200.7/3005A/6010			LNB	1315337	
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Soluble Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0009	1	SW846 6010C	01-Jul-13	02-Jul-13	EDT	1315352	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0018	1						
7440-39-3	Barium	0.204		mg/l	0.0050	0.0007	1						
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0008	1						
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1						
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0020	1						
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0030	1						

Soluble Metals by EPA 200 Series Methods

7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00008	1	EPA 245.1/7470A	01-Jul-13	01-Jul-13	JLM	1315353	X
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Sample Identification

MW-2
SB72315-02

Client Project #

CFI ASTM
Southbridge, MA

Matrix

Ground Water

Collection Date/Time

25-Jun-13 11:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
<u>Prepared by method SW846 5030 Water MS</u>													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00		µg/l	1.00	0.65	1	SW846 8260C	01-Jul-13	02-Jul-13	GMA	1315441	
67-64-1	Acetone	< 10.0		µg/l	10.0	2.56	1						
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.46	1						
71-43-2	Benzene	< 1.00		µg/l	1.00	0.67	1						
108-86-1	Bromobenzene	< 1.00		µg/l	1.00	0.72	1						
74-97-5	Bromochloromethane	< 1.00		µg/l	1.00	0.71	1						
75-27-4	Bromodichloromethane	< 0.50		µg/l	0.50	0.48	1						
75-25-2	Bromoform	< 1.00		µg/l	1.00	0.60	1						
74-83-9	Bromomethane	< 2.00		µg/l	2.00	1.14	1						
78-93-3	2-Butanone (MEK)	< 10.0		µg/l	10.0	1.73	1						
104-51-8	n-Butylbenzene	< 1.00		µg/l	1.00	0.56	1						
135-98-8	sec-Butylbenzene	< 1.00		µg/l	1.00	0.82	1						
98-06-6	tert-Butylbenzene	< 1.00		µg/l	1.00	0.74	1						
75-15-0	Carbon disulfide	< 2.00		µg/l	2.00	0.63	1						
56-23-5	Carbon tetrachloride	< 1.00		µg/l	1.00	0.55	1						
108-90-7	Chlorobenzene	< 1.00		µg/l	1.00	0.65	1						
75-00-3	Chloroethane	< 2.00		µg/l	2.00	1.03	1						
67-66-3	Chloroform	< 1.00		µg/l	1.00	0.69	1						
74-87-3	Chloromethane	< 2.00		µg/l	2.00	1.47	1						
95-49-8	2-Chlorotoluene	< 1.00		µg/l	1.00	0.79	1						
106-43-4	4-Chlorotoluene	< 1.00		µg/l	1.00	0.73	1						
96-12-8	1,2-Dibromo-3-chloropropane	< 2.00		µg/l	2.00	0.93	1						
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.29	1						
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.33	1						
74-95-3	Dibromomethane	< 1.00		µg/l	1.00	0.67	1						
95-50-1	1,2-Dichlorobenzene	< 1.00		µg/l	1.00	0.67	1						
541-73-1	1,3-Dichlorobenzene	< 1.00		µg/l	1.00	0.71	1						
106-46-7	1,4-Dichlorobenzene	< 1.00		µg/l	1.00	0.62	1						
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.00		µg/l	2.00	0.45	1						
75-34-3	1,1-Dichloroethane	< 1.00		µg/l	1.00	0.68	1						
107-06-2	1,2-Dichloroethane	< 1.00		µg/l	1.00	0.78	1						
75-35-4	1,1-Dichloroethene	< 1.00		µg/l	1.00	0.49	1						
156-59-2	cis-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.72	1						
156-60-5	trans-1,2-Dichloroethene	< 1.00		µg/l	1.00	0.68	1						
78-87-5	1,2-Dichloropropane	< 1.00		µg/l	1.00	0.71	1						
142-28-9	1,3-Dichloropropane	< 1.00		µg/l	1.00	0.81	1						
594-20-7	2,2-Dichloropropane	< 1.00		µg/l	1.00	0.60	1						
563-58-6	1,1-Dichloropropene	< 1.00		µg/l	1.00	0.64	1						
10061-01-5	cis-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.25	1						
10061-02-6	trans-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.50	1						
100-41-4	Ethylbenzene	< 1.00		µg/l	1.00	0.73	1						
87-68-3	Hexachlorobutadiene	< 0.50		µg/l	0.50	0.45	1						
591-78-6	2-Hexanone (MBK)	< 10.0		µg/l	10.0	0.54	1						

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Sample Identification

MW-2
SB72315-02

Client Project #

CFI ASTM
Southbridge, MA

Matrix

Ground Water

Collection Date/Time

25-Jun-13 11:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5030 Water MS

98-82-8	Isopropylbenzene	< 1.00		µg/l	1.00	0.62	1	SW846 8260C	01-Jul-13	02-Jul-13	GMA	1315441	
99-87-6	4-Isopropyltoluene	< 1.00		µg/l	1.00	0.61	1						
1634-04-4	Methyl tert-butyl ether	< 1.00		µg/l	1.00	0.65	1						
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0	0.93	1						
75-09-2	Methylene chloride	< 2.00		µg/l	2.00	0.69	1						
91-20-3	Naphthalene	< 1.00		µg/l	1.00	0.33	1						
103-65-1	n-Propylbenzene	< 1.00		µg/l	1.00	0.76	1						
100-42-5	Styrene	< 1.00		µg/l	1.00	0.62	1						
630-20-6	1,1,1,2-Tetrachloroethane	< 1.00		µg/l	1.00	0.63	1						
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.35	1						
127-18-4	Tetrachloroethene	< 1.00		µg/l	1.00	0.74	1						
108-88-3	Toluene	< 1.00		µg/l	1.00	0.81	1						
87-61-6	1,2,3-Trichlorobenzene	< 1.00		µg/l	1.00	0.38	1						
120-82-1	1,2,4-Trichlorobenzene	< 1.00		µg/l	1.00	0.36	1						
108-70-3	1,3,5-Trichlorobenzene	< 1.00		µg/l	1.00	0.78	1						
71-55-6	1,1,1-Trichloroethane	< 1.00		µg/l	1.00	0.58	1						
79-00-5	1,1,2-Trichloroethane	< 1.00		µg/l	1.00	0.64	1						
79-01-6	Trichloroethene	< 1.00		µg/l	1.00	0.76	1						
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.00		µg/l	1.00	0.63	1						
96-18-4	1,2,3-Trichloropropane	< 1.00		µg/l	1.00	0.74	1						
95-63-6	1,2,4-Trimethylbenzene	< 1.00		µg/l	1.00	0.76	1						
108-67-8	1,3,5-Trimethylbenzene	< 1.00		µg/l	1.00	0.74	1						
75-01-4	Vinyl chloride	< 1.00		µg/l	1.00	0.81	1						
179601-23-1	m,p-Xylene	< 2.00		µg/l	2.00	1.64	1						
95-47-6	o-Xylene	< 1.00		µg/l	1.00	0.88	1						
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	1.44	1						
60-29-7	Ethyl ether	< 1.00		µg/l	1.00	0.69	1						
994-05-8	Tert-amyl methyl ether	< 1.00		µg/l	1.00	0.72	1						
637-92-3	Ethyl tert-butyl ether	< 1.00		µg/l	1.00	0.78	1						
108-20-3	Di-isopropyl ether	< 1.00		µg/l	1.00	0.73	1						
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	8.64	1						
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	14.0	1						
110-57-6	trans-1,4-Dichloro-2-buten e	< 5.00		µg/l	5.00	0.77	1						
64-17-5	Ethanol	< 400		µg/l	400	35.7	1						

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	96	70-130 %
2037-26-5	Toluene-d8	95	70-130 %
17060-07-0	1,2-Dichloroethane-d4	119	70-130 %
1868-53-7	Dibromofluoromethane	104	70-130 %

MADEP VPH

Prepared by method VPH - EPA 5030C Water

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Sample Identification

MW-2

SB72315-02

Client Project #

CFI ASTM

Southbridge, MA

Matrix

Ground Water

Collection Date/Time

25-Jun-13 11:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsMADEP VPHPrepared by method VPH - EPA 5030C Water

	C5-C8 Aliphatic Hydrocarbons	< 75.0	D	µg/l	75.0	5.55	5	MADEP VPH 5/2004 Rev. 1.1	01-Jul-13	02-Jul-13	MP	1315452	
	C9-C12 Aliphatic Hydrocarbons	< 25.0	D	µg/l	25.0	4.22	5						
	C9-C10 Aromatic Hydrocarbons	< 25.0	D	µg/l	25.0	1.12	5						
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0	D	µg/l	75.0	7.10	5						
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0	D	µg/l	25.0	4.68	5						
71-43-2	Benzene	< 5.00	D	µg/l	5.00	1.26	5						
100-41-4	Ethylbenzene	< 5.00	D	µg/l	5.00	1.41	5						
1634-04-4	Methyl tert-butyl ether	< 5.00	D	µg/l	5.00	1.55	5						
91-20-3	Naphthalene	< 5.00	D	µg/l	5.00	1.17	5						
108-88-3	Toluene	< 5.00	D	µg/l	5.00	1.28	5						
179601-23-1	m,p-Xylene	< 10.0	D	µg/l	10.0	2.76	5						
95-47-6	o-Xylene	< 5.00	D	µg/l	5.00	1.12	5						

Surrogate recoveries:

615-59-8	2,5-Dibromotoluene (FID)	94			70-130 %								
615-59-8	2,5-Dibromotoluene (PID)	95			70-130 %								

Semivolatile Organic Compounds by GCPolychlorinated BiphenylsPrepared by method SW846 3510C

12674-11-2	Aroclor-1016	< 0.241		µg/l	0.241	0.0104	1	SW846 8082A	29-Jun-13	01-Jul-13	IMR	1315397	
11104-28-2	Aroclor-1221	< 0.241		µg/l	0.241	0.0172	1						
11141-16-5	Aroclor-1232	< 0.241		µg/l	0.241	0.0161	1						
53469-21-9	Aroclor-1242	< 0.241		µg/l	0.241	0.00880	1						
12672-29-6	Aroclor-1248	< 0.241		µg/l	0.241	0.0136	1						
11097-69-1	Aroclor-1254	< 0.241		µg/l	0.241	0.0119	1						
11096-82-5	Aroclor-1260	< 0.241		µg/l	0.241	0.00699	1						
37324-23-5	Aroclor-1262	< 0.241		µg/l	0.241	0.0105	1						
11100-14-4	Aroclor-1268	< 0.241		µg/l	0.241	0.0114	1						

Surrogate recoveries:

10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	65			30-150 %								
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	75			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr)	45			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr) [2C]	45			30-150 %								

Extractable Petroleum HydrocarbonsMADEP EPHPrepared by method SW846 3510C

	C9-C18 Aliphatic Hydrocarbons	< 122		µg/l	122	39.4	1	MADEP EPH 5/2004 R	29-Jun-13	03-Jul-13	MWP	1315399	
	C19-C36 Aliphatic Hydrocarbons	< 122		µg/l	122	38.1	1						

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Sample Identification

MW-2

SB72315-02

Client Project #CFI ASTM
Southbridge, MAMatrix

Ground Water

Collection Date/Time

25-Jun-13 11:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Extractable Petroleum Hydrocarbons

MADEP EPH

Prepared by method SW846 3510C

	C11-C22 Aromatic Hydrocarbons	< 122		µg/l	122	86.9	1	MADEP EPH 5/2004 R	29-Jun-13	03-Jul-13	MWP	1315399	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 122		µg/l	122	86.9	1						
91-20-3	Naphthalene	< 6.10		µg/l	6.10	2.06	1						
91-57-6	2-Methylnaphthalene	< 6.10		µg/l	6.10	4.11	1						
208-96-8	Acenaphthylene	< 6.10		µg/l	6.10	4.37	1						
83-32-9	Acenaphthene	< 6.10		µg/l	6.10	4.46	1						
86-73-7	Fluorene	< 6.10		µg/l	6.10	3.10	1						
85-01-8	Phenanthrene	< 6.10		µg/l	6.10	3.07	1						
120-12-7	Anthracene	< 6.10		µg/l	6.10	2.51	1						
206-44-0	Fluoranthene	< 6.10		µg/l	6.10	3.33	1						
129-00-0	Pyrene	< 6.10		µg/l	6.10	3.21	1						
56-55-3	Benzo (a) anthracene	< 6.10		µg/l	6.10	4.23	1						
218-01-9	Chrysene	< 6.10		µg/l	6.10	2.74	1						
205-99-2	Benzo (b) fluoranthene	< 6.10		µg/l	6.10	4.18	1						
207-08-9	Benzo (k) fluoranthene	< 6.10		µg/l	6.10	4.88	1						
50-32-8	Benzo (a) pyrene	< 6.10		µg/l	6.10	4.41	1						
193-39-5	Indeno (1,2,3-cd) pyrene	< 6.10		µg/l	6.10	4.44	1						
53-70-3	Dibenzo (a,h) anthracene	< 6.10		µg/l	6.10	4.06	1						
191-24-2	Benzo (g,h,i) perylene	< 6.10		µg/l	6.10	3.93	1						

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	40			40-140 %								
84-15-1	Ortho-Terphenyl	78			40-140 %								
321-60-8	2-Fluorobiphenyl	86			40-140 %								

Soluble Metals by EPA 200/6000 Series Methods

	Filtration	Field Filtered		N/A			1	EPA 200.7/3005A/6010			LNB	1315337	
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Soluble Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0009	1	SW846 6010C	01-Jul-13	02-Jul-13	EDT	1315352	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0018	1						
7440-39-3	Barium	0.141		mg/l	0.0050	0.0007	1						
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0008	1						
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1						
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0020	1						
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0030	1						

Soluble Metals by EPA 200 Series Methods

7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00008	1	EPA 245.1/7470A	01-Jul-13	01-Jul-13	JLM	1315353	X
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Sample Identification

MW-5
SB72315-03

Client Project #
CFI ASTM
Southbridge, MA

Matrix
Ground Water

Collection Date/Time
25-Jun-13 12:30

Received
27-Jun-13

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			R01										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 20.0	D	µg/l	20.0	12.9	20	SW846 8260C	01-Jul-13	02-Jul-13	GMA	1315441	
67-64-1	Acetone	< 200	D	µg/l	200	51.1	20						
107-13-1	Acrylonitrile	< 10.0	D	µg/l	10.0	9.22	20						
71-43-2	Benzene	< 20.0	D	µg/l	20.0	13.4	20						
108-86-1	Bromobenzene	< 20.0	D	µg/l	20.0	14.4	20						
74-97-5	Bromochloromethane	< 20.0	D	µg/l	20.0	14.2	20						
75-27-4	Bromodichloromethane	< 10.0	D	µg/l	10.0	9.58	20						
75-25-2	Bromoform	< 20.0	D	µg/l	20.0	12.1	20						
74-83-9	Bromomethane	< 40.0	D	µg/l	40.0	22.8	20						
78-93-3	2-Butanone (MEK)	< 200	D	µg/l	200	34.7	20						
104-51-8	n-Butylbenzene	< 20.0	D	µg/l	20.0	11.2	20						
135-98-8	sec-Butylbenzene	< 20.0	D	µg/l	20.0	16.4	20						
98-06-6	tert-Butylbenzene	< 20.0	D	µg/l	20.0	14.9	20						
75-15-0	Carbon disulfide	< 40.0	D	µg/l	40.0	12.5	20						
56-23-5	Carbon tetrachloride	< 20.0	D	µg/l	20.0	11.0	20						
108-90-7	Chlorobenzene	< 20.0	D	µg/l	20.0	13.1	20						
75-00-3	Chloroethane	< 40.0	D	µg/l	40.0	20.7	20						
67-66-3	Chloroform	< 20.0	D	µg/l	20.0	13.8	20						
74-87-3	Chloromethane	< 40.0	D	µg/l	40.0	29.5	20						
95-49-8	2-Chlorotoluene	< 20.0	D	µg/l	20.0	15.8	20						
106-43-4	4-Chlorotoluene	< 20.0	D	µg/l	20.0	14.6	20						
96-12-8	1,2-Dibromo-3-chloropropane	< 40.0	D	µg/l	40.0	18.5	20						
124-48-1	Dibromochloromethane	< 10.0	D	µg/l	10.0	5.78	20						
106-93-4	1,2-Dibromoethane (EDB)	< 10.0	D	µg/l	10.0	6.54	20						
74-95-3	Dibromomethane	< 20.0	D	µg/l	20.0	13.3	20						
95-50-1	1,2-Dichlorobenzene	< 20.0	D	µg/l	20.0	13.4	20						
541-73-1	1,3-Dichlorobenzene	< 20.0	D	µg/l	20.0	14.2	20						
106-46-7	1,4-Dichlorobenzene	< 20.0	D	µg/l	20.0	12.5	20						
75-71-8	Dichlorodifluoromethane (Freon12)	< 40.0	D	µg/l	40.0	8.94	20						
75-34-3	1,1-Dichloroethane	< 20.0	D	µg/l	20.0	13.6	20						
107-06-2	1,2-Dichloroethane	< 20.0	D	µg/l	20.0	15.6	20						
75-35-4	1,1-Dichloroethene	< 20.0	D	µg/l	20.0	9.76	20						
156-59-2	cis-1,2-Dichloroethene	< 20.0	D	µg/l	20.0	14.3	20						
156-60-5	trans-1,2-Dichloroethene	< 20.0	D	µg/l	20.0	13.6	20						
78-87-5	1,2-Dichloropropane	< 20.0	D	µg/l	20.0	14.2	20						
142-28-9	1,3-Dichloropropane	< 20.0	D	µg/l	20.0	16.1	20						
594-20-7	2,2-Dichloropropane	< 20.0	D	µg/l	20.0	12.1	20						
563-58-6	1,1-Dichloropropene	< 20.0	D	µg/l	20.0	12.7	20						
10061-01-5	cis-1,3-Dichloropropene	< 10.0	D	µg/l	10.0	5.04	20						
10061-02-6	trans-1,3-Dichloropropene	< 10.0	D	µg/l	10.0	9.98	20						
100-41-4	Ethylbenzene	< 20.0	D	µg/l	20.0	14.6	20						
87-68-3	Hexachlorobutadiene	< 10.0	D	µg/l	10.0	9.00	20						
591-78-6	2-Hexanone (MBK)	< 200	D	µg/l	200	10.9	20						

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Sample Identification

MW-5

SB72315-03

Client Project #

CFI ASTM

Southbridge, MA

Matrix

Ground Water

Collection Date/Time

25-Jun-13 12:30

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

R01

Prepared by method SW846 5030 Water MS

98-82-8	Isopropylbenzene	< 20.0	D	µg/l	20.0	12.4	20	SW846 8260C	01-Jul-13	02-Jul-13	GMA	1315441	
99-87-6	4-Isopropyltoluene	< 20.0	D	µg/l	20.0	12.2	20						
1634-04-4	Methyl tert-butyl ether	< 20.0	D	µg/l	20.0	13.0	20						
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	D	µg/l	200	18.6	20						
75-09-2	Methylene chloride	< 40.0	D	µg/l	40.0	13.8	20						
91-20-3	Naphthalene	< 20.0	D	µg/l	20.0	6.62	20						
103-65-1	n-Propylbenzene	< 20.0	D	µg/l	20.0	15.2	20						
100-42-5	Styrene	< 20.0	D	µg/l	20.0	12.3	20						
630-20-6	1,1,1,2-Tetrachloroethane	< 20.0	D	µg/l	20.0	12.5	20						
79-34-5	1,1,2,2-Tetrachloroethane	< 10.0	D	µg/l	10.0	6.98	20						
127-18-4	Tetrachloroethene	< 20.0	D	µg/l	20.0	14.9	20						
108-88-3	Toluene	< 20.0	D	µg/l	20.0	16.2	20						
87-61-6	1,2,3-Trichlorobenzene	< 20.0	D	µg/l	20.0	7.52	20						
120-82-1	1,2,4-Trichlorobenzene	< 20.0	D	µg/l	20.0	7.20	20						
108-70-3	1,3,5-Trichlorobenzene	< 20.0	D	µg/l	20.0	15.7	20						
71-55-6	1,1,1-Trichloroethane	< 20.0	D	µg/l	20.0	11.6	20						
79-00-5	1,1,2-Trichloroethane	< 20.0	D	µg/l	20.0	12.8	20						
79-01-6	Trichloroethene	< 20.0	D	µg/l	20.0	15.1	20						
75-69-4	Trichlorofluoromethane (Freon 11)	< 20.0	D	µg/l	20.0	12.6	20						
96-18-4	1,2,3-Trichloropropane	< 20.0	D	µg/l	20.0	14.7	20						
95-63-6	1,2,4-Trimethylbenzene	< 20.0	D	µg/l	20.0	15.1	20						
108-67-8	1,3,5-Trimethylbenzene	< 20.0	D	µg/l	20.0	14.9	20						
75-01-4	Vinyl chloride	< 20.0	D	µg/l	20.0	16.1	20						
179601-23-1	m,p-Xylene	< 40.0	D	µg/l	40.0	32.8	20						
95-47-6	o-Xylene	< 20.0	D	µg/l	20.0	17.6	20						
109-99-9	Tetrahydrofuran	< 40.0	D	µg/l	40.0	28.8	20						
60-29-7	Ethyl ether	< 20.0	D	µg/l	20.0	13.9	20						
994-05-8	Tert-amyl methyl ether	< 20.0	D	µg/l	20.0	14.4	20						
637-92-3	Ethyl tert-butyl ether	< 20.0	D	µg/l	20.0	15.6	20						
108-20-3	Di-isopropyl ether	< 20.0	D	µg/l	20.0	14.5	20						
75-65-0	Tert-Butanol / butyl alcohol	< 200	D	µg/l	200	173	20						
123-91-1	1,4-Dioxane	< 400	D	µg/l	400	280	20						
110-57-6	trans-1,4-Dichloro-2-buten e	< 100	D	µg/l	100	15.3	20						
64-17-5	Ethanol	< 8000	D	µg/l	8000	714	20						

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	99	70-130 %
2037-26-5	Toluene-d8	98	70-130 %
17060-07-0	1,2-Dichloroethane-d4	111	70-130 %
1868-53-7	Dibromofluoromethane	102	70-130 %

MADEP VPH

R01

Prepared by method VPH - EPA 5030C Water*This laboratory report is not valid without an authorized signature on the cover page.*

Sample Identification

MW-5

SB72315-03

Client Project #CFI ASTM
Southbridge, MAMatrix

Ground Water

Collection Date/Time

25-Jun-13 12:30

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic Compounds

MADEP VPH

R01

Prepared by method VPH - EPA 5030C Water

	C5-C8 Aliphatic Hydrocarbons	< 300	D	µg/l	300	22.2	20	MADEP VPH 5/2004 Rev. 1.1	01-Jul-13	02-Jul-13	MP	1315452	
	C9-C12 Aliphatic Hydrocarbons	< 100	D	µg/l	100	16.9	20						
	C9-C10 Aromatic Hydrocarbons	< 100	D	µg/l	100	4.48	20						
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 300	D	µg/l	300	28.4	20						
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 100	D	µg/l	100	18.7	20						
71-43-2	Benzene	< 20.0	D	µg/l	20.0	5.02	20						
100-41-4	Ethylbenzene	< 20.0	D	µg/l	20.0	5.64	20						
1634-04-4	Methyl tert-butyl ether	< 20.0	D	µg/l	20.0	6.20	20						
91-20-3	Naphthalene	< 20.0	D	µg/l	20.0	4.68	20						
108-88-3	Toluene	< 20.0	D	µg/l	20.0	5.12	20						
179601-23-1	m,p-Xylene	< 40.0	D	µg/l	40.0	11.1	20						
95-47-6	o-Xylene	< 20.0	D	µg/l	20.0	4.48	20						

Surrogate recoveries:

615-59-8	2,5-Dibromotoluene (FID)	88			70-130 %								
615-59-8	2,5-Dibromotoluene (PID)	88			70-130 %								

Semivolatile Organic Compounds by GC

Polychlorinated Biphenyls

Prepared by method SW846 3510C

12674-11-2	Aroclor-1016	< 0.690		µg/l	0.690	0.0297	1	SW846 8082A	29-Jun-13	01-Jul-13	IMR	1315397	
11104-28-2	Aroclor-1221	< 0.690		µg/l	0.690	0.0493	1						
11141-16-5	Aroclor-1232	< 0.690		µg/l	0.690	0.0462	1						
53469-21-9	Aroclor-1242	< 0.690		µg/l	0.690	0.0252	1						
12672-29-6	Aroclor-1248	< 0.690		µg/l	0.690	0.0390	1						
11097-69-1	Aroclor-1254	< 0.690		µg/l	0.690	0.0341	1						
11096-82-5	Aroclor-1260	< 0.690		µg/l	0.690	0.0200	1						
37324-23-5	Aroclor-1262	< 0.690		µg/l	0.690	0.0300	1						
11100-14-4	Aroclor-1268	< 0.690		µg/l	0.690	0.0328	1						

Surrogate recoveries:

10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	75			30-150 %								
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	90			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr)	50			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr) [2C]	55			30-150 %								

Extractable Petroleum Hydrocarbons

MADEP EPH

Prepared by method SW846 3510C

	C9-C18 Aliphatic Hydrocarbons	< 169		µg/l	169	54.8	1	MADEP EPH 5/2004 R	29-Jun-13	03-Jul-13	MWP	1315399	
	C19-C36 Aliphatic Hydrocarbons	< 169		µg/l	169	52.9	1						

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Sample Identification

MW-5

SB72315-03

Client Project #CFI ASTM
Southbridge, MAMatrix

Ground Water

Collection Date/Time

25-Jun-13 12:30

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Extractable Petroleum Hydrocarbons

MADEP EPH

Prepared by method SW846 3510C

	C11-C22 Aromatic Hydrocarbons	< 169		µg/l	169	121	1	MADEP EPH 5/2004 R	29-Jun-13	03-Jul-13	MWP	1315399	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 169		µg/l	169	121	1						
91-20-3	Naphthalene	< 8.47		µg/l	8.47	2.86	1						
91-57-6	2-Methylnaphthalene	< 8.47		µg/l	8.47	5.71	1						
208-96-8	Acenaphthylene	< 8.47		µg/l	8.47	6.07	1						
83-32-9	Acenaphthene	< 8.47		µg/l	8.47	6.20	1						
86-73-7	Fluorene	< 8.47		µg/l	8.47	4.31	1						
85-01-8	Phenanthrene	< 8.47		µg/l	8.47	4.27	1						
120-12-7	Anthracene	< 8.47		µg/l	8.47	3.49	1						
206-44-0	Fluoranthene	< 8.47		µg/l	8.47	4.63	1						
129-00-0	Pyrene	< 8.47		µg/l	8.47	4.46	1						
56-55-3	Benzo (a) anthracene	< 8.47		µg/l	8.47	5.88	1						
218-01-9	Chrysene	< 8.47		µg/l	8.47	3.81	1						
205-99-2	Benzo (b) fluoranthene	< 8.47		µg/l	8.47	5.81	1						
207-08-9	Benzo (k) fluoranthene	< 8.47		µg/l	8.47	6.78	1						
50-32-8	Benzo (a) pyrene	< 8.47		µg/l	8.47	6.14	1						
193-39-5	Indeno (1,2,3-cd) pyrene	< 8.47		µg/l	8.47	6.17	1						
53-70-3	Dibenzo (a,h) anthracene	< 8.47		µg/l	8.47	5.64	1						
191-24-2	Benzo (g,h,i) perylene	< 8.47		µg/l	8.47	5.46	1						

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	41			40-140 %								
84-15-1	Ortho-Terphenyl	80			40-140 %								
321-60-8	2-Fluorobiphenyl	84			40-140 %								

Soluble Metals by EPA 200/6000 Series Methods

	Filtration	Field Filtered		N/A			1	EPA 200.7/3005A/6010			LNB	1315337	
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Soluble Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0009	1	SW846 6010C	01-Jul-13	02-Jul-13	EDT	1315352	
7440-38-2	Arsenic	0.0070		mg/l	0.0040	0.0018	1						
7440-39-3	Barium	0.736		mg/l	0.0050	0.0007	1						
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0008	1						
7440-47-3	Chromium	0.0462		mg/l	0.0050	0.0009	1						
7439-92-1	Lead	0.0775		mg/l	0.0075	0.0020	1						
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0030	1						

Soluble Metals by EPA 200 Series Methods

7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00008	1	EPA 245.1/7470A	01-Jul-13	01-Jul-13	JLM	1315353	X
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Sample Identification

Trip Blank
SB72315-04

Client Project #

CFI ASTM
Southbridge, MA

Matrix

Ground Water

Collection Date/Time

25-Jun-13 00:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsMADEP VPHPrepared by method VPH - EPA 5030C Water

	C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	5.55	1	MADEP VPH 5/2004 Rev. 1.1	01-Jul-13	02-Jul-13	MP	1315452	
	C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	4.22	1						
	C9-C10 Aromatic Hydrocarbons	< 25.0		µg/l	25.0	1.12	1						
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	7.10	1						
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	4.68	1						
71-43-2	Benzene	< 5.00		µg/l	5.00	1.26	1						
100-41-4	Ethylbenzene	< 5.00		µg/l	5.00	1.41	1						
1634-04-4	Methyl tert-butyl ether	< 5.00		µg/l	5.00	1.55	1						
91-20-3	Naphthalene	< 5.00		µg/l	5.00	1.17	1						
108-88-3	Toluene	< 5.00		µg/l	5.00	1.28	1						
179601-23-1	m,p-Xylene	< 10.0		µg/l	10.0	2.76	1						
95-47-6	o-Xylene	< 5.00		µg/l	5.00	1.12	1						

Surrogate recoveries:

615-59-8	2,5-Dibromotoluene (FID)	89			70-130 %								
615-59-8	2,5-Dibromotoluene (PID)	87			70-130 %								

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

Sample Identification

Field Blank

SB72315-05

Client Project #CFI ASTM
Southbridge, MAMatrix

Ground Water

Collection Date/Time

25-Jun-13 12:00

Received

27-Jun-13

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic Compounds

MADEP VPH

Prepared by method VPH - EPA 5030C Water

	C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	5.55	1	MADEP VPH 5/2004 Rev. 1.1	01-Jul-13	02-Jul-13	MP	1315452	
	C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	4.22	1						
	C9-C10 Aromatic Hydrocarbons	< 25.0		µg/l	25.0	1.12	1						
	Unadjusted C5-C8 Aliphatic Hydrocarbons	< 75.0		µg/l	75.0	7.10	1						
	Unadjusted C9-C12 Aliphatic Hydrocarbons	< 25.0		µg/l	25.0	4.68	1						
71-43-2	Benzene	< 5.00		µg/l	5.00	1.26	1						
100-41-4	Ethylbenzene	< 5.00		µg/l	5.00	1.41	1						
1634-04-4	Methyl tert-butyl ether	< 5.00		µg/l	5.00	1.55	1						
91-20-3	Naphthalene	< 5.00		µg/l	5.00	1.17	1						
108-88-3	Toluene	< 5.00		µg/l	5.00	1.28	1						
179601-23-1	m,p-Xylene	< 10.0		µg/l	10.0	2.76	1						
95-47-6	o-Xylene	< 5.00		µg/l	5.00	1.12	1						

Surrogate recoveries:

615-59-8	2,5-Dibromotoluene (FID)	92			70-130 %								
615-59-8	2,5-Dibromotoluene (PID)	93			70-130 %								

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315441 - SW846 5030 Water MS										
Blank (1315441-BLK1)	Prepared & Analyzed: 01-Jul-13									
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)	< 10.0		µg/l	10.0						
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						
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)	< 10.0		µg/l	10.0						
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)	< 10.0		µg/l	10.0						
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						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315441 - SW846 5030 Water MS										
Blank (1315441-BLK1)					Prepared & Analyzed: 01-Jul-13					
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						
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	< 400		µg/l	400						
Surrogate: 4-Bromofluorobenzene	47.7		µg/l		50.0		95	70-130		
Surrogate: Toluene-d8	50.3		µg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	59.4		µg/l		50.0		119	70-130		
Surrogate: Dibromofluoromethane	52.0		µg/l		50.0		104	70-130		
LCS (1315441-BS1)					Prepared & Analyzed: 01-Jul-13					
1,1,2-Trichlorotrifluoroethane (Freon 113)	21.5		µg/l		20.0		108	70-130		
Acetone	11.3		µg/l		20.0		57	70-130		
Acrylonitrile	12.3	QC2	µg/l		20.0		61	70-130		
Benzene	19.3		µg/l		20.0		97	70-130		
Bromobenzene	21.0		µg/l		20.0		105	70-130		
Bromochloromethane	21.5		µg/l		20.0		108	70-130		
Bromodichloromethane	21.5		µg/l		20.0		108	70-130		
Bromoform	21.6		µg/l		20.0		108	70-130		
Bromomethane	17.0		µg/l		20.0		85	70-130		
2-Butanone (MEK)	16.7		µg/l		20.0		83	70-130		
n-Butylbenzene	20.3		µg/l		20.0		101	70-130		
sec-Butylbenzene	22.1		µg/l		20.0		111	70-130		
tert-Butylbenzene	22.2		µg/l		20.0		111	70-130		
Carbon disulfide	16.6		µg/l		20.0		83	70-130		
Carbon tetrachloride	23.1		µg/l		20.0		116	70-130		
Chlorobenzene	19.7		µg/l		20.0		98	70-130		
Chloroethane	15.7		µg/l		20.0		79	70-130		
Chloroform	20.7		µg/l		20.0		103	70-130		
Chloromethane	17.4		µg/l		20.0		87	70-130		
2-Chlorotoluene	19.7		µg/l		20.0		99	70-130		
4-Chlorotoluene	20.2		µg/l		20.0		101	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315441 - SW846 5030 Water MS										
LCS (1315441-BS1)	Prepared & Analyzed: 01-Jul-13									
1,2-Dibromo-3-chloropropane	18.5		µg/l		20.0		93	70-130		
Dibromochloromethane	22.0		µg/l		20.0		110	70-130		
1,2-Dibromoethane (EDB)	21.6		µg/l		20.0		108	70-130		
Dibromomethane	21.5		µg/l		20.0		107	70-130		
1,2-Dichlorobenzene	20.3		µg/l		20.0		102	70-130		
1,3-Dichlorobenzene	21.8		µg/l		20.0		109	70-130		
1,4-Dichlorobenzene	19.7		µg/l		20.0		99	70-130		
Dichlorodifluoromethane (Freon12)	24.2		µg/l		20.0		121	70-130		
1,1-Dichloroethane	19.9		µg/l		20.0		100	70-130		
1,2-Dichloroethane	21.6		µg/l		20.0		108	70-130		
1,1-Dichloroethene	17.5		µg/l		20.0		88	70-130		
cis-1,2-Dichloroethene	20.2		µg/l		20.0		101	70-130		
trans-1,2-Dichloroethene	19.4		µg/l		20.0		97	70-130		
1,2-Dichloropropane	19.1		µg/l		20.0		95	70-130		
1,3-Dichloropropane	20.5		µg/l		20.0		102	70-130		
2,2-Dichloropropane	23.3		µg/l		20.0		117	70-130		
1,1-Dichloropropene	20.7		µg/l		20.0		104	70-130		
cis-1,3-Dichloropropene	19.9		µg/l		20.0		99	70-130		
trans-1,3-Dichloropropene	20.4		µg/l		20.0		102	70-130		
Ethylbenzene	19.8		µg/l		20.0		99	70-130		
Hexachlorobutadiene	24.2		µg/l		20.0		121	70-130		
2-Hexanone (MBK)	16.9		µg/l		20.0		85	70-130		
Isopropylbenzene	20.9		µg/l		20.0		104	70-130		
4-Isopropyltoluene	20.4		µg/l		20.0		102	70-130		
Methyl tert-butyl ether	18.2		µg/l		20.0		91	70-130		
4-Methyl-2-pentanone (MIBK)	16.0		µg/l		20.0		80	70-130		
Methylene chloride	15.7		µg/l		20.0		79	70-130		
Naphthalene	19.4		µg/l		20.0		97	70-130		
n-Propylbenzene	21.2		µg/l		20.0		106	70-130		
Styrene	20.2		µg/l		20.0		101	70-130		
1,1,1,2-Tetrachloroethane	20.2		µg/l		20.0		101	70-130		
1,1,2,2-Tetrachloroethane	19.0		µg/l		20.0		95	70-130		
Tetrachloroethene	23.9		µg/l		20.0		119	70-130		
Toluene	21.7		µg/l		20.0		108	70-130		
1,2,3-Trichlorobenzene	19.8		µg/l		20.0		99	70-130		
1,2,4-Trichlorobenzene	19.8		µg/l		20.0		99	70-130		
1,3,5-Trichlorobenzene	23.0		µg/l		20.0		115	70-130		
1,1,1-Trichloroethane	22.4		µg/l		20.0		112	70-130		
1,1,2-Trichloroethane	20.6		µg/l		20.0		103	70-130		
Trichloroethene	18.8		µg/l		20.0		94	70-130		
Trichlorofluoromethane (Freon 11)	27.3	QC2	µg/l		20.0		137	70-130		
1,2,3-Trichloropropane	19.5		µg/l		20.0		97	70-130		
1,2,4-Trimethylbenzene	21.1		µg/l		20.0		106	70-130		
1,3,5-Trimethylbenzene	21.5		µg/l		20.0		108	70-130		
Vinyl chloride	24.2		µg/l		20.0		121	70-130		
m,p-Xylene	40.8		µg/l		40.0		102	70-130		
o-Xylene	20.7		µg/l		20.0		104	70-130		
Tetrahydrofuran	14.7		µg/l		20.0		74	70-130		
Ethyl ether	15.9		µg/l		20.0		80	70-130		
Tert-amyl methyl ether	22.0		µg/l		20.0		110	70-130		
Ethyl tert-butyl ether	17.4		µg/l		20.0		87	70-130		
Di-isopropyl ether	15.7		µg/l		20.0		78	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315441 - SW846 5030 Water MS										
LCS (1315441-BS1)					Prepared & Analyzed: 01-Jul-13					
Tert-Butanol / butyl alcohol	160		µg/l		200		80	70-130		
1,4-Dioxane	188		µg/l		200		94	70-130		
trans-1,4-Dichloro-2-butene	16.8		µg/l		20.0		84	70-130		
Ethanol	277	QC2	µg/l		400		69	70-130		
Surrogate: 4-Bromofluorobenzene	51.8		µg/l		50.0		104	70-130		
Surrogate: Toluene-d8	50.9		µg/l		50.0		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	55.2		µg/l		50.0		110	70-130		
Surrogate: Dibromofluoromethane	54.0		µg/l		50.0		108	70-130		
LCS Dup (1315441-BS1)					Prepared & Analyzed: 01-Jul-13					
1,1,2-Trichlorotrifluoroethane (Freon 113)	19.8		µg/l		20.0		99	70-130	8	20
Acetone	12.0		µg/l		20.0		60	70-130	6	20
Acrylonitrile	13.1	QC2	µg/l		20.0		65	70-130	6	20
Benzene	20.5		µg/l		20.0		102	70-130	6	20
Bromobenzene	19.6		µg/l		20.0		98	70-130	7	20
Bromochloromethane	19.8		µg/l		20.0		99	70-130	8	20
Bromodichloromethane	22.3		µg/l		20.0		112	70-130	3	20
Bromoform	20.7		µg/l		20.0		103	70-130	5	20
Bromomethane	16.7		µg/l		20.0		84	70-130	2	20
2-Butanone (MEK)	16.3		µg/l		20.0		82	70-130	2	20
n-Butylbenzene	20.4		µg/l		20.0		102	70-130	0.8	20
sec-Butylbenzene	20.7		µg/l		20.0		104	70-130	7	20
tert-Butylbenzene	20.7		µg/l		20.0		103	70-130	7	20
Carbon disulfide	16.6		µg/l		20.0		83	70-130	0.3	20
Carbon tetrachloride	22.0		µg/l		20.0		110	70-130	5	20
Chlorobenzene	18.9		µg/l		20.0		94	70-130	4	20
Chloroethane	16.2		µg/l		20.0		81	70-130	3	20
Chloroform	20.4		µg/l		20.0		102	70-130	2	20
Chloromethane	18.3		µg/l		20.0		91	70-130	5	20
2-Chlorotoluene	19.2		µg/l		20.0		96	70-130	3	20
4-Chlorotoluene	19.4		µg/l		20.0		97	70-130	4	20
1,2-Dibromo-3-chloropropane	20.2		µg/l		20.0		101	70-130	9	20
Dibromochloromethane	23.0		µg/l		20.0		115	70-130	4	20
1,2-Dibromoethane (EDB)	20.3		µg/l		20.0		101	70-130	6	20
Dibromomethane	21.6		µg/l		20.0		108	70-130	0.3	20
1,2-Dichlorobenzene	19.6		µg/l		20.0		98	70-130	4	20
1,3-Dichlorobenzene	20.4		µg/l		20.0		102	70-130	7	20
1,4-Dichlorobenzene	19.0		µg/l		20.0		95	70-130	4	20
Dichlorodifluoromethane (Freon12)	24.2		µg/l		20.0		121	70-130	0	20
1,1-Dichloroethane	18.9		µg/l		20.0		94	70-130	6	20
1,2-Dichloroethane	22.4		µg/l		20.0		112	70-130	4	20
1,1-Dichloroethene	17.1		µg/l		20.0		85	70-130	3	20
cis-1,2-Dichloroethene	20.5		µg/l		20.0		102	70-130	2	20
trans-1,2-Dichloroethene	17.6		µg/l		20.0		88	70-130	10	20
1,2-Dichloropropane	18.7		µg/l		20.0		94	70-130	2	20
1,3-Dichloropropane	20.5		µg/l		20.0		102	70-130	0.05	20
2,2-Dichloropropane	22.5		µg/l		20.0		112	70-130	4	20
1,1-Dichloropropene	20.9		µg/l		20.0		105	70-130	1	20
cis-1,3-Dichloropropene	21.6		µg/l		20.0		108	70-130	8	20
trans-1,3-Dichloropropene	21.1		µg/l		20.0		105	70-130	3	20
Ethylbenzene	19.3		µg/l		20.0		97	70-130	2	20
Hexachlorobutadiene	22.1		µg/l		20.0		110	70-130	9	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315441 - SW846 5030 Water MS										
LCS Dup (1315441-BSD1)					Prepared & Analyzed: 01-Jul-13					
2-Hexanone (MBK)	17.9		µg/l		20.0		90	70-130	6	20
Isopropylbenzene	19.8		µg/l		20.0		99	70-130	5	20
4-Isopropyltoluene	20.2		µg/l		20.0		101	70-130	1	20
Methyl tert-butyl ether	18.1		µg/l		20.0		90	70-130	0.9	20
4-Methyl-2-pentanone (MIBK)	16.9		µg/l		20.0		84	70-130	5	20
Methylene chloride	16.1		µg/l		20.0		81	70-130	3	20
Naphthalene	18.4		µg/l		20.0		92	70-130	6	20
n-Propylbenzene	20.3		µg/l		20.0		101	70-130	5	20
Styrene	19.5		µg/l		20.0		98	70-130	4	20
1,1,1,2-Tetrachloroethane	20.6		µg/l		20.0		103	70-130	2	20
1,1,2,2-Tetrachloroethane	19.5		µg/l		20.0		97	70-130	2	20
Tetrachloroethene	22.2		µg/l		20.0		111	70-130	8	20
Toluene	19.9		µg/l		20.0		100	70-130	9	20
1,2,3-Trichlorobenzene	18.2		µg/l		20.0		91	70-130	8	20
1,2,4-Trichlorobenzene	18.7		µg/l		20.0		93	70-130	6	20
1,3,5-Trichlorobenzene	22.0		µg/l		20.0		110	70-130	5	20
1,1,1-Trichloroethane	21.8		µg/l		20.0		109	70-130	3	20
1,1,2-Trichloroethane	20.9		µg/l		20.0		105	70-130	1	20
Trichloroethene	19.5		µg/l		20.0		98	70-130	4	20
Trichlorofluoromethane (Freon 11)	26.6	QC2	µg/l		20.0		133	70-130	3	20
1,2,3-Trichloropropane	17.8		µg/l		20.0		89	70-130	9	20
1,2,4-Trimethylbenzene	20.3		µg/l		20.0		101	70-130	4	20
1,3,5-Trimethylbenzene	20.4		µg/l		20.0		102	70-130	5	20
Vinyl chloride	22.5		µg/l		20.0		112	70-130	7	20
m,p-Xylene	38.4		µg/l		40.0		96	70-130	6	20
o-Xylene	19.8		µg/l		20.0		99	70-130	4	20
Tetrahydrofuran	16.1		µg/l		20.0		80	70-130	9	20
Ethyl ether	16.4		µg/l		20.0		82	70-130	3	20
Tert-amyl methyl ether	21.8		µg/l		20.0		109	70-130	0.6	20
Ethyl tert-butyl ether	18.5		µg/l		20.0		93	70-130	6	20
Di-isopropyl ether	16.8		µg/l		20.0		84	70-130	7	20
Tert-Butanol / butyl alcohol	194		µg/l		200		97	70-130	19	20
1,4-Dioxane	182		µg/l		200		91	70-130	3	20
trans-1,4-Dichloro-2-butene	20.4		µg/l		20.0		102	70-130	20	20
Ethanol	268	QC2	µg/l		400		67	70-130	3	20
Surrogate: 4-Bromofluorobenzene	51.5		µg/l		50.0		103	70-130		
Surrogate: Toluene-d8	50.0		µg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	56.0		µg/l		50.0		112	70-130		
Surrogate: Dibromofluoromethane	54.8		µg/l		50.0		110	70-130		
Batch 1315452 - VPH - EPA 5030C Water										
Blank (1315452-BLK1)					Prepared & Analyzed: 01-Jul-13					
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	< 5.00		µg/l	5.00						
Ethylbenzene	< 5.00		µg/l	5.00						
Methyl tert-butyl ether	< 5.00		µg/l	5.00						
Naphthalene	< 5.00		µg/l	5.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315452 - VPH - EPA 5030C Water										
Blank (1315452-BLK1)					<u>Prepared & Analyzed: 01-Jul-13</u>					
Toluene	< 5.00		µg/l	5.00						
m,p-Xylene	< 10.0		µg/l	10.0						
o-Xylene	< 5.00		µg/l	5.00						
2-Methylpentane	< 5.00		µg/l	5.00						
n-Nonane	< 10.0		µg/l	10.0						
n-Pentane	< 10.0		µg/l	10.0						
1,2,4-Trimethylbenzene	< 5.00		µg/l	5.00						
2,2,4-Trimethylpentane	< 5.00		µg/l	5.00						
n-Butylcyclohexane	< 5.00		µg/l	5.00						
n-Decane	< 5.00		µg/l	5.00						
Surrogate: 2,5-Dibromotoluene (FID)	44.1		µg/l		50.0		88	70-130		
Surrogate: 2,5-Dibromotoluene (PID)	43.4		µg/l		50.0		87	70-130		
LCS (1315452-BS1)					<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>					
C5-C8 Aliphatic Hydrocarbons	71.0		µg/l		60.0		118	70-130		
C9-C12 Aliphatic Hydrocarbons	62.7		µg/l		60.0		105	70-130		
C9-C10 Aromatic Hydrocarbons	21.8		µg/l		20.0		109	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	222		µg/l		200		111	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	84.5		µg/l		80.0		106	70-130		
Benzene	21.4		µg/l		20.0		107	70-130		
Ethylbenzene	21.6		µg/l		20.0		108	70-130		
Methyl tert-butyl ether	21.7		µg/l		20.0		109	70-130		
Naphthalene	20.7		µg/l		20.0		104	70-130		
Toluene	20.8		µg/l		20.0		104	70-130		
m,p-Xylene	43.2		µg/l		40.0		108	70-130		
o-Xylene	21.7		µg/l		20.0		108	70-130		
2-Methylpentane	20.0		µg/l		20.0		100	70-130		
n-Nonane	20.2		µg/l		20.0		101	70-130		
n-Pentane	18.9		µg/l		20.0		95	70-130		
1,2,4-Trimethylbenzene	22.0		µg/l		20.0		110	70-130		
2,2,4-Trimethylpentane	21.3		µg/l		20.0		106	70-130		
n-Butylcyclohexane	20.3		µg/l		20.0		101	70-130		
n-Decane	22.2		µg/l		20.0		111	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	52.0		µg/l		50.0		104	70-130		
Surrogate: 2,5-Dibromotoluene (PID)	51.5		µg/l		50.0		103	70-130		
LCS Dup (1315452-BSD1)					<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>					
C5-C8 Aliphatic Hydrocarbons	70.9		µg/l		60.0		118	70-130	0.1	25
C9-C12 Aliphatic Hydrocarbons	62.1		µg/l		60.0		103	70-130	1	25
C9-C10 Aromatic Hydrocarbons	22.0		µg/l		20.0		110	70-130	0.9	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	224		µg/l		200		112	70-130	1	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	84.0		µg/l		80.0		105	70-130	0.6	25
Benzene	21.9		µg/l		20.0		110	70-130	2	25
Ethylbenzene	22.1		µg/l		20.0		110	70-130	2	25
Methyl tert-butyl ether	22.0		µg/l		20.0		110	70-130	1	25
Naphthalene	20.5		µg/l		20.0		102	70-130	1	25
Toluene	21.3		µg/l		20.0		107	70-130	2	25
m,p-Xylene	44.1		µg/l		40.0		110	70-130	2	25
o-Xylene	22.1		µg/l		20.0		111	70-130	2	25
2-Methylpentane	20.4		µg/l		20.0		102	70-130	2	25
n-Nonane	19.5		µg/l		20.0		97	70-130	4	25

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315452 - VPH - EPA 5030C Water										
<u>LCS Dup (1315452-BSD1)</u>					<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>					
n-Pentane	19.1		µg/l		20.0		96	70-130	0.9	25
1,2,4-Trimethylbenzene	22.2		µg/l		20.0		111	70-130	0.9	25
2,2,4-Trimethylpentane	21.7		µg/l		20.0		108	70-130	2	25
n-Butylcyclohexane	19.8		µg/l		20.0		99	70-130	2	25
n-Decane	20.3		µg/l		20.0		102	70-130	9	25
Surrogate: 2,5-Dibromotoluene (FID)	50.4		µg/l		50.0		101	70-130		
Surrogate: 2,5-Dibromotoluene (PID)	50.1		µg/l		50.0		100	70-130		

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Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315397 - SW846 3510C										
Blank (1315397-BLK1)					Prepared: 29-Jun-13 Analyzed: 01-Jul-13					
Aroclor-1016	< 0.200		µg/l	0.200						
Aroclor-1016 [2C]	< 0.200		µg/l	0.200						
Aroclor-1221	< 0.200		µg/l	0.200						
Aroclor-1221 [2C]	< 0.200		µg/l	0.200						
Aroclor-1232	< 0.200		µg/l	0.200						
Aroclor-1232 [2C]	< 0.200		µg/l	0.200						
Aroclor-1242	< 0.200		µg/l	0.200						
Aroclor-1242 [2C]	< 0.200		µg/l	0.200						
Aroclor-1248	< 0.200		µg/l	0.200						
Aroclor-1248 [2C]	< 0.200		µg/l	0.200						
Aroclor-1254	< 0.200		µg/l	0.200						
Aroclor-1254 [2C]	< 0.200		µg/l	0.200						
Aroclor-1260	< 0.200		µg/l	0.200						
Aroclor-1260 [2C]	< 0.200		µg/l	0.200						
Aroclor-1262	< 0.200		µg/l	0.200						
Aroclor-1262 [2C]	< 0.200		µg/l	0.200						
Aroclor-1268	< 0.200		µg/l	0.200						
Aroclor-1268 [2C]	< 0.200		µg/l	0.200						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.180		µg/l		0.200		90	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.200		µg/l		0.200		100	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.190		µg/l		0.200		95	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.190		µg/l		0.200		95	30-150		
LCS (1315397-BS1)					Prepared: 29-Jun-13 Analyzed: 01-Jul-13					
Aroclor-1016	2.49		µg/l	0.200	2.50		100	40-140		
Aroclor-1016 [2C]	2.45		µg/l	0.200	2.50		98	40-140		
Aroclor-1260	2.39		µg/l	0.200	2.50		96	40-140		
Aroclor-1260 [2C]	2.04		µg/l	0.200	2.50		82	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.180		µg/l		0.200		90	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.190		µg/l		0.200		95	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.180		µg/l		0.200		90	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.190		µg/l		0.200		95	30-150		
LCS Dup (1315397-BSD1)					Prepared: 29-Jun-13 Analyzed: 01-Jul-13					
Aroclor-1016	2.89		µg/l	0.200	2.50		116	40-140	15	20
Aroclor-1016 [2C]	2.61		µg/l	0.200	2.50		104	40-140	6	20
Aroclor-1260	2.87		µg/l	0.200	2.50		115	40-140	18	20
Aroclor-1260 [2C]	2.56	QR2	µg/l	0.200	2.50		102	40-140	23	20
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.220		µg/l		0.200		110	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.240		µg/l		0.200		120	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.210		µg/l		0.200		105	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.230		µg/l		0.200		115	30-150		

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Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315399 - SW846 3510C										
Blank (1315399-BLK1)					Prepared: 29-Jun-13 Analyzed: 03-Jul-13					
C9-C18 Aliphatic Hydrocarbons	< 100		µg/l	100						
C19-C36 Aliphatic Hydrocarbons	< 100		µg/l	100						
C11-C22 Aromatic Hydrocarbons	< 100		µg/l	100						
Unadjusted C11-C22 Aromatic Hydrocarbons	< 100		µg/l	100						
Total Petroleum Hydrocarbons	< 300		µg/l	300						
Unadjusted Total Petroleum Hydrocarbons	< 300		µg/l	300						
Naphthalene	< 5.00		µg/l	5.00						
2-Methylnaphthalene	< 5.00		µg/l	5.00						
Acenaphthylene	< 5.00		µg/l	5.00						
Acenaphthene	< 5.00		µg/l	5.00						
Fluorene	< 5.00		µg/l	5.00						
Phenanthrene	< 5.00		µg/l	5.00						
Anthracene	< 5.00		µg/l	5.00						
Fluoranthene	< 5.00		µg/l	5.00						
Pyrene	< 5.00		µg/l	5.00						
Benzo (a) anthracene	< 5.00		µg/l	5.00						
Chrysene	< 5.00		µg/l	5.00						
Benzo (b) fluoranthene	< 5.00		µg/l	5.00						
Benzo (k) fluoranthene	< 5.00		µg/l	5.00						
Benzo (a) pyrene	< 5.00		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00						
Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00						
Benzo (g,h,i) perylene	< 5.00		µg/l	5.00						
n-Nonane (C9)	< 5.00		µg/l	5.00						
n-Decane	< 5.00		µg/l	5.00						
n-Dodecane	< 5.00		µg/l	5.00						
n-Tetradecane	< 5.00		µg/l	5.00						
n-Hexadecane	< 5.00		µg/l	5.00						
n-Octadecane	< 5.00		µg/l	5.00						
n-Nonadecane	< 5.00		µg/l	5.00						
n-Eicosane	< 5.00		µg/l	5.00						
n-Docosane	< 5.00		µg/l	5.00						
n-Tetracosane	< 5.00		µg/l	5.00						
n-Hexacosane	< 5.00		µg/l	5.00						
n-Octacosane	< 5.00		µg/l	5.00						
n-Triacontane	< 5.00		µg/l	5.00						
n-Hexatriacontane	< 5.00		µg/l	5.00						
Naphthalene (aliphatic fraction)	0.00		µg/l							
2-Methylnaphthalene (aliphatic fraction)	0.00		µg/l							
Surrogate: 1-Chlorooctadecane	29.5		µg/l		50.0		59	40-140		
Surrogate: Ortho-Terphenyl	46.0		µg/l		50.0		92	40-140		
Surrogate: 2-Fluorobiphenyl	36.5		µg/l		40.0		91	40-140		
LCS (1315399-BS1)					Prepared: 29-Jun-13 Analyzed: 03-Jul-13					
C9-C18 Aliphatic Hydrocarbons	316		µg/l	100	600		53	40-140		
C19-C36 Aliphatic Hydrocarbons	521		µg/l	100	800		65	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	1160		µg/l	100	1700		68	40-140		
Naphthalene	56.9		µg/l	5.00	100		57	40-140		
2-Methylnaphthalene	59.3		µg/l	5.00	100		59	40-140		
Acenaphthylene	69.0		µg/l	5.00	100		69	40-140		
Acenaphthene	70.5		µg/l	5.00	100		71	40-140		

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Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315399 - SW846 3510C										
LCS (1315399-BS1)					Prepared: 29-Jun-13 Analyzed: 03-Jul-13					
Fluorene	75.1		µg/l	5.00	100		75	40-140		
Phenanthrene	77.9		µg/l	5.00	100		78	40-140		
Anthracene	76.7		µg/l	5.00	100		77	40-140		
Fluoranthene	80.3		µg/l	5.00	100		80	40-140		
Pyrene	79.4		µg/l	5.00	100		79	40-140		
Benzo (a) anthracene	85.0		µg/l	5.00	100		85	40-140		
Chrysene	82.8		µg/l	5.00	100		83	40-140		
Benzo (b) fluoranthene	78.3		µg/l	5.00	100		78	40-140		
Benzo (k) fluoranthene	86.7		µg/l	5.00	100		87	40-140		
Benzo (a) pyrene	71.8		µg/l	5.00	100		72	40-140		
Indeno (1,2,3-cd) pyrene	70.4		µg/l	5.00	100		70	40-140		
Dibenzo (a,h) anthracene	69.7		µg/l	5.00	100		70	40-140		
Benzo (g,h,i) perylene	71.3		µg/l	5.00	100		71	40-140		
n-Nonane (C9)	36.3		µg/l	5.00	100		36	30-140		
n-Decane	45.2		µg/l	5.00	100		45	40-140		
n-Dodecane	50.2		µg/l	5.00	100		50	40-140		
n-Tetradecane	57.1		µg/l	5.00	100		57	40-140		
n-Hexadecane	63.5		µg/l	5.00	100		64	40-140		
n-Octadecane	66.1		µg/l	5.00	100		66	40-140		
n-Nonadecane	66.4		µg/l	5.00	100		66	40-140		
n-Eicosane	67.5		µg/l	5.00	100		68	40-140		
n-Docosane	67.0		µg/l	5.00	100		67	40-140		
n-Tetracosane	66.7		µg/l	5.00	100		67	40-140		
n-Hexacosane	66.6		µg/l	5.00	100		67	40-140		
n-Octacosane	67.7		µg/l	5.00	100		68	40-140		
n-Triacontane	65.7		µg/l	5.00	100		66	40-140		
n-Hexatriacontane	67.8		µg/l	5.00	100		68	40-140		
Naphthalene (aliphatic fraction)	0.00		µg/l					0-200		
2-Methylnaphthalene (aliphatic fraction)	0.00		µg/l					0-200		
Surrogate: 1-Chlorooctadecane	31.3		µg/l		50.0		63	40-140		
Surrogate: Ortho-Terphenyl	39.0		µg/l		50.0		78	40-140		
Surrogate: 2-Fluorobiphenyl	36.3		µg/l		40.0		91	40-140		
LCS (1315399-BS3)					Prepared: 29-Jun-13 Analyzed: 02-Jul-13					
C9-C18 Aliphatic Hydrocarbons	308		µg/l	100	600		51	40-140		
C19-C36 Aliphatic Hydrocarbons	494		µg/l	100	800		62	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	1280		µg/l	100	1700		75	40-140		
Naphthalene	61.4		µg/l	5.00	100		61	40-140		
2-Methylnaphthalene	64.4		µg/l	5.00	100		64	40-140		
Acenaphthylene	74.6		µg/l	5.00	100		75	40-140		
Acenaphthene	74.9		µg/l	5.00	100		75	40-140		
Fluorene	79.7		µg/l	5.00	100		80	40-140		
Phenanthrene	83.6		µg/l	5.00	100		84	40-140		
Anthracene	82.4		µg/l	5.00	100		82	40-140		
Fluoranthene	86.1		µg/l	5.00	100		86	40-140		
Pyrene	84.0		µg/l	5.00	100		84	40-140		
Benzo (a) anthracene	91.1		µg/l	5.00	100		91	40-140		
Chrysene	89.0		µg/l	5.00	100		89	40-140		
Benzo (b) fluoranthene	83.2		µg/l	5.00	100		83	40-140		
Benzo (k) fluoranthene	74.2		µg/l	5.00	100		74	40-140		
Benzo (a) pyrene	79.1		µg/l	5.00	100		79	40-140		
Indeno (1,2,3-cd) pyrene	73.8		µg/l	5.00	100		74	40-140		

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Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315399 - SW846 3510C										
LCS (1315399-BS3)					Prepared: 29-Jun-13 Analyzed: 02-Jul-13					
Dibenzo (a,h) anthracene	73.8		µg/l	5.00	100		74	40-140		
Benzo (g,h,i) perylene	74.6		µg/l	5.00	100		75	40-140		
n-Nonane (C9)	37.1		µg/l	5.00	100		37	30-140		
n-Decane	44.1		µg/l	5.00	100		44	40-140		
n-Dodecane	48.7		µg/l	5.00	100		49	40-140		
n-Tetradecane	54.9		µg/l	5.00	100		55	40-140		
n-Hexadecane	60.8		µg/l	5.00	100		61	40-140		
n-Octadecane	63.4		µg/l	5.00	100		63	40-140		
n-Nonadecane	63.7		µg/l	5.00	100		64	40-140		
n-Eicosane	64.8		µg/l	5.00	100		65	40-140		
n-Docosane	64.0		µg/l	5.00	100		64	40-140		
n-Tetracosane	63.3		µg/l	5.00	100		63	40-140		
n-Hexacosane	63.0		µg/l	5.00	100		63	40-140		
n-Octacosane	63.8		µg/l	5.00	100		64	40-140		
n-Triacontane	61.8		µg/l	5.00	100		62	40-140		
n-Hexatriacontane	65.4		µg/l	5.00	100		65	40-140		
Naphthalene (aliphatic fraction)	0.00		µg/l					0-200		
2-Methylnaphthalene (aliphatic fraction)	0.00		µg/l					0-200		
Surrogate: 1-Chlorooctadecane	26.8		µg/l		50.0		54	40-140		
Surrogate: Ortho-Terphenyl	41.2		µg/l		50.0		82	40-140		
Surrogate: 2-Fluorobiphenyl	36.2		µg/l		40.0		90	40-140		
LCS Dup (1315399-BSD1)					Prepared: 29-Jun-13 Analyzed: 03-Jul-13					
C9-C18 Aliphatic Hydrocarbons	342		µg/l	100	600		57	40-140	8	25
C19-C36 Aliphatic Hydrocarbons	560		µg/l	100	800		70	40-140	7	25
Unadjusted C11-C22 Aromatic Hydrocarbons	1260		µg/l	100	1700		74	40-140	9	25
Naphthalene	66.7		µg/l	5.00	100		67	40-140	16	25
2-Methylnaphthalene	68.2		µg/l	5.00	100		68	40-140	14	25
Acenaphthylene	76.7		µg/l	5.00	100		77	40-140	11	25
Acenaphthene	78.8		µg/l	5.00	100		79	40-140	11	25
Fluorene	81.5		µg/l	5.00	100		82	40-140	8	25
Phenanthrene	83.9		µg/l	5.00	100		84	40-140	7	25
Anthracene	82.7		µg/l	5.00	100		83	40-140	8	25
Fluoranthene	85.9		µg/l	5.00	100		86	40-140	7	25
Pyrene	83.6		µg/l	5.00	100		84	40-140	5	25
Benzo (a) anthracene	87.5		µg/l	5.00	100		88	40-140	3	25
Chrysene	90.1		µg/l	5.00	100		90	40-140	8	25
Benzo (b) fluoranthene	79.8		µg/l	5.00	100		80	40-140	2	25
Benzo (k) fluoranthene	92.4		µg/l	5.00	100		92	40-140	6	25
Benzo (a) pyrene	76.3		µg/l	5.00	100		76	40-140	6	25
Indeno (1,2,3-cd) pyrene	73.2		µg/l	5.00	100		73	40-140	4	25
Dibenzo (a,h) anthracene	71.6		µg/l	5.00	100		72	40-140	3	25
Benzo (g,h,i) perylene	73.8		µg/l	5.00	100		74	40-140	3	25
n-Nonane (C9)	38.7		µg/l	5.00	100		39	30-140	6	25
n-Decane	48.5		µg/l	5.00	100		49	40-140	7	25
n-Dodecane	54.4		µg/l	5.00	100		54	40-140	8	25
n-Tetradecane	62.2		µg/l	5.00	100		62	40-140	8	25
n-Hexadecane	69.1		µg/l	5.00	100		69	40-140	8	25
n-Octadecane	71.7		µg/l	5.00	100		72	40-140	8	25
n-Nonadecane	71.8		µg/l	5.00	100		72	40-140	8	25
n-Eicosane	72.9		µg/l	5.00	100		73	40-140	8	25
n-Docosane	71.7		µg/l	5.00	100		72	40-140	7	25

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

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315399 - SW846 3510C										
<u>LCS Dup (1315399-BSD1)</u>					<u>Prepared: 29-Jun-13 Analyzed: 03-Jul-13</u>					
n-Tetracosane	71.2		µg/l	5.00	100		71	40-140	7	25
n-Hexacosane	71.0		µg/l	5.00	100		71	40-140	6	25
n-Octacosane	71.9		µg/l	5.00	100		72	40-140	6	25
n-Triacontane	69.7		µg/l	5.00	100		70	40-140	6	25
n-Hexatriacontane	71.4		µg/l	5.00	100		71	40-140	5	25
Naphthalene (aliphatic fraction)	0.00		µg/l					0-200		200
2-Methylnaphthalene (aliphatic fraction)	0.00		µg/l					0-200		200
Surrogate: 1-Chlorooctadecane	32.8		µg/l		50.0		66	40-140		
Surrogate: Ortho-Terphenyl	42.0		µg/l		50.0		84	40-140		
Surrogate: 2-Fluorobiphenyl	36.6		µg/l		40.0		91	40-140		

Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315352 - SW846 3005A										
<u>Blank (1315352-BLK1)</u>					<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>					
Barium	< 0.0050		mg/l	0.0050						
Lead	< 0.0075		mg/l	0.0075						
Chromium	< 0.0050		mg/l	0.0050						
Cadmium	< 0.0025		mg/l	0.0025						
Silver	< 0.0050		mg/l	0.0050						
Arsenic	< 0.0040		mg/l	0.0040						
Selenium	< 0.0150		mg/l	0.0150						
<u>LCS (1315352-BS1)</u>					<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>					
Selenium	1.21		mg/l	0.0150	1.25		97	85-115		
Barium	1.35		mg/l	0.0050	1.25		108	85-115		
Silver	1.36		mg/l	0.0050	1.25		109	85-115		
Lead	1.27		mg/l	0.0075	1.25		102	85-115		
Arsenic	1.22		mg/l	0.0040	1.25		97	85-115		
Chromium	1.35		mg/l	0.0050	1.25		108	85-115		
Cadmium	1.25		mg/l	0.0025	1.25		100	85-115		
<u>LCS Dup (1315352-BSD1)</u>					<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>					
Selenium	1.24		mg/l	0.0150	1.25		99	85-115	2	20
Lead	1.29		mg/l	0.0075	1.25		103	85-115	1	20
Chromium	1.36		mg/l	0.0050	1.25		109	85-115	0.9	20
Cadmium	1.28		mg/l	0.0025	1.25		102	85-115	2	20
Barium	1.35		mg/l	0.0050	1.25		108	85-115	0.4	20
Silver	1.36		mg/l	0.0050	1.25		109	85-115	0.4	20
Arsenic	1.23		mg/l	0.0040	1.25		99	85-115	1	20
<u>Duplicate (1315352-DUP1)</u>				<u>Source: SB72315-03</u>		<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>				
Barium	0.741		mg/l	0.0050		0.736			0.7	20
Cadmium	< 0.0025		mg/l	0.0025		BRL				20
Chromium	0.0461		mg/l	0.0050		0.0462			0.2	20
Lead	0.0774		mg/l	0.0075		0.0775			0.06	20
Selenium	< 0.0150		mg/l	0.0150		BRL				20
Silver	< 0.0050		mg/l	0.0050		BRL				20
Arsenic	0.0072		mg/l	0.0040		0.0070			2	20
<u>Matrix Spike (1315352-MS1)</u>				<u>Source: SB72315-02</u>		<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>				
Arsenic	1.29		mg/l	0.0040	1.25	BRL	103	75-125		
Chromium	1.27		mg/l	0.0050	1.25	0.0010	101	75-125		
Silver	1.37		mg/l	0.0050	1.25	BRL	109	75-125		
Lead	1.16		mg/l	0.0075	1.25	BRL	93	75-125		
Selenium	1.29		mg/l	0.0150	1.25	BRL	103	75-125		
Cadmium	1.20		mg/l	0.0025	1.25	BRL	96	75-125		
Barium	1.42		mg/l	0.0050	1.25	0.141	102	75-125		
<u>Matrix Spike Dup (1315352-MSD1)</u>				<u>Source: SB72315-02</u>		<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>				
Cadmium	1.20		mg/l	0.0025	1.25	BRL	96	75-125	0.4	20
Selenium	1.28		mg/l	0.0150	1.25	BRL	103	75-125	0.8	20
Chromium	1.28		mg/l	0.0050	1.25	0.0010	102	75-125	0.9	20
Barium	1.41		mg/l	0.0050	1.25	0.141	102	75-125	0.5	20
Arsenic	1.28		mg/l	0.0040	1.25	BRL	103	75-125	0.3	20
Silver	1.38		mg/l	0.0050	1.25	BRL	110	75-125	0.8	20
Lead	1.17		mg/l	0.0075	1.25	BRL	93	75-125	0.3	20
<u>Post Spike (1315352-PS1)</u>				<u>Source: SB72315-02</u>		<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>				
Silver	1.58	QM9	mg/l	0.0050	1.25	BRL	126	80-120		
Arsenic	1.35		mg/l	0.0040	1.25	BRL	108	80-120		
Barium	1.56		mg/l	0.0050	1.25	0.141	114	80-120		

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Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315352 - SW846 3005A										
<u>Post Spike (1315352-PS1)</u>				<u>Source: SB72315-02</u>				<u>Prepared: 01-Jul-13 Analyzed: 02-Jul-13</u>		
Cadmium	1.26		mg/l	0.0025	1.25	BRL	101	80-120		
Chromium	1.41		mg/l	0.0050	1.25	0.0010	112	80-120		
Lead	1.25		mg/l	0.0075	1.25	BRL	100	80-120		
Selenium	1.34		mg/l	0.0150	1.25	BRL	107	80-120		

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Soluble Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1315353 - EPA200/SW7000 Series										
<u>Blank (1315353-BLK1)</u>										
Mercury	< 0.00020		mg/l	0.00020						
<u>LCS (1315353-BS1)</u>										
Mercury	0.00567		mg/l	0.00020	0.00500		113	85-115		
<u>Duplicate (1315353-DUP1)</u>										
Mercury	< 0.00020		mg/l	0.00020		BRL				20
<u>Matrix Spike (1315353-MS1)</u>										
Mercury	0.00587		mg/l	0.00020	0.00500	BRL	117	80-120		
<u>Matrix Spike Dup (1315353-MSD1)</u>										
Mercury	0.00586		mg/l	0.00020	0.00500	BRL	117	80-120	0.2	20
<u>Post Spike (1315353-PS1)</u>										
Mercury	0.00579	QM9	mg/l	0.00020	0.00500	BRL	116	85-115		

Notes and Definitions

D	Data reported from a dilution
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
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.
R01	The Reporting Limit has been raised to account for matrix interference.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

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

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

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

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

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

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

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

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor
Kimberly Wisk
Nicole Leja



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling: SB72315 PM

☐ Standard TAT - 7 to 10 business days

☒ Rush TAT - Date Needed: July 3, 2013

All TATs subject to laboratory approval

Min. 24-hr notification needed for rushes

Samples disposed after 60 days unless otherwise instructed

Report To: Kleinfelder
1 Speen Street
Framingham, MA 01701

Telephone #: 508-370-8256 Fax: 508-68-1401

Project Mgr: Moira Johnson

Invoice To: Cumberland Farms
Mr. Matt Young
100 Crossing Blvd
Framingham, MA 01702

P.O. No.: 46985

RQN

Project No: CFI ASTM Southbridge, MA

Site Name: 357-381 Main Street

Location: Southbridge State MA

Sampler(s): Katie Grim/Moira Johnson

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11= None 12=

List Preservative Code below:

2 2 2 11 11

QA/QC Reporting Notes:
*additional charges may apply

DW=Dinking Water GW= Groundwater WW= Waste Water

O= Oil SW= surface Water SO=Soil SL= Sludge A= Air

X1= X2= X3=

G= Grab

C=Compsite

Lab ID	Sample ID	Date	Time	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	MA VPH & Targets - Total Xylenes	MA EPH	VOCs via 8260	RCRA 8 Metals	PCBs			
<u>SB72315-01</u>	MW-1	6/25/2013	1200	G	GW	6	2		1	x	x	x	x	x			
<u>-02</u>	MW-2	6/25/2013	1100	G	GW	6	2		1	x	x	x	x	x			
<u>-03</u>	MW-3	6/25/2013		G	GW					x	x	x	x	x			
	MW-4	6/25/2013		G	GW					x	x	x	x	x			
	MW-5	6/25/2013	1230	G	GW	6	2		1	x	x	x	x	x			
	MW-6	6/25/2013		G	GW					x	x	x	x	x			
	MW-7	6/25/2013		G	GW					x	x	x	x	x			
	MW-8	6/25/2013		G	GW					x	x	x	x	x			
<u>-04</u>	Trip Blank	6/25/13	2400	G	GW	1				x							
<u>-05</u>	Field Blank	6/25/2013	1200	G	GW	1				x							

MA DEP MCP CAM-Report ☐ yes ☒ no
CT DPH RCP Report ☐ yes ☒ no
☐ Standard ☐ No QC
☐ DQA* ☐ ASP B*
☐ ASP A* ☐ NJ Full
☐ NJ Reduced* ☐ Tier IV*
☐ Tier II* ☐ Other:

State-specific reporting standards:

KLF field filtered metal samples

No CAM needed

Relinquished by:

Received by:

Date

Time

Temp °C

☐ EDD format:

☒ E-mail to: msjohnson@kleinfelder.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken

☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Free

Report Date:
27-Mar-15 15:21



SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

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

Kleinfelder, Inc.
1 Speen Street, Suite 200
Framingham, MA 01701
Attn: Moira Johnson

Project: 357-381 Main Street - Southbridge, MA
Project #: CFI Southbridge

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC03809-01	MW-1	Ground Water	27-Feb-15 12:45	27-Feb-15 16:37
SC03809-02	MW-2	Ground Water	27-Feb-15 14:10	27-Feb-15 16:37
SC03809-03	Trip Blank	Ground Water	27-Feb-15 00:00	27-Feb-15 16:37

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

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



Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 43 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

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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.

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 4.4 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.

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

March 27, 2015 Report Revision Case Narrative:

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

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

EPA 300.0

Samples:

SC03809-01 *MW-1*

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

SC03809-02 *MW-2*

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

SM3500-Cr-B/7196A

Samples:

SC03809-01 *MW-1*

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

SC03809-02 *MW-2*

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

SM4500-Cl-G

Samples:

SC03809-01 *MW-1*

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

SC03809-02 *MW-2*

SM4500-Cl-G

Samples:

SC03809-02 *MW-2*

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

Total Residual Chlorine

SW846 6010C

Blanks:

1503856-BLK1

The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.

Iron

Spikes:

1503856-PS1 *Source: SC03809-01*

The spike recovery was outside of QC acceptance limits for the MS, MSD and/or PS due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

Iron

Duplicates:

1503856-DUP1 *Source: SC03809-01*

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

Arsenic

MRL raised to correlate to batch QC reporting limits.

Silver

1503858-DUP1 *Source: SC03809-02*

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

Silver

Samples:

SC03809-01 *MW-1*

MRL raised to correlate to batch QC reporting limits.

Silver

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

Silver

SC03809-02 *MW-2*

MRL raised to correlate to batch QC reporting limits.

Silver

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

Antimony

Silver

SW846 8082A

SW846 8082A

Samples:

SC03809-01 *MW-1*

Elevated Reporting Limits due to limited sample volume.

SC03809-02 *MW-2*

Elevated Reporting Limits due to limited sample volume.

SW846 8260C

Calibration:

1502049

Analyte quantified by quadratic equation type calibration.

1,1-Dichloropropene
1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
2-Butanone (MEK)
4-Isopropyltoluene
Hexachlorobutadiene
Isopropylbenzene
Naphthalene
n-Butylbenzene
n-Propylbenzene
sec-Butylbenzene
tert-Butylbenzene

This affected the following samples:

1503861-BLK1
1503861-BS1
1503861-BSD1
MW-1
MW-2
S501728-ICV1
S501757-CCV1
Trip Blank

S501728-ICV1

Analyte percent recovery is outside individual acceptance criteria (80-120).

1,1,2-Trichlorotrifluoroethane (Freon 113) (75%)
Dichlorodifluoromethane (Freon 12) (72%)
trans-1,4-Dichloro-2-butene (126%)
Trichlorofluoromethane (Freon 11) (79%)

This affected the following samples:

1503861-BLK1
1503861-BS1
1503861-BSD1
MW-1
MW-2
S501757-CCV1
Trip Blank

Samples:

SW846 8260C

Samples:

S501757-CCV1

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

1,1-Dichloroethene (20.6%)
2,2-Dichloropropane (28.6%)
Bromomethane (-26.1%)

This affected the following samples:

1503861-BLK1
1503861-BS1
1503861-BSD1
MW-1
MW-2
Trip Blank

SW846 8270D

Calibration:

1502045

Analyte quantified by quadratic equation type calibration.

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

This affected the following samples:

1503878-BLK1
1503878-BS1
1503878-BSD1
MW-1
MW-2
S501700-ICV1
S501817-CCV1

Laboratory Control Samples:

1503878 BS/BSD

Benzidine percent recoveries (64/12) 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
MW-2

Pyridine percent recoveries (38/34) 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
MW-2

1503878 BSD

Benzidine RPD 137% (20%) is outside individual acceptance criteria.

1503878-BSD1

SW846 8270D

Laboratory Control Samples:

1503878-BSD1

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

Benzidine

Samples:

S501817-CCV1

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

Benzidine (-30.2%)

This affected the following samples:

1503878-BLK1

1503878-BS1

1503878-BSD1

MW-1

MW-2

Sample Acceptance Check Form

Client: Kleinfelder, Inc. - Framingham, MA
Project: 357-381 Main Street - Southbridge, MA / CFI Southbridge
Work Order: SC03809
Sample(s) received on: 2/27/2015

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

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	☐	☒	☐
Were custody seals intact?	☐	☐	☒
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	☒	☐	☐
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?	☒	☐	☐

Sample IdentificationMW-1
SC03809-01Client Project #
CFI SouthbridgeMatrix
Ground WaterCollection Date/Time
27-Feb-15 12:45Received
27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Volatile Organic Compounds													
<u>Volatile Organic Compounds by SW846 8260</u>													
<u>Prepared by method SW846 5030 Water MS</u>													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.0		µg/l	1.0	0.7	1	SW846 8260C	02-Mar-15	02-Mar-15	GMA	1503861	
67-64-1	Acetone	< 10.0		µg/l	10.0	3.6	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.5		µg/l	0.5	0.5	1	"	"	"	"	"	
71-43-2	Benzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
75-25-2	Bromoform	< 1.0		µg/l	1.0	0.6	1	"	"	"	"	"	
74-83-9	Bromomethane	< 2.0		µg/l	2.0	0.5	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 10.0		µg/l	10.0	3.1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 2.0		µg/l	2.0	0.7	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
75-00-3	Chloroethane	< 2.0		µg/l	2.0	0.7	1	"	"	"	"	"	
67-66-3	Chloroform	6.0		µg/l	1.0	0.5	1	"	"	"	"	"	
74-87-3	Chloromethane	< 2.0		µg/l	2.0	0.5	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 2.0		µg/l	2.0	0.5	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 0.5		µg/l	0.5	0.3	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.0		µg/l	2.0	0.6	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.5		µg/l	0.5	0.5	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	< 10.0		µg/l	10.0	2.0	1	"	"	"	"	"	

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Sample IdentificationMW-1
SC03809-01Client Project #
CFI SouthbridgeMatrix
Ground WaterCollection Date/Time
27-Feb-15 12:45Received
27-Feb-15

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

98-82-8	Isopropylbenzene	< 1.0		µg/l	1.0	0.5	1	SW846 8260C	02-Mar-15	02-Mar-15	GMA	1503861	
99-87-6	4-Isopropyltoluene	< 1.0		µg/l	1.0	0.5	1						
1634-04-4	Methyl tert-butyl ether	< 1.0		µg/l	1.0	0.4	1						
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0	2.5	1						
75-09-2	Methylene chloride	< 2.0		µg/l	2.0	0.5	1						
91-20-3	Naphthalene	< 1.0		µg/l	1.0	0.5	1						
103-65-1	n-Propylbenzene	< 1.0		µg/l	1.0	0.4	1						
100-42-5	Styrene	< 1.0		µg/l	1.0	0.4	1						
630-20-6	1,1,1,2-Tetrachloroethane	< 1.0		µg/l	1.0	0.4	1						
79-34-5	1,1,2,2-Tetrachloroethane	< 0.5		µg/l	0.5	0.5	1						
127-18-4	Tetrachloroethene	< 1.0		µg/l	1.0	0.6	1						
108-88-3	Toluene	< 1.0		µg/l	1.0	0.3	1						
87-61-6	1,2,3-Trichlorobenzene	< 1.0		µg/l	1.0	0.8	1						
120-82-1	1,2,4-Trichlorobenzene	< 1.0		µg/l	1.0	0.4	1						
108-70-3	1,3,5-Trichlorobenzene	< 1.0		µg/l	1.0	0.6	1						
71-55-6	1,1,1-Trichloroethane	< 1.0		µg/l	1.0	0.4	1						
79-00-5	1,1,2-Trichloroethane	< 1.0		µg/l	1.0	0.3	1						
79-01-6	Trichloroethene	< 1.0		µg/l	1.0	0.4	1						
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.0		µg/l	1.0	0.8	1						
96-18-4	1,2,3-Trichloropropane	< 1.0		µg/l	1.0	0.3	1						
95-63-6	1,2,4-Trimethylbenzene	< 1.0		µg/l	1.0	0.3	1						
108-67-8	1,3,5-Trimethylbenzene	< 1.0		µg/l	1.0	0.4	1						
75-01-4	Vinyl chloride	< 1.0		µg/l	1.0	1.0	1						
179601-23-1	m,p-Xylene	< 2.0		µg/l	2.0	0.4	1						
95-47-6	o-Xylene	< 1.0		µg/l	1.0	0.4	1						
109-99-9	Tetrahydrofuran	< 2.0		µg/l	2.0	0.8	1						
60-29-7	Ethyl ether	< 1.0		µg/l	1.0	0.5	1						
994-05-8	Tert-amyl methyl ether	< 1.0		µg/l	1.0	0.3	1						
637-92-3	Ethyl tert-butyl ether	< 1.0		µg/l	1.0	0.4	1						
108-20-3	Di-isopropyl ether	< 1.0		µg/l	1.0	0.3	1						
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	8.9	1						
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	14.6	1						
110-57-6	trans-1,4-Dichloro-2-buten e	< 5.0		µg/l	5.0	1.0	1						
64-17-5	Ethanol	< 400		µg/l	400	80.8	1						

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	85			70-130 %								
2037-26-5	Toluene-d8	102			70-130 %								
17060-07-0	1,2-Dichloroethane-d4	107			70-130 %								
1868-53-7	Dibromofluoromethane	102			70-130 %								

Semivolatile Organic Compounds by GCMSSemivolatile Organic CompoundsPrepared by method SW846 3510C

83-32-9	Acenaphthene	< 5.21		µg/l	5.21	1.31	1	SW846 8270D	02-Mar-15	02-Mar-15	ML	1503878	
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Sample Identification

MW-1
SC03809-01

Client Project #
CFI Southbridge

Matrix
Ground Water

Collection Date/Time
27-Feb-15 12:45

Received
27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS													
<u>Semivolatile Organic Compounds</u>													
<u>Prepared by method SW846 3510C</u>													
208-96-8	Acenaphthylene	< 5.21		µg/l	5.21	1.40	1	SW846 8270D	02-Mar-15	02-Mar-15	ML	1503878	
62-53-3	Aniline	< 5.21		µg/l	5.21	1.71	1						
120-12-7	Anthracene	< 5.21		µg/l	5.21	1.46	1						
103-33-3	Azobenzene/Diphenyldiaz ene	< 5.21		µg/l	5.21	1.98	1						
92-87-5	Benzidine	< 5.21		µg/l	5.21	4.93	1						
56-55-3	Benzo (a) anthracene	< 5.21		µg/l	5.21	1.31	1						
50-32-8	Benzo (a) pyrene	< 5.21		µg/l	5.21	1.38	1						
205-99-2	Benzo (b) fluoranthene	< 5.21		µg/l	5.21	1.72	1						
191-24-2	Benzo (g,h,i) perylene	< 5.21		µg/l	5.21	1.55	1						
207-08-9	Benzo (k) fluoranthene	< 5.21		µg/l	5.21	1.39	1						
65-85-0	Benzoic acid	< 5.21		µg/l	5.21	1.46	1						
100-51-6	Benzyl alcohol	< 5.21		µg/l	5.21	1.38	1						
111-91-1	Bis(2-chloroethoxy)metha ne	< 5.21		µg/l	5.21	1.21	1						
111-44-4	Bis(2-chloroethyl)ether	< 5.21		µg/l	5.21	1.23	1						
108-60-1	Bis(2-chloroisopropyl)ethe r	< 5.21		µg/l	5.21	1.28	1						
117-81-7	Bis(2-ethylhexyl)phthalate	< 5.21		µg/l	5.21	1.40	1						
101-55-3	4-Bromophenyl phenyl ether	< 5.21		µg/l	5.21	2.21	1						
85-68-7	Butyl benzyl phthalate	< 5.21		µg/l	5.21	1.36	1						
86-74-8	Carbazole	< 5.21		µg/l	5.21	1.91	1						
59-50-7	4-Chloro-3-methylphenol	< 5.21		µg/l	5.21	1.55	1						
106-47-8	4-Chloroaniline	< 5.21		µg/l	5.21	1.85	1						
91-58-7	2-Chloronaphthalene	< 5.21		µg/l	5.21	1.71	1						
95-57-8	2-Chlorophenol	< 5.21		µg/l	5.21	1.20	1						
7005-72-3	4-Chlorophenyl phenyl ether	< 5.21		µg/l	5.21	1.33	1						
218-01-9	Chrysene	< 5.21		µg/l	5.21	1.56	1						
53-70-3	Dibenzo (a,h) anthracene	< 5.21		µg/l	5.21	1.60	1						
132-64-9	Dibenzofuran	< 5.21		µg/l	5.21	1.36	1						
95-50-1	1,2-Dichlorobenzene	< 5.21		µg/l	5.21	1.35	1						
541-73-1	1,3-Dichlorobenzene	< 5.21		µg/l	5.21	1.19	1						
106-46-7	1,4-Dichlorobenzene	< 5.21		µg/l	5.21	1.19	1						
91-94-1	3,3'-Dichlorobenzidine	< 5.21		µg/l	5.21	1.26	1						
120-83-2	2,4-Dichlorophenol	< 5.21		µg/l	5.21	1.20	1						
84-66-2	Diethyl phthalate	< 5.21		µg/l	5.21	1.33	1						
131-11-3	Dimethyl phthalate	< 5.21		µg/l	5.21	1.43	1						
105-67-9	2,4-Dimethylphenol	< 5.21		µg/l	5.21	1.12	1						
84-74-2	Di-n-butyl phthalate	< 5.21		µg/l	5.21	1.65	1						
534-52-1	4,6-Dinitro-2-methylphenol	< 5.21		µg/l	5.21	2.10	1						
51-28-5	2,4-Dinitrophenol	< 5.21		µg/l	5.21	2.02	1						
121-14-2	2,4-Dinitrotoluene	< 5.21		µg/l	5.21	1.77	1						
606-20-2	2,6-Dinitrotoluene	< 5.21		µg/l	5.21	1.43	1						
117-84-0	Di-n-octyl phthalate	< 5.21		µg/l	5.21	1.39	1						

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Sample Identification

MW-1
SC03809-01

Client Project #
CFI Southbridge

Matrix
Ground Water

Collection Date/Time
27-Feb-15 12:45

Received
27-Feb-15

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

206-44-0	Fluoranthene	< 5.21		µg/l	5.21	1.62	1	SW846 8270D	02-Mar-15	02-Mar-15	ML	1503878	
86-73-7	Fluorene	< 5.21		µg/l	5.21	1.41	1						
118-74-1	Hexachlorobenzene	< 5.21		µg/l	5.21	1.42	1						
87-68-3	Hexachlorobutadiene	< 5.21		µg/l	5.21	1.29	1						
77-47-4	Hexachlorocyclopentadiene	< 5.21		µg/l	5.21	1.67	1						
67-72-1	Hexachloroethane	< 5.21		µg/l	5.21	1.15	1						
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.21		µg/l	5.21	1.81	1						
78-59-1	Isophorone	< 5.21		µg/l	5.21	1.21	1						
91-57-6	2-Methylnaphthalene	< 5.21		µg/l	5.21	1.49	1						
95-48-7	2-Methylphenol	< 5.21		µg/l	5.21	1.46	1						
108-39-4, 106-44-5	3 & 4-Methylphenol	< 10.4		µg/l	10.4	1.30	1						
91-20-3	Naphthalene	< 5.21		µg/l	5.21	1.22	1						
88-74-4	2-Nitroaniline	< 5.21		µg/l	5.21	1.82	1						
99-09-2	3-Nitroaniline	< 5.21		µg/l	5.21	2.33	1						
100-01-6	4-Nitroaniline	< 20.8		µg/l	20.8	2.27	1						
98-95-3	Nitrobenzene	< 5.21		µg/l	5.21	1.89	1						
88-75-5	2-Nitrophenol	< 5.21		µg/l	5.21	1.07	1						
100-02-7	4-Nitrophenol	< 20.8		µg/l	20.8	2.34	1						
62-75-9	N-Nitrosodimethylamine	< 5.21		µg/l	5.21	1.17	1						
621-64-7	N-Nitrosodi-n-propylamine	< 5.21		µg/l	5.21	1.25	1						
86-30-6	N-Nitrosodiphenylamine	< 5.21		µg/l	5.21	2.47	1						
87-86-5	Pentachlorophenol	< 20.8		µg/l	20.8	2.47	1						
85-01-8	Phenanthrene	< 5.21		µg/l	5.21	1.41	1						
108-95-2	Phenol	< 5.21		µg/l	5.21	1.44	1						
129-00-0	Pyrene	< 5.21		µg/l	5.21	2.80	1						
110-86-1	Pyridine	< 5.21		µg/l	5.21	1.90	1						
120-82-1	1,2,4-Trichlorobenzene	< 5.21		µg/l	5.21	1.14	1						
90-12-0	1-Methylnaphthalene	< 5.21		µg/l	5.21	0.990	1						
95-95-4	2,4,5-Trichlorophenol	< 5.21		µg/l	5.21	2.17	1						
88-06-2	2,4,6-Trichlorophenol	< 5.21		µg/l	5.21	1.76	1						
82-68-8	Pentachloronitrobenzene	< 5.21		µg/l	5.21	1.54	1						
95-94-3	1,2,4,5-Tetrachlorobenzene	< 5.21		µg/l	5.21	1.61	1						

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	63			30-130 %								
367-12-4	2-Fluorophenol	41			15-110 %								
4165-60-0	Nitrobenzene-d5	65			30-130 %								
4165-62-2	Phenol-d5	28			15-110 %								
1718-51-0	Terphenyl-d14	74			30-130 %								
118-79-6	2,4,6-Tribromophenol	65			15-110 %								

Semivolatile Organic Compounds by GCPolychlorinated Biphenyls

R02

Prepared by method SW846 3510C

12674-11-2	Aroclor-1016	< 0.294		µg/l	0.294	0.168	1	SW846 8082A	27-Feb-15	02-Mar-15	IMR	1503770	
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Sample IdentificationMW-1
SC03809-01Client Project #
CFI SouthbridgeMatrix
Ground WaterCollection Date/Time
27-Feb-15 12:45Received
27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCPolychlorinated Biphenyls

R02

Prepared by method SW846 3510C

11104-28-2	Aroclor-1221	< 0.294		µg/l	0.294	0.159	1	SW846 8082A	27-Feb-15	02-Mar-15	IMR	1503770	
11141-16-5	Aroclor-1232	< 0.294		µg/l	0.294	0.184	1						
53469-21-9	Aroclor-1242	< 0.294		µg/l	0.294	0.115	1						
12672-29-6	Aroclor-1248	< 0.294		µg/l	0.294	0.166	1						
11097-69-1	Aroclor-1254	< 0.294		µg/l	0.294	0.110	1						
11096-82-5	Aroclor-1260	< 0.294		µg/l	0.294	0.0912	1						
37324-23-5	Aroclor-1262	< 0.294		µg/l	0.294	0.144	1						
11100-14-4	Aroclor-1268	< 0.294		µg/l	0.294	0.200	1						

Surrogate recoveries:

10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	65			30-150 %								
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	60			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr)	40			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr) [2C]	55			30-150 %								

Extractable Petroleum HydrocarbonsFingerprinting by GCPrepared by method SW846 3510C

8006-61-9	Gasoline	< 0.2		mg/l	0.2	0.1	1	SW846 8100Mod.	02-Mar-15	03-Mar-15	SEP	1503876	
68476-30-2	Fuel Oil #2	< 0.2		mg/l	0.2	0.09	1						
68476-31-3	Fuel Oil #4	< 0.2		mg/l	0.2	0.02	1						
68553-00-4	Fuel Oil #6	< 0.2		mg/l	0.2	0.1	1						
M09800000	Motor Oil	< 0.2		mg/l	0.2	0.1	1						
8032-32-4	Ligroin	< 0.2		mg/l	0.2	0.06	1						
J00100000	Aviation Fuel	< 0.2		mg/l	0.2	0.06	1						
	Hydraulic Oil	< 0.2		mg/l	0.2	0.02	1						
	Dielectric Fluid	< 0.2		mg/l	0.2	0.06	1						
	Unidentified	< 0.2		mg/l	0.2	0.06	1						
	Other Oil	< 0.2		mg/l	0.2	0.02	1						
	Total Petroleum Hydrocarbons	< 0.2		mg/l	0.2	0.02	1						

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	61			40-140 %								
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Total Metals by EPA 200/6000 Series Methods

	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			AAH	1503813	
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Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 0.0070	R06	mg/l	0.0070	0.0012	1	SW846 6010C	02-Mar-15	03-Mar-15	bjw	1503856	
7440-38-2	Arsenic	0.0047		mg/l	0.0040	0.0027	1			02-Mar-15			
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0001	1						
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0002	1						
7440-47-3	Chromium	0.0293		mg/l	0.0050	0.0010	1						
7440-50-8	Copper	0.0216		mg/l	0.0050	0.0035	1			03-Mar-15			
7439-89-6	Iron	12.4		mg/l	0.0150	0.0082	1						

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Sample Identification

MW-1

SC03809-01

Client Project #

CFI Southbridge

Matrix

Ground Water

Collection Date/Time

27-Feb-15 12:45

Received

27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 6000/7000 Series Methods													
7440-02-0	Nickel	0.0254		mg/l	0.0050	0.0014	1	SW846 6010C	02-Mar-15	03-Mar-15	bjw	1503856	
7439-92-1	Lead	0.0517		mg/l	0.0075	0.0020	1			02-Mar-15			
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0025	1						
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0036	1			03-Mar-15			
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0016	1			02-Mar-15			
7440-66-6	Zinc	0.168		mg/l	0.0050	0.0006	1						
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00009	1	EPA 245.1/7470A	02-Mar-15	02-Mar-15	YR	1503857	X
Soluble Metals by EPA 200/6000 Series Methods													
	Filtration	Field Filtered		N/A			1	EPA 200.7/3005A/601 0			AAH	1503838	
Soluble Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0070	R01	mg/l	0.0070	0.0012	1	SW846 6010C	02-Mar-15	02-Mar-15	edt	1503858	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1						
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0001	1						
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0002	1						
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0010	1						
7440-50-8	Copper	< 0.0050		mg/l	0.0050	0.0035	1			03-Mar-15			
7439-89-6	Iron	< 0.0300		mg/l	0.0300	0.0163	1		26-Mar-15	27-Mar-15		1505433	
7440-02-0	Nickel	< 0.0050		mg/l	0.0050	0.0014	1		02-Mar-15	03-Mar-15		1503858	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0020	1			02-Mar-15			
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0025	1						
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0036	1			03-Mar-15			
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0016	1			02-Mar-15			
7440-66-6	Zinc	0.0474		mg/l	0.0050	0.0006	1						
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00009	1	EPA 245.1/7470A	02-Mar-15	02-Mar-15	YR	1503859	X
General Chemistry Parameters													
16065-83-1	Trivalent Chromium	0.0293		mg/l	0.0100	0.0053	1	Calculation	02-Mar-15	02-Mar-15	edt	1503856	
	Flashpoint	>150		°F			1	SW846 1010A	27-Mar-15	27-Mar-15	BD	1505564	
7782-50-5	Total Residual Chlorine	< 0.200	R01,CIHT	mg/l	0.200	0.056	1	SM4500-Cl-G	27-Feb-15 17:30	27-Feb-15 17:50	CAA/T	1503839	X
16887-00-6	Chloride	508	D, GS1	mg/l	20.0	5.82	20	EPA 300.0	02-Mar-15	03-Mar-15	DJB	1503912	X
18540-29-9	Hexavalent Chromium	< 0.050	R01,LIV	mg/l	0.050	0.021	1	SM3500-Cr-B/71 96A	27-Feb-15 17:30	27-Feb-15 18:02	CAA/T	1503840	
57-12-5	Cyanide (total)	< 0.00500		mg/l	0.00500	0.00442	1	EPA 335.4 / SW846 9012B	03-Mar-15	03-Mar-15	RLT	1503940	X
	pH	7.70	pH	pH Units			1	ASTM D 1293-99B	26-Mar-15 18:10	26-Mar-15 19:05	TN	1505476	X
	Total Suspended Solids	1,960	LIV	mg/l	10.0	4.3	1	SM2540D	02-Mar-15	03-Mar-15	BD	1503877	X

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Sample IdentificationMW-2
SC03809-02Client Project #
CFI SouthbridgeMatrix
Ground WaterCollection Date/Time
27-Feb-15 14:10Received
27-Feb-15

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
<u>Volatile Organic Compounds by SW846 8260</u>													
<u>Prepared by method SW846 5030 Water MS</u>													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.0		µg/l	1.0	0.7	1	SW846 8260C	02-Mar-15	02-Mar-15	GMA	1503861	
67-64-1	Acetone	< 10.0		µg/l	10.0	3.6	1						
107-13-1	Acrylonitrile	< 0.5		µg/l	0.5	0.5	1						
71-43-2	Benzene	< 1.0		µg/l	1.0	0.3	1						
108-86-1	Bromobenzene	< 1.0		µg/l	1.0	0.3	1						
74-97-5	Bromochloromethane	< 1.0		µg/l	1.0	0.3	1						
75-27-4	Bromodichloromethane	< 0.5		µg/l	0.5	0.4	1						
75-25-2	Bromoform	< 1.0		µg/l	1.0	0.6	1						
74-83-9	Bromomethane	< 2.0		µg/l	2.0	0.5	1						
78-93-3	2-Butanone (MEK)	< 10.0		µg/l	10.0	3.1	1						
104-51-8	n-Butylbenzene	< 1.0		µg/l	1.0	0.4	1						
135-98-8	sec-Butylbenzene	< 1.0		µg/l	1.0	0.4	1						
98-06-6	tert-Butylbenzene	< 1.0		µg/l	1.0	0.4	1						
75-15-0	Carbon disulfide	< 2.0		µg/l	2.0	0.7	1						
56-23-5	Carbon tetrachloride	< 1.0		µg/l	1.0	0.4	1						
108-90-7	Chlorobenzene	< 1.0		µg/l	1.0	0.3	1						
75-00-3	Chloroethane	< 2.0		µg/l	2.0	0.7	1						
67-66-3	Chloroform	1.9		µg/l	1.0	0.5	1						
74-87-3	Chloromethane	< 2.0		µg/l	2.0	0.5	1						
95-49-8	2-Chlorotoluene	< 1.0		µg/l	1.0	0.4	1						
106-43-4	4-Chlorotoluene	< 1.0		µg/l	1.0	0.3	1						
96-12-8	1,2-Dibromo-3-chloropropane	< 2.0		µg/l	2.0	0.5	1						
124-48-1	Dibromochloromethane	< 0.5		µg/l	0.5	0.4	1						
106-93-4	1,2-Dibromoethane (EDB)	< 0.5		µg/l	0.5	0.3	1						
74-95-3	Dibromomethane	< 1.0		µg/l	1.0	0.4	1						
95-50-1	1,2-Dichlorobenzene	< 1.0		µg/l	1.0	0.4	1						
541-73-1	1,3-Dichlorobenzene	< 1.0		µg/l	1.0	0.4	1						
106-46-7	1,4-Dichlorobenzene	< 1.0		µg/l	1.0	0.5	1						
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.0		µg/l	2.0	0.6	1						
75-34-3	1,1-Dichloroethane	< 1.0		µg/l	1.0	0.3	1						
107-06-2	1,2-Dichloroethane	< 1.0		µg/l	1.0	0.3	1						
75-35-4	1,1-Dichloroethene	< 1.0		µg/l	1.0	0.5	1						
156-59-2	cis-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.4	1						
156-60-5	trans-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.5	1						
78-87-5	1,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1						
142-28-9	1,3-Dichloropropane	< 1.0		µg/l	1.0	0.2	1						
594-20-7	2,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1						
563-58-6	1,1-Dichloropropene	< 1.0		µg/l	1.0	0.4	1						
10061-01-5	cis-1,3-Dichloropropene	< 0.5		µg/l	0.5	0.4	1						
10061-02-6	trans-1,3-Dichloropropene	< 0.5		µg/l	0.5	0.5	1						
100-41-4	Ethylbenzene	< 1.0		µg/l	1.0	0.4	1						
87-68-3	Hexachlorobutadiene	< 0.5		µg/l	0.5	0.4	1						
591-78-6	2-Hexanone (MBK)	< 10.0		µg/l	10.0	2.0	1						

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Sample Identification

MW-2
SC03809-02

Client Project #
CFI Southbridge

Matrix
Ground Water

Collection Date/Time
27-Feb-15 14:10

Received
27-Feb-15

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

98-82-8	Isopropylbenzene	< 1.0		µg/l	1.0	0.5	1	SW846 8260C	02-Mar-15	02-Mar-15	GMA	1503861	
99-87-6	4-Isopropyltoluene	< 1.0		µg/l	1.0	0.5	1						
1634-04-4	Methyl tert-butyl ether	< 1.0		µg/l	1.0	0.4	1						
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0	2.5	1						
75-09-2	Methylene chloride	< 2.0		µg/l	2.0	0.5	1						
91-20-3	Naphthalene	< 1.0		µg/l	1.0	0.5	1						
103-65-1	n-Propylbenzene	< 1.0		µg/l	1.0	0.4	1						
100-42-5	Styrene	< 1.0		µg/l	1.0	0.4	1						
630-20-6	1,1,1,2-Tetrachloroethane	< 1.0		µg/l	1.0	0.4	1						
79-34-5	1,1,2,2-Tetrachloroethane	< 0.5		µg/l	0.5	0.5	1						
127-18-4	Tetrachloroethene	< 1.0		µg/l	1.0	0.6	1						
108-88-3	Toluene	< 1.0		µg/l	1.0	0.3	1						
87-61-6	1,2,3-Trichlorobenzene	< 1.0		µg/l	1.0	0.8	1						
120-82-1	1,2,4-Trichlorobenzene	< 1.0		µg/l	1.0	0.4	1						
108-70-3	1,3,5-Trichlorobenzene	< 1.0		µg/l	1.0	0.6	1						
71-55-6	1,1,1-Trichloroethane	< 1.0		µg/l	1.0	0.4	1						
79-00-5	1,1,2-Trichloroethane	< 1.0		µg/l	1.0	0.3	1						
79-01-6	Trichloroethene	< 1.0		µg/l	1.0	0.4	1						
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.0		µg/l	1.0	0.8	1						
96-18-4	1,2,3-Trichloropropane	< 1.0		µg/l	1.0	0.3	1						
95-63-6	1,2,4-Trimethylbenzene	< 1.0		µg/l	1.0	0.3	1						
108-67-8	1,3,5-Trimethylbenzene	< 1.0		µg/l	1.0	0.4	1						
75-01-4	Vinyl chloride	< 1.0		µg/l	1.0	1.0	1						
179601-23-1	m,p-Xylene	< 2.0		µg/l	2.0	0.4	1						
95-47-6	o-Xylene	< 1.0		µg/l	1.0	0.4	1						
109-99-9	Tetrahydrofuran	< 2.0		µg/l	2.0	0.8	1						
60-29-7	Ethyl ether	< 1.0		µg/l	1.0	0.5	1						
994-05-8	Tert-amyl methyl ether	< 1.0		µg/l	1.0	0.3	1						
637-92-3	Ethyl tert-butyl ether	< 1.0		µg/l	1.0	0.4	1						
108-20-3	Di-isopropyl ether	< 1.0		µg/l	1.0	0.3	1						
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	8.9	1						
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	14.6	1						
110-57-6	trans-1,4-Dichloro-2-buten e	< 5.0		µg/l	5.0	1.0	1						
64-17-5	Ethanol	< 400		µg/l	400	80.8	1						

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	88			70-130 %
2037-26-5	Toluene-d8	101			70-130 %
17060-07-0	1,2-Dichloroethane-d4	105			70-130 %
1868-53-7	Dibromofluoromethane	100			70-130 %

Semivolatile Organic Compounds by GCMSSemivolatile Organic CompoundsPrepared by method SW846 3510C

83-32-9	Acenaphthene	< 5.10		µg/l	5.10	1.29	1	SW846 8270D	02-Mar-15	02-Mar-15	ML	1503878	
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Sample IdentificationMW-2
SC03809-02Client Project #
CFI SouthbridgeMatrix
Ground WaterCollection Date/Time
27-Feb-15 14:10Received
27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS													
<u>Semivolatile Organic Compounds</u>													
<u>Prepared by method SW846 3510C</u>													
208-96-8	Acenaphthylene	< 5.10		µg/l	5.10	1.37	1	SW846 8270D	02-Mar-15	02-Mar-15	ML	1503878	
62-53-3	Aniline	< 5.10		µg/l	5.10	1.67	1						
120-12-7	Anthracene	< 5.10		µg/l	5.10	1.43	1						
103-33-3	Azobenzene/Diphenyldiazene	< 5.10		µg/l	5.10	1.94	1						
92-87-5	Benzidine	< 5.10		µg/l	5.10	4.83	1						
56-55-3	Benzo (a) anthracene	< 5.10		µg/l	5.10	1.29	1						
50-32-8	Benzo (a) pyrene	< 5.10		µg/l	5.10	1.35	1						
205-99-2	Benzo (b) fluoranthene	< 5.10		µg/l	5.10	1.68	1						
191-24-2	Benzo (g,h,i) perylene	< 5.10		µg/l	5.10	1.52	1						
207-08-9	Benzo (k) fluoranthene	< 5.10		µg/l	5.10	1.36	1						
65-85-0	Benzoic acid	< 5.10		µg/l	5.10	1.43	1						
100-51-6	Benzyl alcohol	< 5.10		µg/l	5.10	1.35	1						
111-91-1	Bis(2-chloroethoxy)methane	< 5.10		µg/l	5.10	1.18	1						
111-44-4	Bis(2-chloroethyl)ether	< 5.10		µg/l	5.10	1.20	1						
108-60-1	Bis(2-chloroisopropyl)ether	< 5.10		µg/l	5.10	1.26	1						
117-81-7	Bis(2-ethylhexyl)phthalate	< 5.10		µg/l	5.10	1.37	1						
101-55-3	4-Bromophenyl phenyl ether	< 5.10		µg/l	5.10	2.16	1						
85-68-7	Butyl benzyl phthalate	< 5.10		µg/l	5.10	1.34	1						
86-74-8	Carbazole	< 5.10		µg/l	5.10	1.87	1						
59-50-7	4-Chloro-3-methylphenol	< 5.10		µg/l	5.10	1.52	1						
106-47-8	4-Chloroaniline	< 5.10		µg/l	5.10	1.82	1						
91-58-7	2-Chloronaphthalene	< 5.10		µg/l	5.10	1.67	1						
95-57-8	2-Chlorophenol	< 5.10		µg/l	5.10	1.17	1						
7005-72-3	4-Chlorophenyl phenyl ether	< 5.10		µg/l	5.10	1.31	1						
218-01-9	Chrysene	< 5.10		µg/l	5.10	1.53	1						
53-70-3	Dibenzo (a,h) anthracene	< 5.10		µg/l	5.10	1.57	1						
132-64-9	Dibenzofuran	< 5.10		µg/l	5.10	1.34	1						
95-50-1	1,2-Dichlorobenzene	< 5.10		µg/l	5.10	1.33	1						
541-73-1	1,3-Dichlorobenzene	< 5.10		µg/l	5.10	1.16	1						
106-46-7	1,4-Dichlorobenzene	< 5.10		µg/l	5.10	1.16	1						
91-94-1	3,3'-Dichlorobenzidine	< 5.10		µg/l	5.10	1.23	1						
120-83-2	2,4-Dichlorophenol	< 5.10		µg/l	5.10	1.17	1						
84-66-2	Diethyl phthalate	< 5.10		µg/l	5.10	1.31	1						
131-11-3	Dimethyl phthalate	< 5.10		µg/l	5.10	1.40	1						
105-67-9	2,4-Dimethylphenol	< 5.10		µg/l	5.10	1.10	1						
84-74-2	Di-n-butyl phthalate	< 5.10		µg/l	5.10	1.61	1						
534-52-1	4,6-Dinitro-2-methylphenol	< 5.10		µg/l	5.10	2.06	1						
51-28-5	2,4-Dinitrophenol	< 5.10		µg/l	5.10	1.98	1						
121-14-2	2,4-Dinitrotoluene	< 5.10		µg/l	5.10	1.73	1						
606-20-2	2,6-Dinitrotoluene	< 5.10		µg/l	5.10	1.40	1						
117-84-0	Di-n-octyl phthalate	< 5.10		µg/l	5.10	1.36	1						

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Sample IdentificationMW-2
SC03809-02Client Project #
CFI SouthbridgeMatrix
Ground WaterCollection Date/Time
27-Feb-15 14:10Received
27-Feb-15

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

206-44-0	Fluoranthene	< 5.10		µg/l	5.10	1.59	1	SW846 8270D	02-Mar-15	02-Mar-15	ML	1503878	
86-73-7	Fluorene	< 5.10		µg/l	5.10	1.38	1						
118-74-1	Hexachlorobenzene	< 5.10		µg/l	5.10	1.39	1						
87-68-3	Hexachlorobutadiene	< 5.10		µg/l	5.10	1.27	1						
77-47-4	Hexachlorocyclopentadiene	< 5.10		µg/l	5.10	1.63	1						
67-72-1	Hexachloroethane	< 5.10		µg/l	5.10	1.12	1						
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.10		µg/l	5.10	1.78	1						
78-59-1	Isophorone	< 5.10		µg/l	5.10	1.18	1						
91-57-6	2-Methylnaphthalene	< 5.10		µg/l	5.10	1.46	1						
95-48-7	2-Methylphenol	< 5.10		µg/l	5.10	1.43	1						
108-39-4, 106-44-5	3 & 4-Methylphenol	< 10.2		µg/l	10.2	1.28	1						
91-20-3	Naphthalene	< 5.10		µg/l	5.10	1.19	1						
88-74-4	2-Nitroaniline	< 5.10		µg/l	5.10	1.79	1						
99-09-2	3-Nitroaniline	< 5.10		µg/l	5.10	2.29	1						
100-01-6	4-Nitroaniline	< 20.4		µg/l	20.4	2.22	1						
98-95-3	Nitrobenzene	< 5.10		µg/l	5.10	1.85	1						
88-75-5	2-Nitrophenol	< 5.10		µg/l	5.10	1.05	1						
100-02-7	4-Nitrophenol	< 20.4		µg/l	20.4	2.30	1						
62-75-9	N-Nitrosodimethylamine	< 5.10		µg/l	5.10	1.14	1						
621-64-7	N-Nitrosodi-n-propylamine	< 5.10		µg/l	5.10	1.22	1						
86-30-6	N-Nitrosodiphenylamine	< 5.10		µg/l	5.10	2.42	1						
87-86-5	Pentachlorophenol	< 20.4		µg/l	20.4	2.42	1						
85-01-8	Phenanthrene	< 5.10		µg/l	5.10	1.38	1						
108-95-2	Phenol	< 5.10		µg/l	5.10	1.41	1						
129-00-0	Pyrene	< 5.10		µg/l	5.10	2.74	1						
110-86-1	Pyridine	< 5.10		µg/l	5.10	1.86	1						
120-82-1	1,2,4-Trichlorobenzene	< 5.10		µg/l	5.10	1.11	1						
90-12-0	1-Methylnaphthalene	< 5.10		µg/l	5.10	0.969	1						
95-95-4	2,4,5-Trichlorophenol	< 5.10		µg/l	5.10	2.12	1						
88-06-2	2,4,6-Trichlorophenol	< 5.10		µg/l	5.10	1.72	1						
82-68-8	Pentachloronitrobenzene	< 5.10		µg/l	5.10	1.51	1						
95-94-3	1,2,4,5-Tetrachlorobenzene	< 5.10		µg/l	5.10	1.58	1						

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	76			30-130 %								
367-12-4	2-Fluorophenol	50			15-110 %								
4165-60-0	Nitrobenzene-d5	78			30-130 %								
4165-62-2	Phenol-d5	33			15-110 %								
1718-51-0	Terphenyl-d14	71			30-130 %								
118-79-6	2,4,6-Tribromophenol	89			15-110 %								

Semivolatile Organic Compounds by GCPolychlorinated Biphenyls

R02

Prepared by method SW846 3510C

12674-11-2	Aroclor-1016	< 0.345		µg/l	0.345	0.197	1	SW846 8082A	27-Feb-15	02-Mar-15	IMR	1503770	
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Sample Identification

MW-2

SC03809-02

Client Project #

CFI Southbridge

Matrix

Ground Water

Collection Date/Time

27-Feb-15 14:10

Received

27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCPolychlorinated Biphenyls

R02

Prepared by method SW846 3510C

11104-28-2	Aroclor-1221	< 0.345		µg/l	0.345	0.186	1	SW846 8082A	27-Feb-15	02-Mar-15	IMR	1503770	
11141-16-5	Aroclor-1232	< 0.345		µg/l	0.345	0.216	1						
53469-21-9	Aroclor-1242	< 0.345		µg/l	0.345	0.134	1						
12672-29-6	Aroclor-1248	< 0.345		µg/l	0.345	0.195	1						
11097-69-1	Aroclor-1254	< 0.345		µg/l	0.345	0.129	1						
11096-82-5	Aroclor-1260	< 0.345		µg/l	0.345	0.107	1						
37324-23-5	Aroclor-1262	< 0.345		µg/l	0.345	0.169	1						
11100-14-4	Aroclor-1268	< 0.345		µg/l	0.345	0.234	1						

Surrogate recoveries:

10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	75			30-150 %								
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	75			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr)	45			30-150 %								
2051-24-3	Decachlorobiphenyl (Sr) [2C]	55			30-150 %								

Extractable Petroleum HydrocarbonsFingerprinting by GCPrepared by method SW846 3510C

8006-61-9	Gasoline	< 0.2		mg/l	0.2	0.1	1	SW846 8100Mod.	02-Mar-15	03-Mar-15	SEP	1503876	
68476-30-2	Fuel Oil #2	< 0.2		mg/l	0.2	0.08	1						
68476-31-3	Fuel Oil #4	< 0.2		mg/l	0.2	0.02	1						
68553-00-4	Fuel Oil #6	< 0.2		mg/l	0.2	0.1	1						
M09800000	Motor Oil	< 0.2		mg/l	0.2	0.1	1						
8032-32-4	Ligroin	< 0.2		mg/l	0.2	0.05	1						
J00100000	Aviation Fuel	< 0.2		mg/l	0.2	0.05	1						
	Hydraulic Oil	< 0.2		mg/l	0.2	0.02	1						
	Dielectric Fluid	< 0.2		mg/l	0.2	0.05	1						
	Unidentified	< 0.2		mg/l	0.2	0.05	1						
	Other Oil	< 0.2		mg/l	0.2	0.02	1						
	Total Petroleum Hydrocarbons	< 0.2		mg/l	0.2	0.02	1						

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	55			40-140 %								
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Total Metals by EPA 200/6000 Series Methods

	Preservation	Field Preserved		N/A			1	EPA 200/6000 methods			AAH	1503813	
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Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 0.0070	R06	mg/l	0.0070	0.0012	1	SW846 6010C	02-Mar-15	02-Mar-15	edt	1503856	
7440-38-2	Arsenic	0.0207		mg/l	0.0040	0.0027	1						
7440-41-7	Beryllium	0.0036		mg/l	0.0020	0.0001	1						
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0002	1						
7440-47-3	Chromium	0.233		mg/l	0.0050	0.0010	1						
7440-50-8	Copper	0.117		mg/l	0.0050	0.0035	1			03-Mar-15			
7439-89-6	Iron	83.8		mg/l	0.0150	0.0082	1						

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Sample Identification

MW-2

SC03809-02

Client Project #

CFI Southbridge

Matrix

Ground Water

Collection Date/Time

27-Feb-15 14:10

Received

27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 6000/7000 Series Methods													
7440-02-0	Nickel	0.164		mg/l	0.0050	0.0014	1	SW846 6010C	02-Mar-15	03-Mar-15	bjw	1503856	
7439-92-1	Lead	0.0244		mg/l	0.0075	0.0020	1			02-Mar-15			
7440-36-0	Antimony	< 0.0120	D, R01	mg/l	0.0120	0.0050	2			03-Mar-15			
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0036	1			03-Mar-15			
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0016	1						
7440-66-6	Zinc	0.213		mg/l	0.0050	0.0006	1			02-Mar-15			
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00009	1	EPA 245.1/7470A	02-Mar-15	02-Mar-15	YR	1503857	X
Soluble Metals by EPA 200/6000 Series Methods													
	Filtration	Field Filtered		N/A			1	EPA 200.7/3005A/601 0			AAH	1503838	
Soluble Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0070	R01	mg/l	0.0070	0.0012	1	SW846 6010C	02-Mar-15	02-Mar-15	edt	1503858	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0027	1						
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0001	1						
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0002	1						
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0010	1						
7440-50-8	Copper	< 0.0050		mg/l	0.0050	0.0035	1			03-Mar-15			
7439-89-6	Iron	< 0.0300		mg/l	0.0300	0.0163	1		26-Mar-15	27-Mar-15		1505433	
7440-02-0	Nickel	0.0064		mg/l	0.0050	0.0014	1		02-Mar-15	03-Mar-15		1503858	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0020	1			02-Mar-15			
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0025	1						
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0036	1			03-Mar-15			
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0016	1			02-Mar-15			
7440-66-6	Zinc	0.0086		mg/l	0.0050	0.0006	1						
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00009	1	EPA 245.1/7470A	02-Mar-15	02-Mar-15	YR	1503859	X
General Chemistry Parameters													
16065-83-1	Trivalent Chromium	0.233		mg/l	0.0100	0.0053	1	Calculation	02-Mar-15	02-Mar-15	edt	1503856	
	Flashpoint	>150		°F			1	SW846 1010A	27-Mar-15	27-Mar-15	BD	1505564	
7782-50-5	Total Residual Chlorine	< 0.200	R01,CIHT	mg/l	0.200	0.056	1	SM4500-Cl-G	27-Feb-15 17:30	27-Feb-15 17:48	CAA/T	1503839	X
16887-00-6	Chloride	1,270	D, GS1	mg/l	50.0	14.6	50	EPA 300.0	02-Mar-15	03-Mar-15	DJB	1503912	X
18540-29-9	Hexavalent Chromium	< 0.050	R01,LIV	mg/l	0.050	0.021	1	SM3500-Cr-B/71 96A	27-Feb-15 17:30	27-Feb-15 18:03	CAA/T	1503840	
57-12-5	Cyanide (total)	< 0.00500		mg/l	0.00500	0.00442	1	EPA 335.4 / SW846 9012B	03-Mar-15	03-Mar-15	RLT	1503940	X
	pH	7.70	pH	pH Units			1	ASTM D 1293-99B	26-Mar-15 18:10	26-Mar-15 19:05	TN	1505476	X
	Total Suspended Solids	1,610	LIV	mg/l	20.0	8.6	1	SM2540D	02-Mar-15	03-Mar-15	BD	1503877	X

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Sample Identification

Trip Blank
SC03809-03

Client Project #
CFI Southbridge

Matrix
Ground Water

Collection Date/Time
27-Feb-15 00:00

Received
27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Volatile Organic Compounds													
<u>Volatile Organic Compounds by SW846 8260</u>													
<u>Prepared by method SW846 5030 Water MS</u>													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.0		µg/l	1.0	0.7	1	SW846 8260C	02-Mar-15	02-Mar-15	GMA	1503861	
67-64-1	Acetone	< 10.0		µg/l	10.0	3.6	1						
107-13-1	Acrylonitrile	< 0.5		µg/l	0.5	0.5	1						
71-43-2	Benzene	< 1.0		µg/l	1.0	0.3	1						
108-86-1	Bromobenzene	< 1.0		µg/l	1.0	0.3	1						
74-97-5	Bromochloromethane	< 1.0		µg/l	1.0	0.3	1						
75-27-4	Bromodichloromethane	< 0.5		µg/l	0.5	0.4	1						
75-25-2	Bromoform	< 1.0		µg/l	1.0	0.6	1						
74-83-9	Bromomethane	< 2.0		µg/l	2.0	0.5	1						
78-93-3	2-Butanone (MEK)	< 10.0		µg/l	10.0	3.1	1						
104-51-8	n-Butylbenzene	< 1.0		µg/l	1.0	0.4	1						
135-98-8	sec-Butylbenzene	< 1.0		µg/l	1.0	0.4	1						
98-06-6	tert-Butylbenzene	< 1.0		µg/l	1.0	0.4	1						
75-15-0	Carbon disulfide	< 2.0		µg/l	2.0	0.7	1						
56-23-5	Carbon tetrachloride	< 1.0		µg/l	1.0	0.4	1						
108-90-7	Chlorobenzene	< 1.0		µg/l	1.0	0.3	1						
75-00-3	Chloroethane	< 2.0		µg/l	2.0	0.7	1						
67-66-3	Chloroform	< 1.0		µg/l	1.0	0.5	1						
74-87-3	Chloromethane	< 2.0		µg/l	2.0	0.5	1						
95-49-8	2-Chlorotoluene	< 1.0		µg/l	1.0	0.4	1						
106-43-4	4-Chlorotoluene	< 1.0		µg/l	1.0	0.3	1						
96-12-8	1,2-Dibromo-3-chloropropane	< 2.0		µg/l	2.0	0.5	1						
124-48-1	Dibromochloromethane	< 0.5		µg/l	0.5	0.4	1						
106-93-4	1,2-Dibromoethane (EDB)	< 0.5		µg/l	0.5	0.3	1						
74-95-3	Dibromomethane	< 1.0		µg/l	1.0	0.4	1						
95-50-1	1,2-Dichlorobenzene	< 1.0		µg/l	1.0	0.4	1						
541-73-1	1,3-Dichlorobenzene	< 1.0		µg/l	1.0	0.4	1						
106-46-7	1,4-Dichlorobenzene	< 1.0		µg/l	1.0	0.5	1						
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.0		µg/l	2.0	0.6	1						
75-34-3	1,1-Dichloroethane	< 1.0		µg/l	1.0	0.3	1						
107-06-2	1,2-Dichloroethane	< 1.0		µg/l	1.0	0.3	1						
75-35-4	1,1-Dichloroethene	< 1.0		µg/l	1.0	0.5	1						
156-59-2	cis-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.4	1						
156-60-5	trans-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.5	1						
78-87-5	1,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1						
142-28-9	1,3-Dichloropropane	< 1.0		µg/l	1.0	0.2	1						
594-20-7	2,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1						
563-58-6	1,1-Dichloropropene	< 1.0		µg/l	1.0	0.4	1						
10061-01-5	cis-1,3-Dichloropropene	< 0.5		µg/l	0.5	0.4	1						
10061-02-6	trans-1,3-Dichloropropene	< 0.5		µg/l	0.5	0.5	1						
100-41-4	Ethylbenzene	< 1.0		µg/l	1.0	0.4	1						
87-68-3	Hexachlorobutadiene	< 0.5		µg/l	0.5	0.4	1						
591-78-6	2-Hexanone (MBK)	< 10.0		µg/l	10.0	2.0	1						

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Sample Identification

Trip Blank
SC03809-03

Client Project #
CFI Southbridge

Matrix
Ground Water

Collection Date/Time
27-Feb-15 00:00

Received
27-Feb-15

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

Prepared by method SW846 5030 Water MS

98-82-8	Isopropylbenzene	< 1.0		µg/l	1.0	0.5	1	SW846 8260C	02-Mar-15	02-Mar-15	GMA	1503861	
99-87-6	4-Isopropyltoluene	< 1.0		µg/l	1.0	0.5	1						
1634-04-4	Methyl tert-butyl ether	< 1.0		µg/l	1.0	0.4	1						
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0	2.5	1						
75-09-2	Methylene chloride	< 2.0		µg/l	2.0	0.5	1						
91-20-3	Naphthalene	< 1.0		µg/l	1.0	0.5	1						
103-65-1	n-Propylbenzene	< 1.0		µg/l	1.0	0.4	1						
100-42-5	Styrene	< 1.0		µg/l	1.0	0.4	1						
630-20-6	1,1,1,2-Tetrachloroethane	< 1.0		µg/l	1.0	0.4	1						
79-34-5	1,1,2,2-Tetrachloroethane	< 0.5		µg/l	0.5	0.5	1						
127-18-4	Tetrachloroethene	< 1.0		µg/l	1.0	0.6	1						
108-88-3	Toluene	< 1.0		µg/l	1.0	0.3	1						
87-61-6	1,2,3-Trichlorobenzene	< 1.0		µg/l	1.0	0.8	1						
120-82-1	1,2,4-Trichlorobenzene	< 1.0		µg/l	1.0	0.4	1						
108-70-3	1,3,5-Trichlorobenzene	< 1.0		µg/l	1.0	0.6	1						
71-55-6	1,1,1-Trichloroethane	< 1.0		µg/l	1.0	0.4	1						
79-00-5	1,1,2-Trichloroethane	< 1.0		µg/l	1.0	0.3	1						
79-01-6	Trichloroethene	< 1.0		µg/l	1.0	0.4	1						
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.0		µg/l	1.0	0.8	1						
96-18-4	1,2,3-Trichloropropane	< 1.0		µg/l	1.0	0.3	1						
95-63-6	1,2,4-Trimethylbenzene	< 1.0		µg/l	1.0	0.3	1						
108-67-8	1,3,5-Trimethylbenzene	< 1.0		µg/l	1.0	0.4	1						
75-01-4	Vinyl chloride	< 1.0		µg/l	1.0	1.0	1						
179601-23-1	m,p-Xylene	< 2.0		µg/l	2.0	0.4	1						
95-47-6	o-Xylene	< 1.0		µg/l	1.0	0.4	1						
109-99-9	Tetrahydrofuran	< 2.0		µg/l	2.0	0.8	1						
60-29-7	Ethyl ether	< 1.0		µg/l	1.0	0.5	1						
994-05-8	Tert-amyl methyl ether	< 1.0		µg/l	1.0	0.3	1						
637-92-3	Ethyl tert-butyl ether	< 1.0		µg/l	1.0	0.4	1						
108-20-3	Di-isopropyl ether	< 1.0		µg/l	1.0	0.3	1						
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	8.9	1						
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	14.6	1						
110-57-6	trans-1,4-Dichloro-2-buten e	< 5.0		µg/l	5.0	1.0	1						
64-17-5	Ethanol	< 400		µg/l	400	80.8	1						

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	87			70-130 %								
2037-26-5	Toluene-d8	101			70-130 %								
17060-07-0	1,2-Dichloroethane-d4	108			70-130 %								
1868-53-7	Dibromofluoromethane	101			70-130 %								

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503861 - SW846 5030 Water MS										
<u>Blank (1503861-BLK1)</u>	<u>Prepared & Analyzed: 02-Mar-15</u>									
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.0		µg/l	1.0						
Acetone	< 10.0		µg/l	10.0						
Acrylonitrile	< 0.5		µg/l	0.5						
Benzene	< 1.0		µg/l	1.0						
Bromobenzene	< 1.0		µg/l	1.0						
Bromochloromethane	< 1.0		µg/l	1.0						
Bromodichloromethane	< 0.5		µg/l	0.5						
Bromoform	< 1.0		µg/l	1.0						
Bromomethane	< 2.0		µg/l	2.0						
2-Butanone (MEK)	< 10.0		µg/l	10.0						
n-Butylbenzene	< 1.0		µg/l	1.0						
sec-Butylbenzene	< 1.0		µg/l	1.0						
tert-Butylbenzene	< 1.0		µg/l	1.0						
Carbon disulfide	< 2.0		µg/l	2.0						
Carbon tetrachloride	< 1.0		µg/l	1.0						
Chlorobenzene	< 1.0		µg/l	1.0						
Chloroethane	< 2.0		µg/l	2.0						
Chloroform	< 1.0		µg/l	1.0						
Chloromethane	< 2.0		µg/l	2.0						
2-Chlorotoluene	< 1.0		µg/l	1.0						
4-Chlorotoluene	< 1.0		µg/l	1.0						
1,2-Dibromo-3-chloropropane	< 2.0		µg/l	2.0						
Dibromochloromethane	< 0.5		µg/l	0.5						
1,2-Dibromoethane (EDB)	< 0.5		µg/l	0.5						
Dibromomethane	< 1.0		µg/l	1.0						
1,2-Dichlorobenzene	< 1.0		µg/l	1.0						
1,3-Dichlorobenzene	< 1.0		µg/l	1.0						
1,4-Dichlorobenzene	< 1.0		µg/l	1.0						
Dichlorodifluoromethane (Freon12)	< 2.0		µg/l	2.0						
1,1-Dichloroethane	< 1.0		µg/l	1.0						
1,2-Dichloroethane	< 1.0		µg/l	1.0						
1,1-Dichloroethene	< 1.0		µg/l	1.0						
cis-1,2-Dichloroethene	< 1.0		µg/l	1.0						
trans-1,2-Dichloroethene	< 1.0		µg/l	1.0						
1,2-Dichloropropane	< 1.0		µg/l	1.0						
1,3-Dichloropropane	< 1.0		µg/l	1.0						
2,2-Dichloropropane	< 1.0		µg/l	1.0						
1,1-Dichloropropene	< 1.0		µg/l	1.0						
cis-1,3-Dichloropropene	< 0.5		µg/l	0.5						
trans-1,3-Dichloropropene	< 0.5		µg/l	0.5						
Ethylbenzene	< 1.0		µg/l	1.0						
Hexachlorobutadiene	< 0.5		µg/l	0.5						
2-Hexanone (MBK)	< 10.0		µg/l	10.0						
Isopropylbenzene	< 1.0		µg/l	1.0						
4-Isopropyltoluene	< 1.0		µg/l	1.0						
Methyl tert-butyl ether	< 1.0		µg/l	1.0						
4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0						
Methylene chloride	< 2.0		µg/l	2.0						
Naphthalene	< 1.0		µg/l	1.0						
n-Propylbenzene	< 1.0		µg/l	1.0						
Styrene	< 1.0		µg/l	1.0						
1,1,1,2-Tetrachloroethane	< 1.0		µg/l	1.0						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503861 - SW846 5030 Water MS										
<u>Blank (1503861-BLK1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
1,1,2,2-Tetrachloroethane	< 0.5		µg/l	0.5						
Tetrachloroethene	< 1.0		µg/l	1.0						
Toluene	< 1.0		µg/l	1.0						
1,2,3-Trichlorobenzene	< 1.0		µg/l	1.0						
1,2,4-Trichlorobenzene	< 1.0		µg/l	1.0						
1,3,5-Trichlorobenzene	< 1.0		µg/l	1.0						
1,1,1-Trichloroethane	< 1.0		µg/l	1.0						
1,1,2-Trichloroethane	< 1.0		µg/l	1.0						
Trichloroethene	< 1.0		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	< 1.0		µg/l	1.0						
1,2,3-Trichloropropane	< 1.0		µg/l	1.0						
1,2,4-Trimethylbenzene	< 1.0		µg/l	1.0						
1,3,5-Trimethylbenzene	< 1.0		µg/l	1.0						
Vinyl chloride	< 1.0		µg/l	1.0						
m,p-Xylene	< 2.0		µg/l	2.0						
o-Xylene	< 1.0		µg/l	1.0						
Tetrahydrofuran	< 2.0		µg/l	2.0						
Ethyl ether	< 1.0		µg/l	1.0						
Tert-amyl methyl ether	< 1.0		µg/l	1.0						
Ethyl tert-butyl ether	< 1.0		µg/l	1.0						
Di-isopropyl ether	< 1.0		µg/l	1.0						
Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0						
1,4-Dioxane	< 20.0		µg/l	20.0						
trans-1,4-Dichloro-2-butene	< 5.0		µg/l	5.0						
Ethanol	< 400		µg/l	400						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>44.1</i>		µg/l		<i>50.0</i>		<i>88</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>50.0</i>		µg/l		<i>50.0</i>		<i>100</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>52.8</i>		µg/l		<i>50.0</i>		<i>106</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>49.5</i>		µg/l		<i>50.0</i>		<i>99</i>	<i>70-130</i>		
<u>LCS (1503861-BS1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	20.6		µg/l		20.0		103	70-130		
Acetone	17.5		µg/l		20.0		88	70-130		
Acrylonitrile	17.9		µg/l		20.0		90	70-130		
Benzene	19.9		µg/l		20.0		99	70-130		
Bromobenzene	18.4		µg/l		20.0		92	70-130		
Bromochloromethane	17.6		µg/l		20.0		88	70-130		
Bromodichloromethane	18.5		µg/l		20.0		93	70-130		
Bromoform	20.8		µg/l		20.0		104	70-130		
Bromomethane	14.6		µg/l		20.0		73	70-130		
2-Butanone (MEK)	18.9		µg/l		20.0		95	70-130		
n-Butylbenzene	19.1		µg/l		20.0		96	70-130		
sec-Butylbenzene	20.2		µg/l		20.0		101	70-130		
tert-Butylbenzene	20.8		µg/l		20.0		104	70-130		
Carbon disulfide	19.8		µg/l		20.0		99	70-130		
Carbon tetrachloride	20.5		µg/l		20.0		102	70-130		
Chlorobenzene	19.4		µg/l		20.0		97	70-130		
Chloroethane	19.4		µg/l		20.0		97	70-130		
Chloroform	17.6		µg/l		20.0		88	70-130		
Chloromethane	18.2		µg/l		20.0		91	70-130		
2-Chlorotoluene	21.5		µg/l		20.0		107	70-130		
4-Chlorotoluene	20.7		µg/l		20.0		103	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503861 - SW846 5030 Water MS										
<u>LCS (1503861-BS1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
1,2-Dibromo-3-chloropropane	19.4		µg/l		20.0		97	70-130		
Dibromochloromethane	19.4		µg/l		20.0		97	70-130		
1,2-Dibromoethane (EDB)	18.9		µg/l		20.0		94	70-130		
Dibromomethane	17.8		µg/l		20.0		89	70-130		
1,2-Dichlorobenzene	19.7		µg/l		20.0		98	70-130		
1,3-Dichlorobenzene	20.0		µg/l		20.0		100	70-130		
1,4-Dichlorobenzene	18.3		µg/l		20.0		92	70-130		
Dichlorodifluoromethane (Freon12)	21.6		µg/l		20.0		108	70-130		
1,1-Dichloroethane	19.1		µg/l		20.0		96	70-130		
1,2-Dichloroethane	18.5		µg/l		20.0		93	70-130		
1,1-Dichloroethene	23.0		µg/l		20.0		115	70-130		
cis-1,2-Dichloroethene	19.0		µg/l		20.0		95	70-130		
trans-1,2-Dichloroethene	19.6		µg/l		20.0		98	70-130		
1,2-Dichloropropane	18.0		µg/l		20.0		90	70-130		
1,3-Dichloropropane	18.8		µg/l		20.0		94	70-130		
2,2-Dichloropropane	24.4		µg/l		20.0		122	70-130		
1,1-Dichloropropene	20.0		µg/l		20.0		100	70-130		
cis-1,3-Dichloropropene	19.3		µg/l		20.0		96	70-130		
trans-1,3-Dichloropropene	20.2		µg/l		20.0		101	70-130		
Ethylbenzene	20.6		µg/l		20.0		103	70-130		
Hexachlorobutadiene	18.3		µg/l		20.0		92	70-130		
2-Hexanone (MBK)	17.5		µg/l		20.0		88	70-130		
Isopropylbenzene	20.4		µg/l		20.0		102	70-130		
4-Isopropyltoluene	20.4		µg/l		20.0		102	70-130		
Methyl tert-butyl ether	19.2		µg/l		20.0		96	70-130		
4-Methyl-2-pentanone (MIBK)	19.0		µg/l		20.0		95	70-130		
Methylene chloride	17.9		µg/l		20.0		89	70-130		
Naphthalene	17.6		µg/l		20.0		88	70-130		
n-Propylbenzene	19.5		µg/l		20.0		98	70-130		
Styrene	21.3		µg/l		20.0		107	70-130		
1,1,1,2-Tetrachloroethane	20.9		µg/l		20.0		105	70-130		
1,1,2,2-Tetrachloroethane	18.3		µg/l		20.0		91	70-130		
Tetrachloroethene	20.8		µg/l		20.0		104	70-130		
Toluene	19.4		µg/l		20.0		97	70-130		
1,2,3-Trichlorobenzene	18.7		µg/l		20.0		94	70-130		
1,2,4-Trichlorobenzene	17.9		µg/l		20.0		89	70-130		
1,3,5-Trichlorobenzene	19.0		µg/l		20.0		95	70-130		
1,1,1-Trichloroethane	22.7		µg/l		20.0		114	70-130		
1,1,2-Trichloroethane	17.9		µg/l		20.0		90	70-130		
Trichloroethene	19.8		µg/l		20.0		99	70-130		
Trichlorofluoromethane (Freon 11)	21.0		µg/l		20.0		105	70-130		
1,2,3-Trichloropropane	18.6		µg/l		20.0		93	70-130		
1,2,4-Trimethylbenzene	19.7		µg/l		20.0		98	70-130		
1,3,5-Trimethylbenzene	19.8		µg/l		20.0		99	70-130		
Vinyl chloride	21.9		µg/l		20.0		110	70-130		
m,p-Xylene	21.2		µg/l		20.0		106	70-130		
o-Xylene	21.8		µg/l		20.0		109	70-130		
Tetrahydrofuran	18.6		µg/l		20.0		93	70-130		
Ethyl ether	18.9		µg/l		20.0		94	70-130		
Tert-amyl methyl ether	17.4		µg/l		20.0		87	70-130		
Ethyl tert-butyl ether	19.5		µg/l		20.0		98	70-130		
Di-isopropyl ether	19.7		µg/l		20.0		98	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503861 - SW846 5030 Water MS										
<u>LCS (1503861-BS1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
Tert-Butanol / butyl alcohol	209		µg/l		200		104	70-130		
1,4-Dioxane	185		µg/l		200		93	70-130		
trans-1,4-Dichloro-2-butene	19.6		µg/l		20.0		98	70-130		
Ethanol	383		µg/l		400		96	70-130		
Surrogate: 4-Bromofluorobenzene	51.9		µg/l		50.0		104	70-130		
Surrogate: Toluene-d8	48.9		µg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	50.0		µg/l		50.0		100	70-130		
Surrogate: Dibromofluoromethane	47.0		µg/l		50.0		94	70-130		
<u>LCS Dup (1503861-BSD1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	20.8		µg/l		20.0		104	70-130	0.9	20
Acetone	17.1		µg/l		20.0		86	70-130	3	20
Acrylonitrile	17.8		µg/l		20.0		89	70-130	0.4	20
Benzene	19.5		µg/l		20.0		98	70-130	2	20
Bromobenzene	18.3		µg/l		20.0		91	70-130	1	20
Bromochloromethane	18.2		µg/l		20.0		91	70-130	3	20
Bromodichloromethane	18.6		µg/l		20.0		93	70-130	0.2	20
Bromoform	20.8		µg/l		20.0		104	70-130	0.1	20
Bromomethane	15.5		µg/l		20.0		78	70-130	6	20
2-Butanone (MEK)	19.8		µg/l		20.0		99	70-130	4	20
n-Butylbenzene	18.2		µg/l		20.0		91	70-130	5	20
sec-Butylbenzene	19.9		µg/l		20.0		99	70-130	2	20
tert-Butylbenzene	19.8		µg/l		20.0		99	70-130	5	20
Carbon disulfide	20.2		µg/l		20.0		101	70-130	2	20
Carbon tetrachloride	19.7		µg/l		20.0		98	70-130	4	20
Chlorobenzene	19.0		µg/l		20.0		95	70-130	2	20
Chloroethane	18.6		µg/l		20.0		93	70-130	4	20
Chloroform	17.7		µg/l		20.0		88	70-130	0.06	20
Chloromethane	16.7		µg/l		20.0		84	70-130	8	20
2-Chlorotoluene	20.6		µg/l		20.0		103	70-130	4	20
4-Chlorotoluene	19.7		µg/l		20.0		99	70-130	5	20
1,2-Dibromo-3-chloropropane	19.4		µg/l		20.0		97	70-130	0.4	20
Dibromochloromethane	18.8		µg/l		20.0		94	70-130	3	20
1,2-Dibromoethane (EDB)	19.0		µg/l		20.0		95	70-130	0.7	20
Dibromomethane	18.2		µg/l		20.0		91	70-130	2	20
1,2-Dichlorobenzene	18.9		µg/l		20.0		94	70-130	4	20
1,3-Dichlorobenzene	19.4		µg/l		20.0		97	70-130	3	20
1,4-Dichlorobenzene	18.0		µg/l		20.0		90	70-130	2	20
Dichlorodifluoromethane (Freon12)	21.1		µg/l		20.0		105	70-130	2	20
1,1-Dichloroethane	19.0		µg/l		20.0		95	70-130	0.7	20
1,2-Dichloroethane	18.4		µg/l		20.0		92	70-130	0.6	20
1,1-Dichloroethene	21.6		µg/l		20.0		108	70-130	6	20
cis-1,2-Dichloroethene	18.9		µg/l		20.0		94	70-130	0.9	20
trans-1,2-Dichloroethene	18.3		µg/l		20.0		92	70-130	7	20
1,2-Dichloropropane	18.0		µg/l		20.0		90	70-130	0.06	20
1,3-Dichloropropane	18.6		µg/l		20.0		93	70-130	1	20
2,2-Dichloropropane	23.7		µg/l		20.0		119	70-130	3	20
1,1-Dichloropropene	20.0		µg/l		20.0		100	70-130	0.2	20
cis-1,3-Dichloropropene	19.4		µg/l		20.0		97	70-130	0.7	20
trans-1,3-Dichloropropene	19.9		µg/l		20.0		100	70-130	1	20
Ethylbenzene	20.3		µg/l		20.0		101	70-130	2	20
Hexachlorobutadiene	19.0		µg/l		20.0		95	70-130	4	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503861 - SW846 5030 Water MS										
<u>LCS Dup (1503861-BSD1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
2-Hexanone (MBK)	17.2		µg/l		20.0		86	70-130	2	20
Isopropylbenzene	19.8		µg/l		20.0		99	70-130	3	20
4-Isopropyltoluene	19.7		µg/l		20.0		98	70-130	4	20
Methyl tert-butyl ether	19.5		µg/l		20.0		97	70-130	2	20
4-Methyl-2-pentanone (MIBK)	19.0		µg/l		20.0		95	70-130	0.3	20
Methylene chloride	17.6		µg/l		20.0		88	70-130	2	20
Naphthalene	16.4		µg/l		20.0		82	70-130	7	20
n-Propylbenzene	18.7		µg/l		20.0		94	70-130	4	20
Styrene	20.8		µg/l		20.0		104	70-130	2	20
1,1,1,2-Tetrachloroethane	19.8		µg/l		20.0		99	70-130	6	20
1,1,2,2-Tetrachloroethane	18.3		µg/l		20.0		91	70-130	0.2	20
Tetrachloroethene	20.5		µg/l		20.0		103	70-130	1	20
Toluene	18.8		µg/l		20.0		94	70-130	3	20
1,2,3-Trichlorobenzene	17.4		µg/l		20.0		87	70-130	7	20
1,2,4-Trichlorobenzene	16.4		µg/l		20.0		82	70-130	9	20
1,3,5-Trichlorobenzene	18.1		µg/l		20.0		90	70-130	5	20
1,1,1-Trichloroethane	22.3		µg/l		20.0		112	70-130	2	20
1,1,2-Trichloroethane	17.7		µg/l		20.0		88	70-130	1	20
Trichloroethene	18.8		µg/l		20.0		94	70-130	6	20
Trichlorofluoromethane (Freon 11)	20.4		µg/l		20.0		102	70-130	3	20
1,2,3-Trichloropropane	19.3		µg/l		20.0		96	70-130	4	20
1,2,4-Trimethylbenzene	18.8		µg/l		20.0		94	70-130	4	20
1,3,5-Trimethylbenzene	19.4		µg/l		20.0		97	70-130	2	20
Vinyl chloride	20.3		µg/l		20.0		102	70-130	7	20
m,p-Xylene	21.1		µg/l		20.0		106	70-130	0.7	20
o-Xylene	21.0		µg/l		20.0		105	70-130	4	20
Tetrahydrofuran	19.7		µg/l		20.0		98	70-130	6	20
Ethyl ether	18.6		µg/l		20.0		93	70-130	1	20
Tert-amyl methyl ether	18.1		µg/l		20.0		90	70-130	4	20
Ethyl tert-butyl ether	19.4		µg/l		20.0		97	70-130	0.3	20
Di-isopropyl ether	19.3		µg/l		20.0		96	70-130	2	20
Tert-Butanol / butyl alcohol	202		µg/l		200		101	70-130	3	20
1,4-Dioxane	181		µg/l		200		91	70-130	2	20
trans-1,4-Dichloro-2-butene	19.8		µg/l		20.0		99	70-130	1	20
Ethanol	391		µg/l		400		98	70-130	2	20
Surrogate: 4-Bromofluorobenzene	50.4		µg/l		50.0		101	70-130		
Surrogate: Toluene-d8	49.1		µg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	48.8		µg/l		50.0		98	70-130		
Surrogate: Dibromofluoromethane	46.8		µg/l		50.0		94	70-130		

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503878 - SW846 3510C										
<u>Blank (1503878-BLK1)</u>	<u>Prepared & Analyzed: 02-Mar-15</u>									
Acenaphthene	< 5.00		µg/l	5.00						
Acenaphthylene	< 5.00		µg/l	5.00						
Aniline	< 5.00		µg/l	5.00						
Anthracene	< 5.00		µg/l	5.00						
Azobenzene/Diphenyldiazene	< 5.00		µg/l	5.00						
Benzidine	< 5.00		µg/l	5.00						
Benzo (a) anthracene	< 5.00		µg/l	5.00						
Benzo (a) pyrene	< 5.00		µg/l	5.00						
Benzo (b) fluoranthene	< 5.00		µg/l	5.00						
Benzo (g,h,i) perylene	< 5.00		µg/l	5.00						
Benzo (k) fluoranthene	< 5.00		µg/l	5.00						
Benzoic acid	< 5.00		µg/l	5.00						
Benzyl alcohol	< 5.00		µg/l	5.00						
Bis(2-chloroethoxy)methane	< 5.00		µg/l	5.00						
Bis(2-chloroethyl)ether	< 5.00		µg/l	5.00						
Bis(2-chloroisopropyl)ether	< 5.00		µg/l	5.00						
Bis(2-ethylhexyl)phthalate	< 5.00		µg/l	5.00						
4-Bromophenyl phenyl ether	< 5.00		µg/l	5.00						
Butyl benzyl phthalate	< 5.00		µg/l	5.00						
Carbazole	< 5.00		µg/l	5.00						
4-Chloro-3-methylphenol	< 5.00		µg/l	5.00						
4-Chloroaniline	< 5.00		µg/l	5.00						
2-Chloronaphthalene	< 5.00		µg/l	5.00						
2-Chlorophenol	< 5.00		µg/l	5.00						
4-Chlorophenyl phenyl ether	< 5.00		µg/l	5.00						
Chrysene	< 5.00		µg/l	5.00						
Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00						
Dibenzofuran	< 5.00		µg/l	5.00						
1,2-Dichlorobenzene	< 5.00		µg/l	5.00						
1,3-Dichlorobenzene	< 5.00		µg/l	5.00						
1,4-Dichlorobenzene	< 5.00		µg/l	5.00						
3,3'-Dichlorobenzidine	< 5.00		µg/l	5.00						
2,4-Dichlorophenol	< 5.00		µg/l	5.00						
Diethyl phthalate	< 5.00		µg/l	5.00						
Dimethyl phthalate	< 5.00		µg/l	5.00						
2,4-Dimethylphenol	< 5.00		µg/l	5.00						
Di-n-butyl phthalate	< 5.00		µg/l	5.00						
4,6-Dinitro-2-methylphenol	< 5.00		µg/l	5.00						
2,4-Dinitrophenol	< 5.00		µg/l	5.00						
2,4-Dinitrotoluene	< 5.00		µg/l	5.00						
2,6-Dinitrotoluene	< 5.00		µg/l	5.00						
Di-n-octyl phthalate	< 5.00		µg/l	5.00						
Fluoranthene	< 5.00		µg/l	5.00						
Fluorene	< 5.00		µg/l	5.00						
Hexachlorobenzene	< 5.00		µg/l	5.00						
Hexachlorobutadiene	< 5.00		µg/l	5.00						
Hexachlorocyclopentadiene	< 5.00		µg/l	5.00						
Hexachloroethane	< 5.00		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00						
Isophorone	< 5.00		µg/l	5.00						
2-Methylnaphthalene	< 5.00		µg/l	5.00						
2-Methylphenol	< 5.00		µg/l	5.00						

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503878 - SW846 3510C										
<u>Blank (1503878-BLK1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
3 & 4-Methylphenol	< 10.0		µg/l	10.0						
Naphthalene	< 5.00		µg/l	5.00						
2-Nitroaniline	< 5.00		µg/l	5.00						
3-Nitroaniline	< 5.00		µg/l	5.00						
4-Nitroaniline	< 20.0		µg/l	20.0						
Nitrobenzene	< 5.00		µg/l	5.00						
2-Nitrophenol	< 5.00		µg/l	5.00						
4-Nitrophenol	< 20.0		µg/l	20.0						
N-Nitrosodimethylamine	< 5.00		µg/l	5.00						
N-Nitrosodi-n-propylamine	< 5.00		µg/l	5.00						
N-Nitrosodiphenylamine	< 5.00		µg/l	5.00						
Pentachlorophenol	< 20.0		µg/l	20.0						
Phenanthrene	< 5.00		µg/l	5.00						
Phenol	< 5.00		µg/l	5.00						
Pyrene	< 5.00		µg/l	5.00						
Pyridine	< 5.00		µg/l	5.00						
1,2,4-Trichlorobenzene	< 5.00		µg/l	5.00						
1-Methylnaphthalene	< 5.00		µg/l	5.00						
2,4,5-Trichlorophenol	< 5.00		µg/l	5.00						
2,4,6-Trichlorophenol	< 5.00		µg/l	5.00						
Pentachloronitrobenzene	< 5.00		µg/l	5.00						
1,2,4,5-Tetrachlorobenzene	< 5.00		µg/l	5.00						
<i>Surrogate: 2-Fluorobiphenyl</i>	18.9		µg/l		50.0		38	30-130		
<i>Surrogate: 2-Fluorophenol</i>	13.0		µg/l		50.0		26	15-110		
<i>Surrogate: Nitrobenzene-d5</i>	19.5		µg/l		50.0		39	30-130		
<i>Surrogate: Phenol-d5</i>	8.63		µg/l		50.0		17	15-110		
<i>Surrogate: Terphenyl-d14</i>	22.3		µg/l		50.0		45	30-130		
<i>Surrogate: 2,4,6-Tribromophenol</i>	20.7		µg/l		50.0		41	15-110		
<u>LCS (1503878-BS1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
Acenaphthene	35.4		µg/l	5.00	50.0		71	40-140		
Acenaphthylene	37.2		µg/l	5.00	50.0		74	40-140		
Aniline	29.8		µg/l	5.00	50.0		60	40-140		
Anthracene	38.2		µg/l	5.00	50.0		76	40-140		
Azobenzene/Diphenyldiazene	38.6		µg/l	5.00	50.0		77	40-140		
Benzidine	32.2		µg/l	5.00	50.0		64	40-140		
Benzo (a) anthracene	40.7		µg/l	5.00	50.0		81	40-140		
Benzo (a) pyrene	40.9		µg/l	5.00	50.0		82	40-140		
Benzo (b) fluoranthene	39.2		µg/l	5.00	50.0		78	40-140		
Benzo (g,h,i) perylene	37.6		µg/l	5.00	50.0		75	40-140		
Benzo (k) fluoranthene	41.0		µg/l	5.00	50.0		82	40-140		
Benzoic acid	20.4		µg/l	5.00	50.0		41	30-130		
Benzyl alcohol	31.4		µg/l	5.00	50.0		63	40-140		
Bis(2-chloroethoxy)methane	33.7		µg/l	5.00	50.0		67	40-140		
Bis(2-chloroethyl)ether	30.6		µg/l	5.00	50.0		61	40-140		
Bis(2-chloroisopropyl)ether	33.3		µg/l	5.00	50.0		67	40-140		
Bis(2-ethylhexyl)phthalate	44.9		µg/l	5.00	50.0		90	40-140		
4-Bromophenyl phenyl ether	37.9		µg/l	5.00	50.0		76	40-140		
Butyl benzyl phthalate	44.1		µg/l	5.00	50.0		88	40-140		
Carbazole	41.7		µg/l	5.00	50.0		83	40-140		
4-Chloro-3-methylphenol	37.6		µg/l	5.00	50.0		75	30-130		
4-Chloroaniline	32.4		µg/l	5.00	50.0		65	40-140		

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503878 - SW846 3510C										
<u>LCS (1503878-BS1)</u>	<u>Prepared & Analyzed: 02-Mar-15</u>									
2-Chloronaphthalene	35.8		µg/l	5.00	50.0		72	40-140		
2-Chlorophenol	32.3		µg/l	5.00	50.0		65	30-130		
4-Chlorophenyl phenyl ether	38.4		µg/l	5.00	50.0		77	40-140		
Chrysene	42.4		µg/l	5.00	50.0		85	40-140		
Dibenzo (a,h) anthracene	39.7		µg/l	5.00	50.0		79	40-140		
Dibenzofuran	37.5		µg/l	5.00	50.0		75	40-140		
1,2-Dichlorobenzene	32.5		µg/l	5.00	50.0		65	40-140		
1,3-Dichlorobenzene	31.7		µg/l	5.00	50.0		63	40-140		
1,4-Dichlorobenzene	31.7		µg/l	5.00	50.0		63	40-140		
3,3'-Dichlorobenzidine	41.9		µg/l	5.00	50.0		84	40-140		
2,4-Dichlorophenol	35.8		µg/l	5.00	50.0		72	30-130		
Diethyl phthalate	40.6		µg/l	5.00	50.0		81	40-140		
Dimethyl phthalate	38.8		µg/l	5.00	50.0		78	40-140		
2,4-Dimethylphenol	33.6		µg/l	5.00	50.0		67	30-130		
Di-n-butyl phthalate	40.2		µg/l	5.00	50.0		80	40-140		
4,6-Dinitro-2-methylphenol	36.9		µg/l	5.00	50.0		74	30-130		
2,4-Dinitrophenol	34.5		µg/l	5.00	50.0		69	30-130		
2,4-Dinitrotoluene	41.4		µg/l	5.00	50.0		83	40-140		
2,6-Dinitrotoluene	41.1		µg/l	5.00	50.0		82	40-140		
Di-n-octyl phthalate	42.1		µg/l	5.00	50.0		84	40-140		
Fluoranthene	37.4		µg/l	5.00	50.0		75	40-140		
Fluorene	37.5		µg/l	5.00	50.0		75	40-140		
Hexachlorobenzene	38.1		µg/l	5.00	50.0		76	40-140		
Hexachlorobutadiene	30.2		µg/l	5.00	50.0		60	40-140		
Hexachlorocyclopentadiene	39.0		µg/l	5.00	50.0		78	40-140		
Hexachloroethane	31.3		µg/l	5.00	50.0		63	40-140		
Indeno (1,2,3-cd) pyrene	39.5		µg/l	5.00	50.0		79	40-140		
Isophorone	35.7		µg/l	5.00	50.0		71	40-140		
2-Methylnaphthalene	36.7		µg/l	5.00	50.0		73	40-140		
2-Methylphenol	31.6		µg/l	5.00	50.0		63	30-130		
3 & 4-Methylphenol	30.8		µg/l	10.0	50.0		62	30-130		
Naphthalene	33.1		µg/l	5.00	50.0		66	40-140		
2-Nitroaniline	39.5		µg/l	5.00	50.0		79	40-140		
3-Nitroaniline	40.9		µg/l	5.00	50.0		82	40-140		
4-Nitroaniline	49.1		µg/l	20.0	50.0		98	40-140		
Nitrobenzene	33.2		µg/l	5.00	50.0		66	40-140		
2-Nitrophenol	35.9		µg/l	5.00	50.0		72	30-130		
4-Nitrophenol	27.5		µg/l	20.0	50.0		55	30-130		
N-Nitrosodimethylamine	24.0		µg/l	5.00	50.0		48	40-140		
N-Nitrosodi-n-propylamine	36.8		µg/l	5.00	50.0		74	40-140		
N-Nitrosodiphenylamine	42.0		µg/l	5.00	50.0		84	40-140		
Pentachlorophenol	34.8		µg/l	20.0	50.0		70	30-130		
Phenanthrene	35.8		µg/l	5.00	50.0		72	40-140		
Phenol	16.7		µg/l	5.00	50.0		33	30-130		
Pyrene	42.4		µg/l	5.00	50.0		85	40-140		
Pyridine	18.8	QC2	µg/l	5.00	50.0		38	40-140		
1,2,4-Trichlorobenzene	32.4		µg/l	5.00	50.0		65	40-140		
1-Methylnaphthalene	35.5		µg/l	5.00	50.0		71	40-140		
2,4,5-Trichlorophenol	38.6		µg/l	5.00	50.0		77	30-130		
2,4,6-Trichlorophenol	36.1		µg/l	5.00	50.0		72	30-130		
Pentachloronitrobenzene	40.7		µg/l	5.00	50.0		81	40-140		
1,2,4,5-Tetrachlorobenzene	35.9		µg/l	5.00	50.0		72	40-140		

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503878 - SW846 3510C										
<u>LCS (1503878-BS1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
Surrogate: 2-Fluorobiphenyl	31.3		µg/l		50.0		63	30-130		
Surrogate: 2-Fluorophenol	19.2		µg/l		50.0		38	15-110		
Surrogate: Nitrobenzene-d5	30.4		µg/l		50.0		61	30-130		
Surrogate: Phenol-d5	13.5		µg/l		50.0		27	15-110		
Surrogate: Terphenyl-dl4	37.5		µg/l		50.0		75	30-130		
Surrogate: 2,4,6-Tribromophenol	36.3		µg/l		50.0		73	15-110		
<u>LCS Dup (1503878-BSD1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
Acenaphthene	36.5		µg/l	5.00	50.0		73	40-140	3	20
Acenaphthylene	38.4		µg/l	5.00	50.0		77	40-140	3	20
Aniline	29.8		µg/l	5.00	50.0		60	40-140	0.02	20
Anthracene	38.7		µg/l	5.00	50.0		77	40-140	1	20
Azobenzene/Diphenyldiazene	39.1		µg/l	5.00	50.0		78	40-140	2	20
Benzidine	5.98	QC2, QR9	µg/l	5.00	50.0		12	40-140	137	20
Benzo (a) anthracene	42.4		µg/l	5.00	50.0		85	40-140	4	20
Benzo (a) pyrene	42.4		µg/l	5.00	50.0		85	40-140	4	20
Benzo (b) fluoranthene	39.9		µg/l	5.00	50.0		80	40-140	2	20
Benzo (g,h,i) perylene	38.4		µg/l	5.00	50.0		77	40-140	2	20
Benzo (k) fluoranthene	42.4		µg/l	5.00	50.0		85	40-140	4	20
Benzoic acid	22.3		µg/l	5.00	50.0		45	30-130	9	20
Benzyl alcohol	34.2		µg/l	5.00	50.0		68	40-140	9	20
Bis(2-chloroethoxy)methane	35.1		µg/l	5.00	50.0		70	40-140	4	20
Bis(2-chloroethyl)ether	31.5		µg/l	5.00	50.0		63	40-140	3	20
Bis(2-chloroisopropyl)ether	34.1		µg/l	5.00	50.0		68	40-140	3	20
Bis(2-ethylhexyl)phthalate	47.0		µg/l	5.00	50.0		94	40-140	5	20
4-Bromophenyl phenyl ether	38.3		µg/l	5.00	50.0		77	40-140	1	20
Butyl benzyl phthalate	45.1		µg/l	5.00	50.0		90	40-140	2	20
Carbazole	42.0		µg/l	5.00	50.0		84	40-140	0.9	20
4-Chloro-3-methylphenol	39.6		µg/l	5.00	50.0		79	30-130	5	20
4-Chloroaniline	31.7		µg/l	5.00	50.0		63	40-140	2	20
2-Chloronaphthalene	37.1		µg/l	5.00	50.0		74	40-140	3	20
2-Chlorophenol	34.0		µg/l	5.00	50.0		68	30-130	5	20
4-Chlorophenyl phenyl ether	39.5		µg/l	5.00	50.0		79	40-140	3	20
Chrysene	43.5		µg/l	5.00	50.0		87	40-140	3	20
Dibenzo (a,h) anthracene	40.8		µg/l	5.00	50.0		82	40-140	3	20
Dibenzofuran	38.5		µg/l	5.00	50.0		77	40-140	3	20
1,2-Dichlorobenzene	33.1		µg/l	5.00	50.0		66	40-140	2	20
1,3-Dichlorobenzene	32.5		µg/l	5.00	50.0		65	40-140	2	20
1,4-Dichlorobenzene	32.3		µg/l	5.00	50.0		65	40-140	2	20
3,3'-Dichlorobenzidine	40.9		µg/l	5.00	50.0		82	40-140	3	20
2,4-Dichlorophenol	37.5		µg/l	5.00	50.0		75	30-130	5	20
Diethyl phthalate	41.6		µg/l	5.00	50.0		83	40-140	3	20
Dimethyl phthalate	40.0		µg/l	5.00	50.0		80	40-140	3	20
2,4-Dimethylphenol	33.1		µg/l	5.00	50.0		66	30-130	2	20
Di-n-butyl phthalate	41.3		µg/l	5.00	50.0		83	40-140	3	20
4,6-Dinitro-2-methylphenol	38.0		µg/l	5.00	50.0		76	30-130	3	20
2,4-Dinitrophenol	36.4		µg/l	5.00	50.0		73	30-130	5	20
2,4-Dinitrotoluene	43.5		µg/l	5.00	50.0		87	40-140	5	20
2,6-Dinitrotoluene	41.9		µg/l	5.00	50.0		84	40-140	2	20
Di-n-octyl phthalate	43.3		µg/l	5.00	50.0		87	40-140	3	20
Fluoranthene	38.5		µg/l	5.00	50.0		77	40-140	3	20
Fluorene	38.7		µg/l	5.00	50.0		77	40-140	3	20

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503878 - SW846 3510C										
<u>LCS Dup (1503878-BSD1)</u>	<u>Prepared & Analyzed: 02-Mar-15</u>									
Hexachlorobenzene	39.5		µg/l	5.00	50.0		79	40-140	4	20
Hexachlorobutadiene	30.7		µg/l	5.00	50.0		61	40-140	2	20
Hexachlorocyclopentadiene	39.9		µg/l	5.00	50.0		80	40-140	2	20
Hexachloroethane	31.9		µg/l	5.00	50.0		64	40-140	2	20
Indeno (1,2,3-cd) pyrene	40.3		µg/l	5.00	50.0		81	40-140	2	20
Isophorone	37.0		µg/l	5.00	50.0		74	40-140	4	20
2-Methylnaphthalene	37.7		µg/l	5.00	50.0		75	40-140	3	20
2-Methylphenol	33.4		µg/l	5.00	50.0		67	30-130	6	20
3 & 4-Methylphenol	32.2		µg/l	10.0	50.0		64	30-130	5	20
Naphthalene	34.4		µg/l	5.00	50.0		69	40-140	4	20
2-Nitroaniline	41.2		µg/l	5.00	50.0		82	40-140	4	20
3-Nitroaniline	41.4		µg/l	5.00	50.0		83	40-140	1	20
4-Nitroaniline	50.4		µg/l	20.0	50.0		101	40-140	3	20
Nitrobenzene	34.9		µg/l	5.00	50.0		70	40-140	5	20
2-Nitrophenol	37.8		µg/l	5.00	50.0		76	30-130	5	20
4-Nitrophenol	27.7		µg/l	20.0	50.0		55	30-130	0.7	20
N-Nitrosodimethylamine	27.7		µg/l	5.00	50.0		55	40-140	14	20
N-Nitrosodi-n-propylamine	38.4		µg/l	5.00	50.0		77	40-140	4	20
N-Nitrosodiphenylamine	42.4		µg/l	5.00	50.0		85	40-140	1	20
Pentachlorophenol	39.3		µg/l	20.0	50.0		79	30-130	12	20
Phenanthrene	36.7		µg/l	5.00	50.0		73	40-140	2	20
Phenol	17.7		µg/l	5.00	50.0		35	30-130	6	20
Pyrene	43.7		µg/l	5.00	50.0		87	40-140	3	20
Pyridine	17.1	QC2	µg/l	5.00	50.0		34	40-140	10	20
1,2,4-Trichlorobenzene	33.6		µg/l	5.00	50.0		67	40-140	4	20
1-Methylnaphthalene	36.7		µg/l	5.00	50.0		73	40-140	3	20
2,4,5-Trichlorophenol	40.4		µg/l	5.00	50.0		81	30-130	4	20
2,4,6-Trichlorophenol	37.6		µg/l	5.00	50.0		75	30-130	4	20
Pentachloronitrobenzene	42.1		µg/l	5.00	50.0		84	40-140	3	20
1,2,4,5-Tetrachlorobenzene	35.9		µg/l	5.00	50.0		72	40-140	0.02	20
Surrogate: 2-Fluorobiphenyl	35.1		µg/l		50.0		70	30-130		
Surrogate: 2-Fluorophenol	23.1		µg/l		50.0		46	15-110		
Surrogate: Nitrobenzene-d5	36.3		µg/l		50.0		73	30-130		
Surrogate: Phenol-d5	16.4		µg/l		50.0		33	15-110		
Surrogate: Terphenyl-dl4	44.2		µg/l		50.0		88	30-130		
Surrogate: 2,4,6-Tribromophenol	41.9		µg/l		50.0		84	15-110		

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503770 - SW846 3510C										
<u>Blank (1503770-BLK1)</u>					<u>Prepared & Analyzed: 27-Feb-15</u>					
Aroclor-1016	< 0.200		µg/l	0.200						
Aroclor-1016 [2C]	< 0.200		µg/l	0.200						
Aroclor-1221	< 0.200		µg/l	0.200						
Aroclor-1221 [2C]	< 0.200		µg/l	0.200						
Aroclor-1232	< 0.200		µg/l	0.200						
Aroclor-1232 [2C]	< 0.200		µg/l	0.200						
Aroclor-1242	< 0.200		µg/l	0.200						
Aroclor-1242 [2C]	< 0.200		µg/l	0.200						
Aroclor-1248	< 0.200		µg/l	0.200						
Aroclor-1248 [2C]	< 0.200		µg/l	0.200						
Aroclor-1254	< 0.200		µg/l	0.200						
Aroclor-1254 [2C]	< 0.200		µg/l	0.200						
Aroclor-1260	< 0.200		µg/l	0.200						
Aroclor-1260 [2C]	< 0.200		µg/l	0.200						
Aroclor-1262	< 0.200		µg/l	0.200						
Aroclor-1262 [2C]	< 0.200		µg/l	0.200						
Aroclor-1268	< 0.200		µg/l	0.200						
Aroclor-1268 [2C]	< 0.200		µg/l	0.200						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.180		µg/l		0.200		90	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.210		µg/l		0.200		105	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.220		µg/l		0.200		110	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.250		µg/l		0.200		125	30-150		
<u>LCS (1503770-BS1)</u>					<u>Prepared & Analyzed: 27-Feb-15</u>					
Aroclor-1016	2.36		µg/l	0.200	2.50		94	40-140		
Aroclor-1016 [2C]	2.41		µg/l	0.200	2.50		96	40-140		
Aroclor-1260	2.44		µg/l	0.200	2.50		98	40-140		
Aroclor-1260 [2C]	2.41		µg/l	0.200	2.50		96	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.190		µg/l		0.200		95	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.210		µg/l		0.200		105	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.220		µg/l		0.200		110	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.260		µg/l		0.200		130	30-150		
<u>LCS Dup (1503770-BSD1)</u>					<u>Prepared & Analyzed: 27-Feb-15</u>					
Aroclor-1016	2.38		µg/l	0.200	2.50		95	40-140	0.8	20
Aroclor-1016 [2C]	2.39		µg/l	0.200	2.50		96	40-140	0.8	20
Aroclor-1260	2.47		µg/l	0.200	2.50		99	40-140	1	20
Aroclor-1260 [2C]	2.47		µg/l	0.200	2.50		99	40-140	2	20
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.200		µg/l		0.200		100	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	0.210		µg/l		0.200		105	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.220		µg/l		0.200		110	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.270		µg/l		0.200		135	30-150		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503876 - SW846 3510C										
<u>Blank (1503876-BLK1)</u>					<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>					
Gasoline	< 0.2		mg/l	0.2						
Fuel Oil #2	< 0.2		mg/l	0.2						
Fuel Oil #4	< 0.2		mg/l	0.2						
Fuel Oil #6	< 0.2		mg/l	0.2						
Motor Oil	< 0.2		mg/l	0.2						
Ligroin	< 0.2		mg/l	0.2						
Aviation Fuel	< 0.2		mg/l	0.2						
Hydraulic Oil	< 0.2		mg/l	0.2						
Dielectric Fluid	< 0.2		mg/l	0.2						
Unidentified	< 0.2		mg/l	0.2						
Other Oil	< 0.2		mg/l	0.2						
Total Petroleum Hydrocarbons	< 0.2		mg/l	0.2						
Surrogate: 1-Chlorooctadecane	0.0348		mg/l		0.0500		70	40-140		
<u>LCS (1503876-BS2)</u>					<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>					
Fuel Oil #2	2.0		mg/l	0.2	2.00		101	40-140		
Surrogate: 1-Chlorooctadecane	0.0456		mg/l		0.0500		91	40-140		
<u>LCS Dup (1503876-BSD2)</u>					<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>					
Fuel Oil #2	2.2		mg/l	0.2	2.00		110	40-140	8	200
Surrogate: 1-Chlorooctadecane	0.0489		mg/l		0.0500		98	40-140		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503856 - SW846 3005A										
<u>Blank (1503856-BLK1)</u>					<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>					
Iron	0.101	QB1	mg/l	0.0150						
Chromium	< 0.0050		mg/l	0.0050						
Arsenic	< 0.0040		mg/l	0.0040						
Cadmium	< 0.0025		mg/l	0.0025						
Lead	< 0.0075		mg/l	0.0075						
Antimony	< 0.0060		mg/l	0.0060						
Beryllium	< 0.0020		mg/l	0.0020						
Thallium	< 0.0050		mg/l	0.0050						
Zinc	< 0.0050		mg/l	0.0050						
Copper	< 0.0050		mg/l	0.0050						
Nickel	< 0.0050		mg/l	0.0050						
Selenium	< 0.0150		mg/l	0.0150						
Silver	< 0.0070		mg/l	0.0070						
<u>LCS (1503856-BS1)</u>					<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>					
Iron	1.35		mg/l	0.0150	1.25		108	85-115		
Beryllium	1.29		mg/l	0.0020	1.25		104	85-115		
Arsenic	1.22		mg/l	0.0040	1.25		97	85-115		
Lead	1.19		mg/l	0.0075	1.25		95	85-115		
Cadmium	1.20		mg/l	0.0025	1.25		96	85-115		
Chromium	1.24		mg/l	0.0050	1.25		99	85-115		
Antimony	1.17		mg/l	0.0060	1.25		93	85-115		
Zinc	1.23		mg/l	0.0050	1.25		99	85-115		
Copper	1.27		mg/l	0.0050	1.25		102	85-115		
Nickel	1.28		mg/l	0.0050	1.25		102	85-115		
Selenium	1.30		mg/l	0.0150	1.25		104	85-115		
Silver	1.21		mg/l	0.0070	1.25		97	85-115		
Thallium	1.27		mg/l	0.0050	1.25		101	85-115		
<u>LCS Dup (1503856-BSD1)</u>					<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>					
Iron	1.36		mg/l	0.0150	1.25		109	85-115	0.6	20
Cadmium	1.25		mg/l	0.0025	1.25		100	85-115	4	20
Selenium	1.28		mg/l	0.0150	1.25		102	85-115	2	20
Nickel	1.26		mg/l	0.0050	1.25		101	85-115	2	20
Copper	1.23		mg/l	0.0050	1.25		98	85-115	3	20
Zinc	1.30		mg/l	0.0050	1.25		104	85-115	5	20
Thallium	1.30		mg/l	0.0050	1.25		104	85-115	3	20
Antimony	1.19		mg/l	0.0060	1.25		95	85-115	2	20
Chromium	1.26		mg/l	0.0050	1.25		101	85-115	1	20
Beryllium	1.34		mg/l	0.0020	1.25		107	85-115	3	20
Arsenic	1.24		mg/l	0.0040	1.25		99	85-115	2	20
Silver	1.21		mg/l	0.0070	1.25		97	85-115	0.5	20
Lead	1.24		mg/l	0.0075	1.25		100	85-115	5	20
<u>Duplicate (1503856-DUP1)</u>					<u>Source: SC03809-01 Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>					
Iron	12.3		mg/l	0.0150		12.4			1	20
Nickel	0.0261		mg/l	0.0050		0.0254			3	20
Selenium	< 0.0150		mg/l	0.0150		BRL				20
Copper	0.0223		mg/l	0.0050		0.0216			3	20
Zinc	0.172		mg/l	0.0050		0.168			3	20
Thallium	< 0.0050		mg/l	0.0050		BRL				20
Antimony	< 0.0060		mg/l	0.0060		BRL				20
Lead	0.0531		mg/l	0.0075		0.0517			3	20
Cadmium	< 0.0025		mg/l	0.0025		BRL				20

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Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503856 - SW846 3005A										
<u>Duplicate (1503856-DUP1)</u>			<u>Source: SC03809-01</u>			<u>Prepared & Analyzed: 02-Mar-15</u>				
Beryllium	0.0013	J	mg/l	0.0020		0.0013			1	20
Arsenic	0.0038	J,QR8	mg/l	0.0040		0.0047			21	20
Silver	< 0.0070	R06	mg/l	0.0070		0.0069				20
Chromium	0.0302		mg/l	0.0050		0.0293			3	20
<u>Matrix Spike (1503856-MS1)</u>			<u>Source: SC03809-01</u>			<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>				
Iron	14.0		mg/l	0.0150	1.25	12.4	123	75-125		
Beryllium	1.21		mg/l	0.0020	1.25	0.0013	97	75-125		
Copper	1.12		mg/l	0.0050	1.25	0.0216	88	75-125		
Selenium	1.19		mg/l	0.0150	1.25	BRL	96	75-125		
Nickel	1.11		mg/l	0.0050	1.25	0.0254	87	75-125		
Zinc	1.26		mg/l	0.0050	1.25	0.168	87	75-125		
Chromium	1.17		mg/l	0.0050	1.25	0.0293	91	75-125		
Arsenic	1.16		mg/l	0.0040	1.25	0.0047	93	75-125		
Cadmium	1.07		mg/l	0.0025	1.25	BRL	86	75-125		
Thallium	1.18		mg/l	0.0050	1.25	BRL	94	75-125		
Antimony	1.01		mg/l	0.0060	1.25	BRL	81	75-125		
Lead	1.07		mg/l	0.0075	1.25	0.0517	81	75-125		
Silver	1.19		mg/l	0.0070	1.25	0.0069	95	75-125		
<u>Matrix Spike Dup (1503856-MSD1)</u>			<u>Source: SC03809-01</u>			<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>				
Iron	13.6		mg/l	0.0150	1.25	12.4	98	75-125	2	20
Chromium	1.26		mg/l	0.0050	1.25	0.0293	99	75-125	8	20
Selenium	1.23		mg/l	0.0150	1.25	BRL	99	75-125	3	20
Silver	1.27		mg/l	0.0070	1.25	0.0069	101	75-125	6	20
Arsenic	1.30		mg/l	0.0040	1.25	0.0047	103	75-125	11	20
Beryllium	1.32		mg/l	0.0020	1.25	0.0013	105	75-125	9	20
Cadmium	1.18		mg/l	0.0025	1.25	BRL	94	75-125	10	20
Antimony	1.15		mg/l	0.0060	1.25	BRL	92	75-125	13	20
Thallium	1.30		mg/l	0.0050	1.25	BRL	104	75-125	10	20
Zinc	1.39		mg/l	0.0050	1.25	0.168	98	75-125	10	20
Copper	1.15		mg/l	0.0050	1.25	0.0216	91	75-125	3	20
Nickel	1.13		mg/l	0.0050	1.25	0.0254	88	75-125	2	20
Lead	1.18		mg/l	0.0075	1.25	0.0517	91	75-125	10	20
<u>Post Spike (1503856-PS1)</u>			<u>Source: SC03809-01</u>			<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>				
Iron	12.9	QM4X	mg/l	0.0150	1.25	12.4	42	80-120		
Cadmium	1.23		mg/l	0.0025	1.25	BRL	98	80-120		
Selenium	1.27		mg/l	0.0150	1.25	BRL	102	80-120		
Nickel	1.18		mg/l	0.0050	1.25	0.0254	92	80-120		
Copper	1.21		mg/l	0.0050	1.25	0.0216	95	80-120		
Zinc	1.42		mg/l	0.0050	1.25	0.168	100	80-120		
Thallium	1.36		mg/l	0.0050	1.25	BRL	109	80-120		
Antimony	1.29		mg/l	0.0060	1.25	BRL	103	80-120		
Silver	1.36		mg/l	0.0070	1.25	0.0069	109	80-120		
Chromium	1.33		mg/l	0.0050	1.25	0.0293	104	80-120		
Beryllium	1.36		mg/l	0.0020	1.25	0.0013	109	80-120		
Arsenic	1.36		mg/l	0.0040	1.25	0.0047	109	80-120		
Lead	1.22		mg/l	0.0075	1.25	0.0517	94	80-120		

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Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503857 - EPA200/SW7000 Series										
<u>Blank (1503857-BLK1)</u>										
Mercury	< 0.00020		mg/l	0.00020						
<u>LCS (1503857-BS1)</u>										
Mercury	0.00527		mg/l	0.00020	0.00500		105	85-115		
<u>Duplicate (1503857-DUP1)</u>										
Mercury	< 0.00020		mg/l	0.00020		BRL				20
<u>Matrix Spike (1503857-MS1)</u>										
Mercury	0.00513		mg/l	0.00020	0.00500	BRL	103	80-120		
<u>Matrix Spike Dup (1503857-MSD1)</u>										
Mercury	0.00519		mg/l	0.00020	0.00500	BRL	104	80-120	1	20
<u>Post Spike (1503857-PS1)</u>										
Mercury	0.00537		mg/l	0.00020	0.00500	BRL	107	85-115		

Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503858 - SW846 3005A										
<u>Blank (1503858-BLK1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
Cadmium	< 0.0025		mg/l	0.0025						
Selenium	< 0.0150		mg/l	0.0150						
Nickel	< 0.0050		mg/l	0.0050						
Copper	< 0.0050		mg/l	0.0050						
Zinc	< 0.0050		mg/l	0.0050						
Silver	< 0.0070		mg/l	0.0070						
Thallium	< 0.0050		mg/l	0.0050						
Antimony	< 0.0060		mg/l	0.0060						
Chromium	< 0.0050		mg/l	0.0050						
Arsenic	< 0.0040		mg/l	0.0040						
Beryllium	< 0.0020		mg/l	0.0020						
Lead	< 0.0075		mg/l	0.0075						
<u>LCS (1503858-BS1)</u>					<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>					
Copper	1.17		mg/l	0.0050	1.25		93	85-115		
Chromium	1.18		mg/l	0.0050	1.25		95	85-115		
Cadmium	1.16		mg/l	0.0025	1.25		93	85-115		
Beryllium	1.23		mg/l	0.0020	1.25		98	85-115		
Arsenic	1.16		mg/l	0.0040	1.25		93	85-115		
Silver	1.15		mg/l	0.0070	1.25		92	85-115		
Nickel	1.24		mg/l	0.0050	1.25		99	85-115		
Zinc	1.19		mg/l	0.0050	1.25		95	85-115		
Selenium	1.27		mg/l	0.0150	1.25		102	85-115		
Thallium	1.22		mg/l	0.0050	1.25		97	85-115		
Antimony	1.13		mg/l	0.0060	1.25		90	85-115		
Lead	1.16		mg/l	0.0075	1.25		92	85-115		
<u>LCS Dup (1503858-BSD1)</u>					<u>Prepared & Analyzed: 02-Mar-15</u>					
Cadmium	1.19		mg/l	0.0025	1.25		95	85-115	2	20
Arsenic	1.20		mg/l	0.0040	1.25		96	85-115	3	20
Selenium	1.24		mg/l	0.0150	1.25		100	85-115	2	20
Nickel	1.24		mg/l	0.0050	1.25		99	85-115	0.4	20
Copper	1.19		mg/l	0.0050	1.25		95	85-115	2	20
Zinc	1.22		mg/l	0.0050	1.25		98	85-115	2	20
Thallium	1.25		mg/l	0.0050	1.25		100	85-115	3	20
Antimony	1.16		mg/l	0.0060	1.25		93	85-115	2	20
Lead	1.18		mg/l	0.0075	1.25		94	85-115	2	20
Chromium	1.21		mg/l	0.0050	1.25		97	85-115	2	20
Beryllium	1.27		mg/l	0.0020	1.25		101	85-115	3	20
Silver	1.17		mg/l	0.0070	1.25		94	85-115	2	20
<u>Duplicate (1503858-DUP1)</u>					<u>Source: SC03809-02</u>		<u>Prepared & Analyzed: 02-Mar-15</u>			
Zinc	0.0072		mg/l	0.0050		0.0086			18	20
Selenium	< 0.0150		mg/l	0.0150		BRL				20
Copper	< 0.0050		mg/l	0.0050		BRL				20
Cadmium	< 0.0025		mg/l	0.0025		BRL				20
Silver	< 0.0070	R01	mg/l	0.0070		BRL				20
Nickel	0.0062		mg/l	0.0050		0.0064			2	20
Beryllium	< 0.0020		mg/l	0.0020		BRL				20
Thallium	< 0.0050		mg/l	0.0050		0.0024				20
Chromium	< 0.0050		mg/l	0.0050		BRL				20
Lead	< 0.0075		mg/l	0.0075		BRL				20
Antimony	< 0.0060		mg/l	0.0060		BRL				20
Arsenic	< 0.0040		mg/l	0.0040		BRL				20

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Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503858 - SW846 3005A										
<u>Matrix Spike (1503858-MS1)</u>				<u>Source: SC03809-02</u>		<u>Prepared & Analyzed: 02-Mar-15</u>				
Cadmium	1.25		mg/l	0.0025	1.25	BRL	100	75-125		
Chromium	1.31		mg/l	0.0050	1.25	BRL	105	75-125		
Arsenic	1.41		mg/l	0.0040	1.25	BRL	113	75-125		
Thallium	1.32		mg/l	0.0050	1.25	0.0024	106	75-125		
Lead	1.18		mg/l	0.0075	1.25	BRL	95	75-125		
Antimony	1.32		mg/l	0.0060	1.25	BRL	106	75-125		
Zinc	1.30		mg/l	0.0050	1.25	0.0086	103	75-125		
Nickel	1.16		mg/l	0.0050	1.25	0.0064	93	75-125		
Selenium	1.31		mg/l	0.0150	1.25	BRL	105	75-125		
Beryllium	1.41		mg/l	0.0020	1.25	BRL	112	75-125		
Silver	1.42		mg/l	0.0070	1.25	BRL	114	75-125		
Copper	1.16		mg/l	0.0050	1.25	BRL	92	75-125		
<u>Matrix Spike Dup (1503858-MSD1)</u>				<u>Source: SC03809-02</u>		<u>Prepared & Analyzed: 02-Mar-15</u>				
Silver	1.31		mg/l	0.0070	1.25	BRL	105	75-125	8	20
Zinc	1.23		mg/l	0.0050	1.25	0.0086	98	75-125	6	20
Thallium	1.23		mg/l	0.0050	1.25	0.0024	98	75-125	7	20
Antimony	1.26		mg/l	0.0060	1.25	BRL	100	75-125	5	20
Lead	1.12		mg/l	0.0075	1.25	BRL	90	75-125	5	20
Chromium	1.21		mg/l	0.0050	1.25	BRL	97	75-125	7	20
Cadmium	1.18		mg/l	0.0025	1.25	BRL	94	75-125	6	20
Beryllium	1.35		mg/l	0.0020	1.25	BRL	108	75-125	4	20
Arsenic	1.33		mg/l	0.0040	1.25	BRL	107	75-125	6	20
Copper	1.19		mg/l	0.0050	1.25	BRL	95	75-125	3	20
Selenium	1.33		mg/l	0.0150	1.25	BRL	106	75-125	1	20
Nickel	1.18		mg/l	0.0050	1.25	0.0064	94	75-125	1	20
<u>Post Spike (1503858-PS1)</u>				<u>Source: SC03809-02</u>		<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>				
Nickel	1.17		mg/l	0.0050	1.25	0.0064	93	80-120		
Antimony	1.26		mg/l	0.0060	1.25	BRL	101	80-120		
Lead	1.12		mg/l	0.0075	1.25	BRL	90	80-120		
Chromium	1.25		mg/l	0.0050	1.25	BRL	100	80-120		
Cadmium	1.19		mg/l	0.0025	1.25	BRL	95	80-120		
Beryllium	1.37		mg/l	0.0020	1.25	BRL	109	80-120		
Arsenic	1.35		mg/l	0.0040	1.25	BRL	108	80-120		
Silver	1.36		mg/l	0.0070	1.25	BRL	109	80-120		
Zinc	1.23		mg/l	0.0050	1.25	0.0086	98	80-120		
Thallium	1.26		mg/l	0.0050	1.25	0.0024	100	80-120		
Selenium	1.30		mg/l	0.0150	1.25	BRL	104	80-120		
Copper	1.19		mg/l	0.0050	1.25	BRL	95	80-120		
Batch 1505433 - SW846 3005A										
<u>Blank (1505433-BLK1)</u>						<u>Prepared: 26-Mar-15 Analyzed: 27-Mar-15</u>				
Iron	< 0.0300		mg/l	0.0300						
<u>LCS (1505433-BS1)</u>						<u>Prepared: 26-Mar-15 Analyzed: 27-Mar-15</u>				
Iron	1.85		mg/l	0.0300	2.00		92	85-115		
<u>LCS Dup (1505433-BSD1)</u>						<u>Prepared: 26-Mar-15 Analyzed: 27-Mar-15</u>				
Iron	1.88		mg/l	0.0300	2.00		94	85-115	2	20
<u>Duplicate (1505433-DUP1)</u>				<u>Source: SC03809-01</u>		<u>Prepared: 26-Mar-15 Analyzed: 27-Mar-15</u>				
Iron	< 0.0300		mg/l	0.0300		BRL				20
<u>Matrix Spike (1505433-MS1)</u>				<u>Source: SC03809-01</u>		<u>Prepared: 26-Mar-15 Analyzed: 27-Mar-15</u>				
Iron	2.28		mg/l	0.0300	2.50	BRL	91	75-125		
<u>Matrix Spike Dup (1505433-MSD1)</u>				<u>Source: SC03809-01</u>		<u>Prepared: 26-Mar-15 Analyzed: 27-Mar-15</u>				
Iron	2.29		mg/l	0.0300	2.50	BRL	92	75-125	0.7	20

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Soluble Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503859 - EPA200/SW7000 Series										
<u>Blank (1503859-BLK1)</u>										
Mercury	< 0.00020		mg/l	0.00020						
<u>LCS (1503859-BS1)</u>										
Mercury	0.00535		mg/l	0.00020	0.00500		107	85-115		
<u>Duplicate (1503859-DUP1)</u>										
Mercury	< 0.00020		mg/l	0.00020		BRL				20
<u>Matrix Spike (1503859-MS1)</u>										
Mercury	0.00571		mg/l	0.00020	0.00500	BRL	114	80-120		
<u>Matrix Spike Dup (1503859-MSD1)</u>										
Mercury	0.00568		mg/l	0.00020	0.00500	BRL	114	80-120	0.4	20
<u>Post Spike (1503859-PS1)</u>										
Mercury	0.00565		mg/l	0.00020	0.00500	BRL	113	85-115		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503839 - General Preparation										
<u>Blank (1503839-BLK1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	< 0.020		mg/l	0.020						
<u>LCS (1503839-BS1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.054		mg/l	0.020	0.0500		108	90-110		
<u>Calibration Blank (1503839-CCB1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	-0.001		mg/l							
<u>Calibration Blank (1503839-CCB2)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.002		mg/l							
<u>Calibration Blank (1503839-CCB3)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.002		mg/l							
<u>Calibration Check (1503839-CCV1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.053		mg/l	0.020	0.0500		105	90-110		
<u>Calibration Check (1503839-CCV2)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.049		mg/l	0.020	0.0500		98	90-110		
<u>Calibration Check (1503839-CCV3)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.050		mg/l	0.020	0.0500		99	90-110		
<u>Duplicate (1503839-DUP1)</u>				<u>Source: SC03809-01</u>						<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	< 0.200		mg/l	0.200		BRL				20
<u>Matrix Spike (1503839-MS1)</u>				<u>Source: SC03809-01</u>						<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.414		mg/l	0.200	0.500	BRL	83	80-120		
<u>Matrix Spike Dup (1503839-MSD1)</u>				<u>Source: SC03809-01</u>						<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.412		mg/l	0.200	0.500	BRL	82	80-120	0.5	200
<u>Reference (1503839-SRM1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Total Residual Chlorine	0.102		mg/l	0.020	0.110		93	85-115		
Batch 1503840 - General Preparation										
<u>Blank (1503840-BLK1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	< 0.005		mg/l	0.005						
<u>LCS (1503840-BS1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	0.052		mg/l	0.005	0.0500		104	80-120		
<u>Calibration Blank (1503840-CCB1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	-0.0009		mg/l							
<u>Calibration Blank (1503840-CCB2)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	-0.0008		mg/l							
<u>Calibration Check (1503840-CCV1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	0.052		mg/l	0.005	0.0500		104	90-110		
<u>Calibration Check (1503840-CCV2)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	0.052		mg/l	0.005	0.0500		104	90-110		
<u>Duplicate (1503840-DUP1)</u>				<u>Source: SC03809-02</u>						<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	< 0.050		mg/l	0.050		BRL				20
<u>Matrix Spike (1503840-MS1)</u>				<u>Source: SC03809-02</u>						<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	0.471		mg/l	0.050	0.500	BRL	94	85-115		
<u>Matrix Spike Dup (1503840-MSD1)</u>				<u>Source: SC03809-02</u>						<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	0.473		mg/l	0.050	0.500	BRL	95	85-115	0.4	20
<u>Reference (1503840-SRM1)</u>										<u>Prepared & Analyzed: 27-Feb-15</u>
Hexavalent Chromium	0.024		mg/l	0.005	0.0250		96	85-115		
Batch 1503877 - General Preparation										
<u>Blank (1503877-BLK1)</u>										<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>
Total Suspended Solids	< 5.0		mg/l	5.0						
<u>LCS (1503877-BS1)</u>										<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>
Total Suspended Solids	98.0		mg/l	10.0	100		98	90-110		

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General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1503912 - General Preparation										
<u>Blank (1503912-BLK1)</u>								<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>		
Chloride	< 1.00		mg/l	1.00						
<u>LCS (1503912-BS1)</u>								<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>		
Chloride	19.8		mg/l	1.00	20.0		99	90-110		
<u>Reference (1503912-SRM1)</u>								<u>Prepared: 02-Mar-15 Analyzed: 03-Mar-15</u>		
Chloride	24.4		mg/l	1.00	25.0		98	90-110		
Batch 1503940 - General Preparation										
<u>Blank (1503940-BLK1)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	< 0.00500		mg/l	0.00500						
<u>Blank (1503940-BLK2)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	< 0.00500		mg/l	0.00500						
<u>LCS (1503940-BS1)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.412		mg/l	0.00500	0.400		103	90-110		
<u>LCS (1503940-BS2)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.203		mg/l	0.00500	0.200		102	90-110		
<u>LCS (1503940-BS3)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.412		mg/l	0.00500	0.400		103	90-110		
<u>LCS (1503940-BS4)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.209		mg/l	0.00500	0.200		104	90-110		
<u>Calibration Blank (1503940-CCB1)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.00105		mg/l							
<u>Calibration Blank (1503940-CCB2)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.00129		mg/l							
<u>Calibration Blank (1503940-CCB3)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.00123		mg/l							
<u>Calibration Check (1503940-CCV1)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.304		mg/l	0.00500	0.300		101	90-110		
<u>Calibration Check (1503940-CCV2)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.304		mg/l	0.00500	0.300		101	90-110		
<u>Calibration Check (1503940-CCV3)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.308		mg/l	0.00500	0.300		103	90-110		
<u>Reference (1503940-SRM1)</u>								<u>Prepared & Analyzed: 03-Mar-15</u>		
Cyanide (total)	0.284		mg/l	0.00500	0.270		105	65-135		
Batch 1505476 - General Preparation										
<u>Duplicate (1505476-DUP1)</u>				<u>Source: SC03809-01</u>				<u>Prepared & Analyzed: 26-Mar-15</u>		
pH	7.69		pH Units			7.70			0.1	5
<u>Reference (1505476-SRM1)</u>								<u>Prepared & Analyzed: 26-Mar-15</u>		
pH	5.99		pH Units		6.00		100	97.5-102.5		
<u>Reference (1505476-SRM2)</u>								<u>Prepared & Analyzed: 26-Mar-15</u>		
pH	5.99		pH Units		6.00		100	97.5-102.5		
Batch 1505564 - General Preparation										
<u>Duplicate (1505564-DUP1)</u>				<u>Source: SC03809-02</u>				<u>Prepared & Analyzed: 27-Mar-15</u>		
Flashpoint	>150		°F			>150				20
<u>Reference (1505564-SRM1)</u>								<u>Prepared & Analyzed: 27-Mar-15</u>		
Flashpoint	80		°F		81.0		99	95-105		

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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.
QB1	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM4X	The spike recovery was outside of QC acceptance limits for the MS, MSD and/or PS due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
QR9	RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
R01	The Reporting Limit has been raised to account for matrix interference.
R02	Elevated Reporting Limits due to limited sample volume.
R06	MRL raised to correlate to batch QC reporting limits.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
CIHT	The method for residual chlorine indicates that samples should be analyzed immediately. 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous residual chlorine samples not analyzed in the field are considered out of hold time at the time of sample receipt.
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.
LIV	The initial volume for this sample has been reduced due to sample matrix and/or historical data therefore elevating the reporting limit.

Interpretation of Total Petroleum Hydrocarbon Report

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

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

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

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

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

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

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

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

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

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

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor
Nicole Leja
Rebecca Merz



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HANTRAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
☒ Standard TAT - 7 to 10 business days SC 03809
☐ Rush TAT - Date Needed: _____
All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed

Report To: Kleinfelder
1 Speen Street
Framingham, MA 01701
Telephone #: 508-370-8256 Fax: 508-68-1401
Project Mgr: Mark Habedank

Invoice To: Cumberland Farms
Mr. Matt Young
100 Crossing Blvd
Framingham, MA 01702
P.O No.: 63527 RQN _____

Project No: CFI Southbridge
Site Name: 357&381 Main Street
Location: Southbridge State MA
Sampler(s): Ryan Degnim

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11= none 12= _____

List Preservative Code below:

QA/QC Reporting Notes:
*additional charges may apply

DW=Dinking Water GW= Groundwater WW= Waste Water
O= Oil SW= surface Water SO=Soil SL= Sludge A= Air
X1= _____ X2= _____ X3= _____

Containers

Analysis

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

G= Grab

C=Compsite

Lab ID	Sample ID	Date	Time	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Cyanide	VOCs via 8260	sVOCs via 8270	TPH via 8100	PPM 13 Metals (total)	PPM 13 Metals (dissolved)	Trivalent & Hexavalent Chromium	TSS, TRC, Chloride	PCBs
03809-01	MW-1	2/27/2015	1245	G	GW	3	3		4	X	X	X	X	X	X	X	X	X
03809-02	MW-2	2/27/2015	1410	G	GW	3	3		4	X	X	X	X	X	X	X	X	X
03809-03	Trip Blank	2/27/15	2400	G	GW	1					X							

Dissolved metal samples

were field filtered where noted.

Chromium Short Hold

Relinquished by:

Received by:

Date

Time

Temp °C

☐ EDD format: _____

☒ E-mail to: _____

estralley@kleinfelder.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken

☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen



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Featuring
HANIBAL TECHNOLOGY

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

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

<i>Laboratory ID</i>	<i>Client ID</i>	<i>Analysis</i>	<i>Added</i>
SC03809-01	MW-1	Flashpoint	3/25/2015
SC03809-01	MW-1	pH	3/25/2015
SC03809-02	MW-2	Flashpoint	3/25/2015
SC03809-02	MW-2	pH	3/25/2015
SC03809-01	MW-1	Soluble Iron by ICP	3/26/2015
SC03809-01	MW-1	Total Iron by ICP	3/26/2015
SC03809-02	MW-2	Soluble Iron by ICP	3/26/2015
SC03809-02	MW-2	Total Iron by ICP	3/26/2015