WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

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

April 20, 2016
Project No. 03-221324

Ms. Suzanne Warner
U.S. Environmental Protection Agency
Dewatering GP Processing
Industrial Permit Unit (OEP06-4)
5 Post Office Square, Suite 100
Boston, MA 02109-3912

RE: Notice of Intent for Dewatering General Permit
Cumberland Farms Inc., Store # 0006
68 Main Street
Westminster, MA 01473

Dear Ms. Warner:

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

System Design

The groundwater treatment system located on the Site will be composed of the following: Submersible pneumatic pumps that collect groundwater from the UST excavation area, then recovered groundwater will be pumped into a 20,000 gallon frac tank (to settle out solids) and then pumped to a nearby drainage manhole connection prior to the outfall location. The proposed discharge location for the groundwater is a drainage manhole located on the northern boundary of the subject property (refer to Figure 2). This storm water manhole (MH-1) discharges to a storm water drainage outfall in the wetlands area adjacent to the site to the north. This wetlands area discharges into Tophet Swap located approximately 1,500 feet northwest of the Site. Please refer to Figure 1 for a depiction of the wetlands located immediately northwest of the subject property.

Average flow rate of discharge of treated groundwater from the system to the storm drainage line is expected to be approximately 50 gallons per minute (gpm). The design capacity of the groundwater treatment system is 100 gpm based upon data collected from comparable systems installed at other remedial sites operated/designed by ECS.

Influent Sample Analysis

Groundwater samples were collected from monitoring well MW-1 on December 23, 2013 and then again on April 6, 2016. These samples were submitted to Spectrum/Eurofins Analytical, Inc. of Agawam, Massachusetts under standard chain of custody protocol for analysis of total petroleum hydrocarbons (TPH) by EPA method 1664, volatile organic compounds (VOCs) by EPA Method 8260B, semi-volatile organic compounds (SVOCs) by EPA method 8270, PCBs by EPA method 8082, total metals by EPA Method 200.7, pH, and total suspended solids by SM2540D. Copies of the laboratory reports and chains of custody record are provided as Attachment II.

Appendix III of the 2010 RGP under NPDES sets the effluent limitations for treatment system discharges. Groundwater analytical results of the samples collected from MW-1 were compared to the Appendix III effluent limitations (www.epa.gov/region1/npdes/rgp.html). These results indicate that TSS, iron, and pH were detected in the samples at concentrations above the applicable EPA RGP Appendix III effluent limitations. Total suspended solids and total iron are expected to be reduced through pretreatment with the sedimentation/frac tank.

It should also be noted that dichlorodifluoromethane (Freon 12), a refrigerant and aerosol spray repellant was detected in the groundwater sample collected on December 23, 2013 at a trace detection (well below the applicable MassDEP Reportable Concentration). There is no known source or documented release of Freon 12 at the subject property. This constituent was not detected in the groundwater sample collected on April 6, 2016.

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

According to Massachusetts Geographic Information Systems (MassGIS) online maps for the Natural Heritage Endangered Species Program (NHESP) (2008), no Priority Habitat of Rare Species or Estimated Habitats of Rare Wildlife are located within the proposed at or immediately adjacent to the work zone area. The closest NHESP Estimated Habitats of Rare Wildlife in Wetland Areas Protected Open Spaces are located approximately 2,500 feet north of the Site. Given the fact there will be an on-site dewatering treatment system, the potential discharge will not have an adverse affect on the NHESP Estimated Habitats of Rare Wildlife. A copy of the MassGIS Resource Priority and NHESP Maps of the Site area is included in Attachment III.

Review of National Register of Historic Places

Listings of Historic Places within the Town of Walpole in the vicinity of the Site were obtained from the Massachusetts Cultural Resources Information System (MACRIS) online database at http://mhc-macris.net/towns.aspx (accessed April 14, 2016). Copies of the MACRIS report are provided as Attachment IV. The database indicated that there are no historic places located in close proximity to the Site and proposed discharge area. This project does not involve the demolition or rehabilitation of historic properties.

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

Sincerely,
ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Matthew J. Lyne
Senior Project Manager

cc: Matthew Young, Cumberland Farms, Inc., 100 Crossing Blvd, Framingham, MA 01702
Robert Kubit, MassDEP, Division of Watershed Management, 8 New Bond Street, Worcester, MA 01606
Town of Westminster Department of Public Works
Town of Westminster Conservation Commission

LIST OF ATTACHMENTS

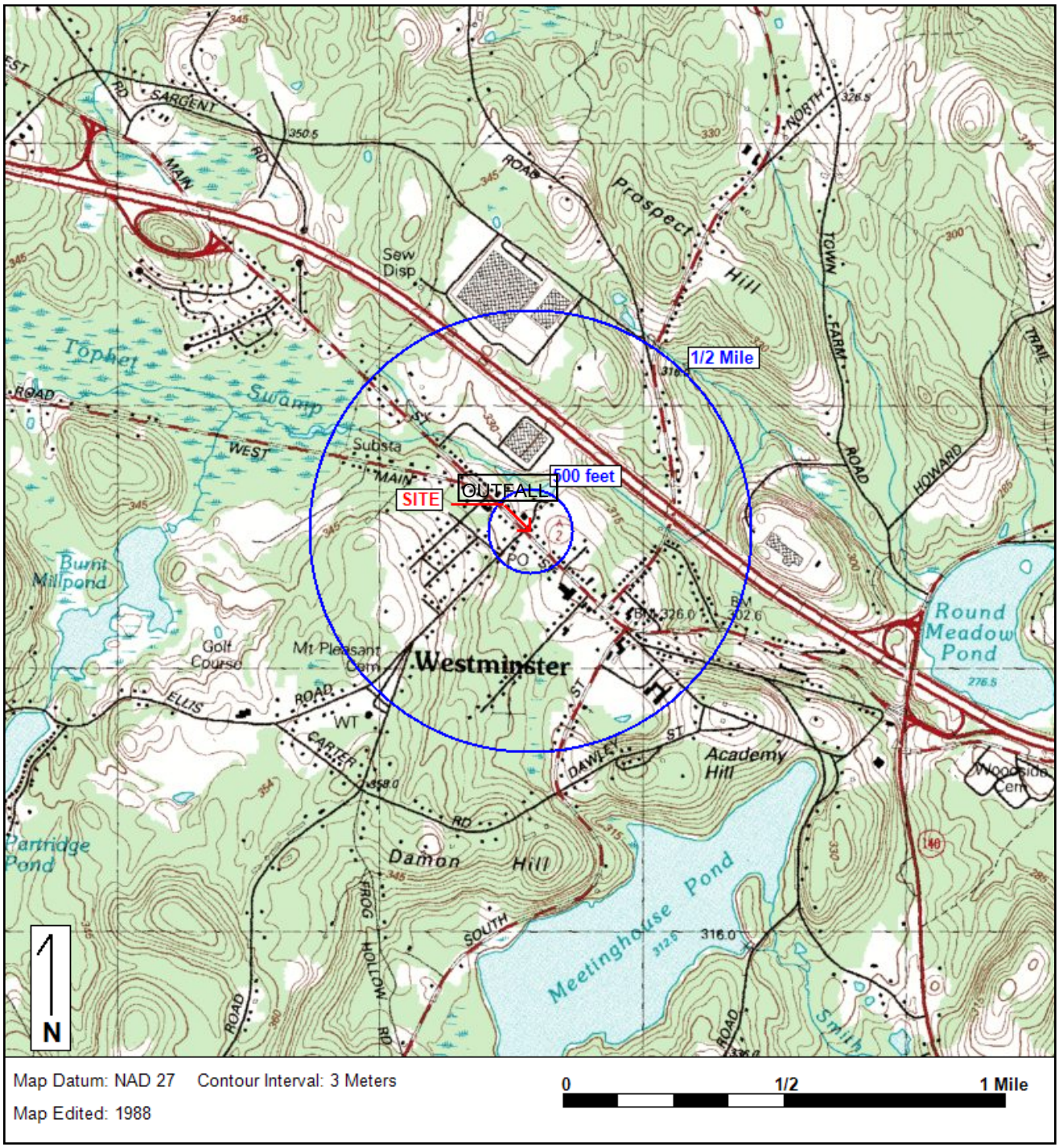
Figure 1: Site Locus
Figure 2: Site Plan
Attachment I: NOI for the DGP
Attachment II: Laboratory Analytical Reports and Chain of Custody Records
Attachment III: MassGIS Resource Priority & NHESP Maps
Attachment IV: MACRIS Database Search Results

FIGURES

Environmental Compliance Services, Inc.
997 Millbury Street, Unit G
Worcester, MA 01607
Phone 508.756.0151 Fax 508.757.7063
www.ecsconsult.com

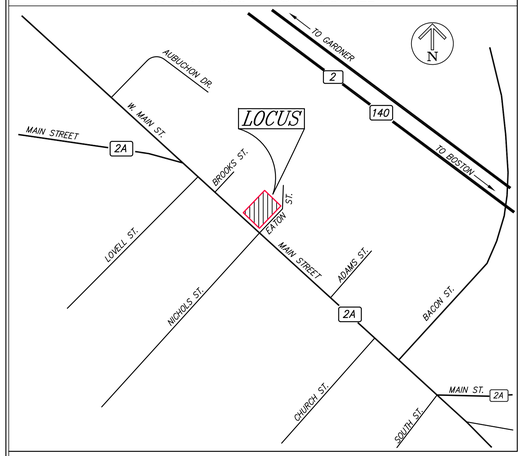
MA Acquistion Property-Westminster-72 Main St
68 Main Street
Westminster, MA 01473

Figure 1: SITE LOCUS



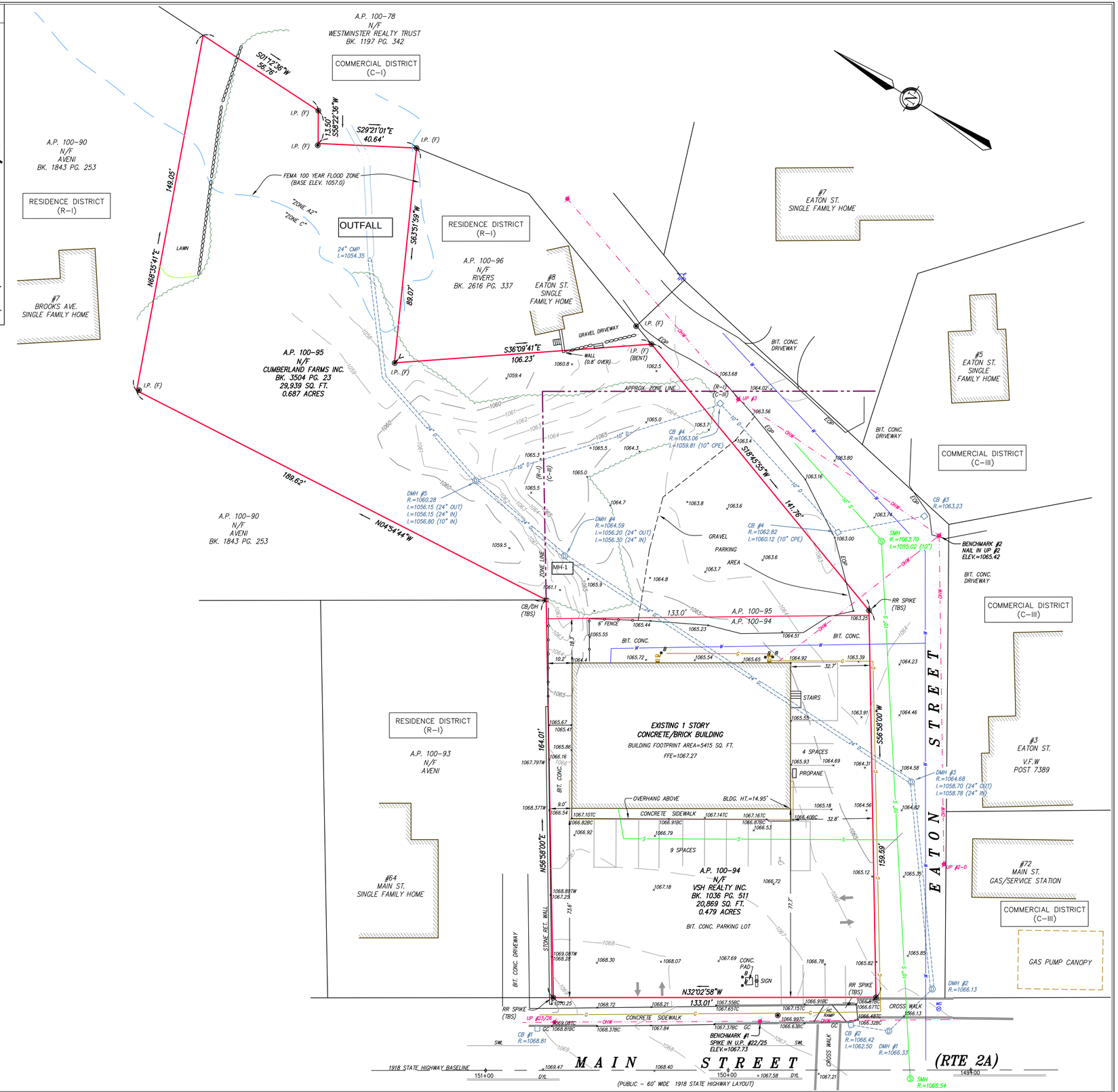
Base Map: U.S. Geological Survey; Quadrangle Location: Fitchburg, MA
Lat/Lon: 42 33' 7" NORTH, 71 55' 4" WEST - UTM Coordinates: 19 260619.22 EAST / 4714743.5 NORTH
Generated By: Rick Starodoj

VICINITY MAP ~ NOT TO SCALE



LEGEND

- EXISTING BUILDING
- DRAIN LINE/DRAIN MANHOLE
- GAS LINE/GAS VALVE
- OVERHEAD WIRES
- WATER LINE/WATER GATE
- SEWER LINE/SEWER MANHOLE
- FENCE
- EDGE OF WATER
- STONEWALL
- TREE LINE
- FLAGGED WETLAND LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- BOLLARD
- CATCH BASIN
- FIRE HYDRANT
- GAS METER
- I.P. IRON PIPE/IRON PIN
- LP LIGHT POLE
- UP UTILITY POLE
- SIGN
- A.P. ASSESSORS PARCEL
- BK. PG. DEED BOOK/PAGE
- BIT. CONC. BITUMINOUS CONCRETE
- DYL DOUBLE YELLOW LINE
- GC GRANITE CURB
- CONC. CONCRETE SURFACE
- C.L.F. CHAIN LINK FENCE
- EOP EDGE OF PAVEMENT
- (F) FOUND
- N/F NOW OR FORMERLY
- SWL SOLID WHITE LINE
- TBS TO BE SET



GENERAL NOTES

1. CURRENT OWNER OF RECORD:
   VSH REALTY INC. (ASSESSORS MAP 100 LOT 94)
   DEED REFERENCE: BOOK 1036 PAGE 511
   CUMBERLAND FARMS, INC. (ASSESSORS MAP 100 LOT 95)
   DEED REFERENCE: BOOK 3504 PAGE 23
   SITE ADDRESS: 68 MAIN STREET, WESTMINSTER, MA
   PLAN REFERENCE: PLAN BOOK 130 PAGE 3
2. THIS PLAN IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY ODONE SURVEY & MAPPING ON FEBRUARY 6, 2013. SURVEY BY TRIMBLE S6 TOTAL STATION.
3. WESTMINSTER ZONING DISTRICT:
   RESIDENTIAL 1 (R 1) & COMMERCIAL (CIII)
4. ELEVATIONS SHOWN BASED ON NGVD 1929.
5. UTILITY NOTE: LOCATION OF UTILITIES SHOWN HEREON WERE DETERMINED BY OBSERVATION OF ABOVE GROUND EVIDENCE TOGETHER WITH PLANS OF RECORD. THE RELATIONSHIP BETWEEN ACTUAL FIELD LOCATION AND LOCATION SHOWN HEREON MUST BE CONSIDERED APPROXIMATE. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES AND FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION AS INDICATED ON THIS PLAN.
   BEFORE CONSTRUCTION CALL "DIG SAFE"
   1-888-344-7233
6. FLOOD NOTE: BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE C AND PARTIALLY IN ZONE A2 OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 250347 0008 B, WHICH BEARS AN EFFECTIVE DATE OF JULY 19, 1982.

REVISIONS

4		
3		
2		
1		
DATE	DESCRIPTION	
GO/CAT/SG	GDO	GDO / GDO
FIELD	CALC	DRAWN / CHECK

PREPARED BY:

ODONE SURVEY & MAPPING

SURVEYING ~ MAPPING ~ PLANNING & CONSULTING

291 Main Street, Suite 5
Northborough, MA 01532
Tel.: 508-351-6022 Fax: 508-351-6633
web: www.osm-pc.com

EXISTING CONDITIONS PLAN

Cumberland FARMS

68 MAIN STREET (ROUTE-2A)
WESTMINSTER, MA 01473

STORE# 0006 - STATION# TBD - PROP V# 0153

CUMBERLAND FARMS INC.
100 CROSSING BOULEVARD
FRAMINGHAM, MA 01702

PREPARED FOR

CIVIL DESIGN GROUP, LLC

21 HIGH STREET, SUITE 305B
NORTH ANDOVER, MA 01845

SCALE: 1 INCH = 20 FEET

METERS 0 5 10 15
0 10 20 40 60 FEET

SHEET NO. 1 OF 1	DATE: FEBRUARY 20, 2013
	DWG FILE: 0653-01A
	PROJECT NO. 20130653.00

TABLES

Table 2
Summary of Groundwater Analytical Data
Cumberland Farms #0006/V0153
68 Main Street
Westminster, MA

	MW-1	MW-1	MassDEP Reportable Concentration: RCGW-1	MassDEP Reportable Concentration: RCGW-2	EPA RGP Discharge Limit
Sampling Date	12-23-13	4-6-16			
Depth to Groundwater (ft)	4.12	3.86			
TPH by EPA 8100M (mg/L)	< 1.1	< 1.1	0.2	5	5.0
VOCs by 8260 (µg/L)					
Benzene	< 1.0	< 1.0	5	1,000	NS
Toluene	< 1.0	< 1.0	1,000	40,000	100
Ethylbenzene	< 1.0	< 1.0	700	5,000	NS
Xylenes	< 1.0	< 1.0	3,000	3,000	NS
Naphthalene	< 1.0	< 1.0	140	700	NS
MTBE	< 1.0	< 1.0	70	5,000	NS
Tetracholorethylene (PCE)	< 1.0	< 1.0	5	50	NS
Trichloroethylene (TCE)	< 1.0	< 1.0	5	5	NS
Dichlorodifluoromethane (Freon 12)	2.23	< 1.0	10,000	100,000	NS
Bromodichloromethane	< 1.0	2.3	3	6	
Chloroform	< 1.0	10.7	50	50	
SVOCs by 8270 (µg/L)	NS	< 5.95	NS	NS	100
PCBs by 8082 (µg/L)	< 0.225	< 0.206	0.5	0.5	0.5
PP13 Metals (mg/L) by 6010					
Total Iron	1.54	0.261	NS	NS	1.0
Total Barium	NS	0.0436	2	50	NS
Total Zinc	NS	0.0061	0.9	0.9	0.066
pH	6.92	**6.07**	NS	NS	6.5-8.3
Total Suspended Solids (mg/L)	**52**	< 5.0	NS	NS	30/50
Total Dissolved Solids (mg/L)	NS	435	NS	NS	NS
Flashpoint	NS	> 150 F	NS	NS	NS
Reactivity	NS	< 25.0	NS	NS	NS

NOTES: NA = Not Analyzed. NS = No Standard
RCGW-1: Reportable Concentration for groundwater classified as RCGW-1, promulgated June 20, 2014. Site is classified as RCGW-2.

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ATTACHMENT I

II. Suggested Notice of Intent (NOI) Format

1. General facility information. Please provide the following information about the facility.

a) Name of facility: Cumberland Farms Store #0006	**Mailing Address for the Facility:** 100 Crossing Boulevard, Framingham, MA 01702	
b) Location Address of the Facility (if different from mailing address): 68 Main Street, Westminster, MA 01473	**Facility Location** **longitude:** 71.917666 **latitude:** 42.551833	**Type of Business:** Convenience Store **Facility SIC codes:** 5411

c) Name of facility owner: Cumberland Farms, Inc. **Owner's email:** myoung@cumberlandfarms.com

Owner's Tel #: (508) 270-1400 **Owner's Fax #:** (781) 459-0454

Address of owner (if different from facility address)

Owner is (check one): 1. Federal____ 2. State _____ 3. Private __✔__ 4. Other _____ (Describe)_____

Legal name of Operator, if not owner: Cumberland Farms, Inc.

Operator Contact Name: Matthew Young

Operator Tel Number: (508) 270-1400 **Fax Number:** (781) 459-0454

Operator's email: myoung@cumberlandfarms.com

Operator Address (if different from owner)

d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? __✔__

e) Check Yes or No for the following:

1. **Has a prior NPDES permit been granted for the discharge? Yes ____ No _✔_ If Yes, Permit Number: _____**
2. **Is the discharge a "new discharger" as defined by 40 CFR Section 122.2? Yes _✔_ No _____**
3. **Is the facility covered by an individual NPDES permit? Yes _____ No _✔_ If Yes, Permit Number ____**
4. **Is there a pending application on file with EPA for this discharge? Yes _____ No _✔_ If Yes, date of submittal:**

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

a) Name of receiving water into which discharge will occur: Tophet Swamp

State Water Quality Classification: Class B **Freshwater:** X **Marine Water:** _____

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

✔ **1. Construction dewatering of groundwater intrusion and/or storm water accumulation.**

☐ **2. Short-term or long-term dewatering of foundation sumps.**

☐ **3. Other.**

c) Number of outfalls 1

For each outfall:

d) Estimate the maximum daily and average monthly flow of the discharge (in gallons per day – GPD). Max Daily Flow 75,000 **GPD**
Average Monthly Flow 25,000 **GPD**

e.) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH 7 **Min pH** 6

f.) Identify the source of the discharge (i.e. potable water, surface water, or groundwater). If groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit. See attached lab report.

g.) What treatment does the wastewater receive prior to discharge? Well screen filter with filter stone. Solids settling through sedimentation tank/frac tank.

h.) Is the discharge continuous? Yes ☐ **No** ✔ **If no, is the discharge periodic (P) (occurs regularly, i.e., monthly or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B)** Intermittent for 1-2 months.
If (P), number of days or months per year of the discharge _____ **and the specific months of discharge** _____;
If (I), number of days/year there is a discharge 30
Is the discharge temporary? Yes ✔ **No** ☐
If yes, approximate start date of dewatering 5/9/16 **approximate end date of dewatering** 9/30/16

i.) Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long. 71.915555 **lat.** 42.548883 **; Outfall 2: long.**_____ **lat.**_____**; Outfall 3: long.**_____ **lat.**_____**.**

j.) If the source of the discharge is potable water, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water and attach any calculation sheets used to support stream flow and dilution calculations NA-Not Potable Water **cfs**
(See Appendix VII for equations and additional information)

MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):

k.) Does the discharge occur in an ACEC? Yes _____ No __✔__ See attached ACEC Map

If yes, provide the name of the ACEC: _____

3. Contaminant Information

a) Are any pH neutralization and/or dechlorination chemicals used in the discharge? If so, include the chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC_{50} in percent for aquatic organism(s)). No.

b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge. None.

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendix IV. In addition, respond to the following questions.

a) Which of the three eligibility criteria listed in Appendix IV, Criterion (A, B, or C) have you met? Criterion A

b) Please attach documentation with your NOI supporting your response. Please see Appendix IV for acceptable documentation See attached Phase I Site Assessment Map and MassGIS Map.

5. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

a) See Screening Process in Appendix III and respond to questions regarding your site and any historic properties listed or eligible for listing on the National Register of Historic Places. Question 1: Yes _____ No __✔__ ; Question 2: No __✔__ Yes _____ See attached MACRIS Map

b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No __✔__ If yes, attach the results of the consultation(s).

c) Which of the three National Historic Preservation Act eligibility criterion listed in Appendix III, Criterion (A, B, or C) have you met? Criterion A

d) Is the project located on property of religious or cultural significance to an Indian Tribe? Yes _____ or No __✔__ If yes, provide that name of the Indian Tribe associated with the property. _____

6. Supplemental Information: Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit See attached lab report

7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product or finished product; (4) if the discharge of dewatering subsequently mixes with other permitted wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharge; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) 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 Name: Cumberland Farms Store #0006

Operator signature:

Print Full Name and Title: Mark G. Howard Executive Vice President, Chief Legal and Administrative Officer, General Counsel and Secretary

Date:

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

ATTACHMENT II

Report Date:
31-Dec-13 11:05

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

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

Project: CFI #0006- Westminister, MA
Project #: 03-221324

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB82475-01	MW-1	Ground Water	23-Dec-13 12:15	23-Dec-13 15:35

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

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

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 18 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.	**Project #:** 03-221324
Project Location: CFI #0006- Westminister, MA	**RTN:**
This form provides certifications for the following data set: SB82475-01	
Matrices: Ground Water	

CAM Protocol

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

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

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

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

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

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

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

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

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

Nicole Leja
Laboratory Director
Date: 12/31/2013

CASE NARRATIVE:

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

The samples were received -0.3 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

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

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

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

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

Cancelled EPH Analysis Case Narrative:

Analysis for PCBs, TPH 1664 and EPH were requested for this work order, however only two amber liters were submitted. The sample was prepared for PCBs and TPH 1664 from the available volume. The EPH analysis has been cancelled due to insufficient volume.

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

SW846 8260C

Calibration:

1312093

Analyte quantified by quadratic equation type calibration.

1,1,2,2-Tetrachloroethane
1,1,2-Trichlorotrifluoroethane (Freon 113)
1,2,3-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dibromo-3-chloropropane
1,3,5-Trimethylbenzene
Bromoform
Carbon disulfide
Carbon tetrachloride
cis-1,3-Dichloropropene
Dibromochloromethane
Naphthalene
n-Butylbenzene
sec-Butylbenzene
tert-Butylbenzene
trans-1,3-Dichloropropene
trans-1,4-Dichloro-2-butene
Trichlorofluoromethane (Freon 11)
Vinyl chloride

SW846 8260C

Calibration:

1312093

This affected the following samples:

1331163-BLK1
1331163-BS1
1331163-BSD1
MW-1
S315780-CCV1
S315794-ICV1

Samples:

S315780-CCV1

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

Acetone (-21.2%)

This affected the following samples:

1331163-BLK1
1331163-BS1
1331163-BSD1
MW-1

Sample Acceptance Check Form

Client:	Environmental Compliance Services - Worcester, MA
Project:	CFI #0006- Westminister, MA / 03-221324
Work Order:	SB82475
Sample(s) received on:	12/23/2013
Received by:	Jessica Hoffman

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

	Yes	No	N/A
1. Were custody seals present?	☐	☑	☐
2. Were custody seals intact?	☐	☐	☑
3. Were samples received at a temperature of ≤ 6°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	Client Project #	Matrix	Collection Date/Time	Received
MW-1	03-221324	Ground Water	23-Dec-13 12:15	23-Dec-13
SB82475-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00		µg/l	1.00	0.65	1	SW846 8260C	28-Dec-13	28-Dec-13	GMA	1331163	
67-64-1	Acetone	< 10.0		µg/l	10.0	2.56	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.48	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	1.93	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	1.28	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	1.00	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	1.20	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.36	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)	**2.23**		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	0.83	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1.00		µg/l	1.00	0.77	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	0.87	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	0.36	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	0.95	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	< 10.0		µg/l	10.0	0.66	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	03-221324	Ground Water	23-Dec-13 12:15	23-Dec-13
SB82475-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5030 Water MS													
98-82-8	Isopropylbenzene	< 1.00		µg/l	1.00	0.62	1	SW846 8260C	28-Dec-13	28-Dec-13	GMA	1331163	
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	2.76	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 2.00		µg/l	2.00	0.95	1	"	"	"	"	"	
91-20-3	Naphthalene	< 1.00		µg/l	1.00	0.58	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	0.67	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.32	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	12.0	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-butene	< 5.00		µg/l	5.00	0.74	1	"	"	"	"	"	
64-17-5	Ethanol	< 400		µg/l	400	35.0	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*94*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*103*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GC													
Polychlorinated Biphenyls													
Prepared by method SW846 3510C													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1 SB82475-01	03-221324	Ground Water	23-Dec-13 12:15	23-Dec-13

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Polychlorinated Biphenyls													
Prepared by method SW846 3510C													
12674-11-2	Aroclor-1016	< 0.225		µg/l	0.225	0.0826	1	SW846 8082A	26-Dec-13	27-Dec-13	IMR	1330940	
11104-28-2	Aroclor-1221	< 0.225		µg/l	0.225	0.142	1	"	"	"	"	"	
11141-16-5	Aroclor-1232	< 0.225		µg/l	0.225	0.117	1	"	"	"	"	"	
53469-21-9	Aroclor-1242	< 0.225		µg/l	0.225	0.134	1	"	"	"	"	"	
12672-29-6	Aroclor-1248	< 0.225		µg/l	0.225	0.117	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 0.225		µg/l	0.225	0.147	1	"	"	"	"	"	
11096-82-5	Aroclor-1260	< 0.225		µg/l	0.225	0.123	1	"	"	"	"	"	
37324-23-5	Aroclor-1262	< 0.225		µg/l	0.225	0.155	1	"	"	"	"	"	
11100-14-4	Aroclor-1268	< 0.225		µg/l	0.225	0.0927	1	"	"	"	"	"	
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*90*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*100*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*105*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*105*			*30-150 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
	Non-polar material (SGT-HEM)	< 1.1		mg/l	1.1	0.6	1	EPA 1664B	26-Dec-13	29-Dec-13	JK	1330937	
Total Metals by EPA 200/6000 Series Methods													
	Preservation	**Lab Preserved**		N/A			1	EPA 200/6000 methods	24-Dec-13	24-Dec-13	LNB	1330897	
Total Metals by EPA 6000/7000 Series Methods													
7439-89-6	Iron	**1.54**		mg/l	0.0150	0.0074	1	SW846 6010C	27-Dec-13	27-Dec-13	tbc	1331053	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0020	1	"	"	"	"	"	
General Chemistry Parameters													
	Total Suspended Solids	**52.0**		mg/l	5.0	1.7	1	SM2540D	26-Dec-13	27-Dec-13	CMB	1330957	X

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1331163 - SW846 5030 Water MS										
Blank (1331163-BLK1)					Prepared & Analyzed: 28-Dec-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						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1331163 - SW846 5030 Water MS										
Blank (1331163-BLK1)						Prepared & Analyzed: 28-Dec-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	*46.8*		µg/l		*50.0*		*94*	*70-130*		
Surrogate: Toluene-d8	*50.5*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50.9*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*49.2*		µg/l		*50.0*		*98*	*70-130*		
LCS (1331163-BS1)						Prepared & Analyzed: 28-Dec-13				
1,1,2-Trichlorotrifluoroethane (Freon 113)	**19.9**		µg/l		20.0		99	70-130		
Acetone	**24.4**		µg/l		20.0		122	70-130		
Acrylonitrile	**19.7**		µg/l		20.0		98	70-130		
Benzene	**21.1**		µg/l		20.0		105	70-130		
Bromobenzene	**20.6**		µg/l		20.0		103	70-130		
Bromochloromethane	**19.5**		µg/l		20.0		98	70-130		
Bromodichloromethane	**21.9**		µg/l		20.0		110	70-130		
Bromoform	**22.5**		µg/l		20.0		112	70-130		
Bromomethane	**20.8**		µg/l		20.0		104	70-130		
2-Butanone (MEK)	**21.4**		µg/l		20.0		107	70-130		
n-Butylbenzene	**20.3**		µg/l		20.0		101	70-130		
sec-Butylbenzene	**20.2**		µg/l		20.0		101	70-130		
tert-Butylbenzene	**20.4**		µg/l		20.0		102	70-130		
Carbon disulfide	**20.3**		µg/l		20.0		102	70-130		
Carbon tetrachloride	**20.8**		µg/l		20.0		104	70-130		
Chlorobenzene	**20.7**		µg/l		20.0		104	70-130		
Chloroethane	**20.0**		µg/l		20.0		100	70-130		
Chloroform	**20.1**		µg/l		20.0		101	70-130		
Chloromethane	**19.7**		µg/l		20.0		99	70-130		
2-Chlorotoluene	**21.8**		µg/l		20.0		109	70-130		
4-Chlorotoluene	**22.2**		µg/l		20.0		111	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1331163 - SW846 5030 Water MS										
LCS (1331163-BS1)						Prepared & Analyzed: 28-Dec-13				
1,2-Dibromo-3-chloropropane	**21.9**		µg/l		20.0		110	70-130		
Dibromochloromethane	**21.1**		µg/l		20.0		106	70-130		
1,2-Dibromoethane (EDB)	**21.4**		µg/l		20.0		107	70-130		
Dibromomethane	**21.1**		µg/l		20.0		106	70-130		
1,2-Dichlorobenzene	**20.6**		µg/l		20.0		103	70-130		
1,3-Dichlorobenzene	**20.4**		µg/l		20.0		102	70-130		
1,4-Dichlorobenzene	**20.5**		µg/l		20.0		103	70-130		
Dichlorodifluoromethane (Freon12)	**21.1**		µg/l		20.0		106	70-130		
1,1-Dichloroethane	**21.1**		µg/l		20.0		105	70-130		
1,2-Dichloroethane	**19.9**		µg/l		20.0		100	70-130		
1,1-Dichloroethene	**21.0**		µg/l		20.0		105	70-130		
cis-1,2-Dichloroethene	**20.9**		µg/l		20.0		105	70-130		
trans-1,2-Dichloroethene	**21.0**		µg/l		20.0		105	70-130		
1,2-Dichloropropane	**20.2**		µg/l		20.0		101	70-130		
1,3-Dichloropropane	**20.3**		µg/l		20.0		101	70-130		
2,2-Dichloropropane	**25.0**		µg/l		20.0		125	70-130		
1,1-Dichloropropene	**22.0**		µg/l		20.0		110	70-130		
cis-1,3-Dichloropropene	**21.3**		µg/l		20.0		107	70-130		
trans-1,3-Dichloropropene	**22.1**		µg/l		20.0		111	70-130		
Ethylbenzene	**21.9**		µg/l		20.0		110	70-130		
Hexachlorobutadiene	**20.1**		µg/l		20.0		100	70-130		
2-Hexanone (MBK)	**18.9**		µg/l		20.0		95	70-130		
Isopropylbenzene	**22.3**		µg/l		20.0		111	70-130		
4-Isopropyltoluene	**22.4**		µg/l		20.0		112	70-130		
Methyl tert-butyl ether	**21.4**		µg/l		20.0		107	70-130		
4-Methyl-2-pentanone (MIBK)	**18.8**		µg/l		20.0		94	70-130		
Methylene chloride	**20.5**		µg/l		20.0		103	70-130		
Naphthalene	**20.2**		µg/l		20.0		101	70-130		
n-Propylbenzene	**22.5**		µg/l		20.0		113	70-130		
Styrene	**22.4**		µg/l		20.0		112	70-130		
1,1,1,2-Tetrachloroethane	**23.3**		µg/l		20.0		117	70-130		
1,1,2,2-Tetrachloroethane	**20.4**		µg/l		20.0		102	70-130		
Tetrachloroethene	**21.7**		µg/l		20.0		109	70-130		
Toluene	**20.8**		µg/l		20.0		104	70-130		
1,2,3-Trichlorobenzene	**22.4**		µg/l		20.0		112	70-130		
1,2,4-Trichlorobenzene	**22.1**		µg/l		20.0		111	70-130		
1,3,5-Trichlorobenzene	**21.2**		µg/l		20.0		106	70-130		
1,1,1-Trichloroethane	**22.6**		µg/l		20.0		113	70-130		
1,1,2-Trichloroethane	**19.9**		µg/l		20.0		100	70-130		
Trichloroethene	**20.2**		µg/l		20.0		101	70-130		
Trichlorofluoromethane (Freon 11)	**19.9**		µg/l		20.0		99	70-130		
1,2,3-Trichloropropane	**20.9**		µg/l		20.0		105	70-130		
1,2,4-Trimethylbenzene	**20.4**		µg/l		20.0		102	70-130		
1,3,5-Trimethylbenzene	**20.5**		µg/l		20.0		103	70-130		
Vinyl chloride	**20.0**		µg/l		20.0		100	70-130		
m,p-Xylene	**44.8**		µg/l		40.0		112	70-130		
o-Xylene	**22.7**		µg/l		20.0		114	70-130		
Tetrahydrofuran	**20.2**		µg/l		20.0		101	70-130		
Ethyl ether	**20.4**		µg/l		20.0		102	70-130		
Tert-amyl methyl ether	**18.6**		µg/l		20.0		93	70-130		
Ethyl tert-butyl ether	**22.0**		µg/l		20.0		110	70-130		
Di-isopropyl ether	**21.0**		µg/l		20.0		105	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1331163 - SW846 5030 Water MS										
LCS (1331163-BS1)						Prepared & Analyzed: 28-Dec-13				
Tert-Butanol / butyl alcohol	**202**		µg/l		200		101	70-130		
1,4-Dioxane	**211**		µg/l		200		105	70-130		
trans-1,4-Dichloro-2-butene	**21.3**		µg/l		20.0		107	70-130		
Ethanol	**382**		µg/l		400		95	70-130		
Surrogate: 4-Bromofluorobenzene	*51.5*		µg/l		*50.0*		*103*	*70-130*		
Surrogate: Toluene-d8	*49.9*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.0*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: Dibromofluoromethane	*50.4*		µg/l		*50.0*		*101*	*70-130*		
LCS Dup (1331163-BSD1)						Prepared & Analyzed: 28-Dec-13				
1,1,2-Trichlorotrifluoroethane (Freon 113)	**18.7**		µg/l		20.0		93	70-130	6	20
Acetone	**24.8**		µg/l		20.0		124	70-130	2	20
Acrylonitrile	**20.4**		µg/l		20.0		102	70-130	4	20
Benzene	**20.0**		µg/l		20.0		100	70-130	5	20
Bromobenzene	**20.0**		µg/l		20.0		100	70-130	3	20
Bromochloromethane	**19.0**		µg/l		20.0		95	70-130	3	20
Bromodichloromethane	**21.0**		µg/l		20.0		105	70-130	4	20
Bromoform	**21.8**		µg/l		20.0		109	70-130	3	20
Bromomethane	**20.0**		µg/l		20.0		100	70-130	4	20
2-Butanone (MEK)	**22.7**		µg/l		20.0		113	70-130	5	20
n-Butylbenzene	**18.9**		µg/l		20.0		95	70-130	7	20
sec-Butylbenzene	**19.0**		µg/l		20.0		95	70-130	6	20
tert-Butylbenzene	**18.8**		µg/l		20.0		94	70-130	8	20
Carbon disulfide	**18.8**		µg/l		20.0		94	70-130	8	20
Carbon tetrachloride	**19.5**		µg/l		20.0		98	70-130	6	20
Chlorobenzene	**19.3**		µg/l		20.0		97	70-130	7	20
Chloroethane	**19.2**		µg/l		20.0		96	70-130	4	20
Chloroform	**19.3**		µg/l		20.0		96	70-130	4	20
Chloromethane	**18.6**		µg/l		20.0		93	70-130	6	20
2-Chlorotoluene	**20.2**		µg/l		20.0		101	70-130	8	20
4-Chlorotoluene	**20.6**		µg/l		20.0		103	70-130	8	20
1,2-Dibromo-3-chloropropane	**21.8**		µg/l		20.0		109	70-130	0.7	20
Dibromochloromethane	**20.6**		µg/l		20.0		103	70-130	3	20
1,2-Dibromoethane (EDB)	**20.7**		µg/l		20.0		104	70-130	3	20
Dibromomethane	**20.0**		µg/l		20.0		100	70-130	6	20
1,2-Dichlorobenzene	**19.7**		µg/l		20.0		98	70-130	4	20
1,3-Dichlorobenzene	**20.2**		µg/l		20.0		101	70-130	0.6	20
1,4-Dichlorobenzene	**18.5**		µg/l		20.0		93	70-130	10	20
Dichlorodifluoromethane (Freon12)	**19.5**		µg/l		20.0		97	70-130	8	20
1,1-Dichloroethane	**19.9**		µg/l		20.0		100	70-130	6	20
1,2-Dichloroethane	**19.7**		µg/l		20.0		98	70-130	1	20
1,1-Dichloroethene	**19.8**		µg/l		20.0		99	70-130	6	20
cis-1,2-Dichloroethene	**20.1**		µg/l		20.0		100	70-130	4	20
trans-1,2-Dichloroethene	**20.2**		µg/l		20.0		101	70-130	4	20
1,2-Dichloropropane	**19.5**		µg/l		20.0		98	70-130	4	20
1,3-Dichloropropane	**20.2**		µg/l		20.0		101	70-130	0.5	20
2,2-Dichloropropane	**23.0**		µg/l		20.0		115	70-130	9	20
1,1-Dichloropropene	**20.4**		µg/l		20.0		102	70-130	7	20
cis-1,3-Dichloropropene	**20.8**		µg/l		20.0		104	70-130	3	20
trans-1,3-Dichloropropene	**21.4**		µg/l		20.0		107	70-130	3	20
Ethylbenzene	**20.4**		µg/l		20.0		102	70-130	7	20
Hexachlorobutadiene	**19.7**		µg/l		20.0		98	70-130	2	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1331163 - SW846 5030 Water MS										
LCS Dup (1331163-BSD1)					Prepared & Analyzed: 28-Dec-13					
2-Hexanone (MBK)	**19.0**		µg/l		20.0		95	70-130	0.3	20
Isopropylbenzene	**20.8**		µg/l		20.0		104	70-130	7	20
4-Isopropyltoluene	**21.0**		µg/l		20.0		105	70-130	6	20
Methyl tert-butyl ether	**20.6**		µg/l		20.0		103	70-130	4	20
4-Methyl-2-pentanone (MIBK)	**20.0**		µg/l		20.0		100	70-130	6	20
Methylene chloride	**19.8**		µg/l		20.0		99	70-130	4	20
Naphthalene	**20.0**		µg/l		20.0		100	70-130	0.8	20
n-Propylbenzene	**20.9**		µg/l		20.0		104	70-130	8	20
Styrene	**20.8**		µg/l		20.0		104	70-130	8	20
1,1,1,2-Tetrachloroethane	**21.9**		µg/l		20.0		110	70-130	6	20
1,1,2,2-Tetrachloroethane	**20.3**		µg/l		20.0		102	70-130	0.2	20
Tetrachloroethene	**20.0**		µg/l		20.0		100	70-130	8	20
Toluene	**19.7**		µg/l		20.0		99	70-130	5	20
1,2,3-Trichlorobenzene	**21.6**		µg/l		20.0		108	70-130	4	20
1,2,4-Trichlorobenzene	**20.9**		µg/l		20.0		105	70-130	6	20
1,3,5-Trichlorobenzene	**20.0**		µg/l		20.0		100	70-130	6	20
1,1,1-Trichloroethane	**21.4**		µg/l		20.0		107	70-130	6	20
1,1,2-Trichloroethane	**20.3**		µg/l		20.0		101	70-130	2	20
Trichloroethene	**19.2**		µg/l		20.0		96	70-130	5	20
Trichlorofluoromethane (Freon 11)	**18.9**		µg/l		20.0		95	70-130	5	20
1,2,3-Trichloropropane	**20.4**		µg/l		20.0		102	70-130	2	20
1,2,4-Trimethylbenzene	**19.1**		µg/l		20.0		96	70-130	7	20
1,3,5-Trimethylbenzene	**18.9**		µg/l		20.0		95	70-130	8	20
Vinyl chloride	**18.2**		µg/l		20.0		91	70-130	9	20
m,p-Xylene	**41.7**		µg/l		40.0		104	70-130	7	20
o-Xylene	**21.2**		µg/l		20.0		106	70-130	7	20
Tetrahydrofuran	**19.6**		µg/l		20.0		98	70-130	3	20
Ethyl ether	**19.9**		µg/l		20.0		99	70-130	3	20
Tert-amyl methyl ether	**17.8**		µg/l		20.0		89	70-130	4	20
Ethyl tert-butyl ether	**21.4**		µg/l		20.0		107	70-130	3	20
Di-isopropyl ether	**20.2**		µg/l		20.0		101	70-130	4	20
Tert-Butanol / butyl alcohol	**199**		µg/l		200		100	70-130	1	20
1,4-Dioxane	**207**		µg/l		200		103	70-130	2	20
trans-1,4-Dichloro-2-butene	**19.5**		µg/l		20.0		97	70-130	9	20
Ethanol	**378**		µg/l		400		95	70-130	1	20
Surrogate: 4-Bromofluorobenzene	*50.2*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: Toluene-d8	*50.3*		µg/l		*50.0*		*101*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.7*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*50.6*		µg/l		*50.0*		*101*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1330940 - SW846 3510C										
Blank (1330940-BLK1)					Prepared: 26-Dec-13 Analyzed: 27-Dec-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)	*0.160*		µg/l		*0.200*		*80*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.180*		µg/l		*0.200*		*90*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.180*		µg/l		*0.200*		*90*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.130*		µg/l		*0.200*		*65*	*30-150*		
LCS (1330940-BS1)					Prepared: 26-Dec-13 Analyzed: 27-Dec-13					
Aroclor-1016	**2.20**		µg/l	0.200	2.50		88	40-140		
Aroclor-1016 [2C]	**2.23**		µg/l	0.200	2.50		89	40-140		
Aroclor-1260	**2.19**		µg/l	0.200	2.50		88	40-140		
Aroclor-1260 [2C]	**1.92**		µg/l	0.200	2.50		77	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.180*		µg/l		*0.200*		*90*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.200*		µg/l		*0.200*		*100*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.210*		µg/l		*0.200*		*105*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.160*		µg/l		*0.200*		*80*	*30-150*		
LCS Dup (1330940-BSD1)					Prepared: 26-Dec-13 Analyzed: 27-Dec-13					
Aroclor-1016	**2.19**		µg/l	0.200	2.50		88	40-140	0.5	20
Aroclor-1016 [2C]	**2.23**		µg/l	0.200	2.50		89	40-140	0	20
Aroclor-1260	**2.19**		µg/l	0.200	2.50		88	40-140	0	20
Aroclor-1260 [2C]	**1.98**		µg/l	0.200	2.50		79	40-140	3	20
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)	*0.200*		µg/l		*0.200*		*100*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.160*		µg/l		*0.200*		*80*	*30-150*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1330937 - SW846 3510C										
Blank (1330937-BLK1)						Prepared: 26-Dec-13 Analyzed: 29-Dec-13				
Non-polar material (SGT-HEM)	< 1.0		mg/l	1.0						
LCS (1330937-BS1)						Prepared: 26-Dec-13 Analyzed: 29-Dec-13				
Non-polar material (SGT-HEM)	**42.5**		mg/l	1.0	49.2		86	83-101		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1331053 - SW846 3005A										
Blank (1331053-BLK1)					Prepared & Analyzed: 27-Dec-13					
Iron	< 0.0150		mg/l	0.0150						
Lead	< 0.0075		mg/l	0.0075						
LCS (1331053-BS1)					Prepared & Analyzed: 27-Dec-13					
Iron	**1.31**		mg/l	0.0150	1.25		105	85-115		
Lead	**1.22**		mg/l	0.0075	1.25		97	85-115		
LCS Dup (1331053-BSD1)					Prepared & Analyzed: 27-Dec-13					
Iron	**1.31**		mg/l	0.0150	1.25		105	85-115	0	20
Lead	**1.21**		mg/l	0.0075	1.25		97	85-115	0.7	20
Duplicate (1331053-DUP1)			**Source: SB82475-01**		Prepared & Analyzed: 27-Dec-13					
Iron	**1.69**		mg/l	0.0150		1.54			9	20
Lead	**0.0029**	J	mg/l	0.0075		0.0030			3	20
Matrix Spike (1331053-MS1)			**Source: SB82475-01**		Prepared & Analyzed: 27-Dec-13					
Iron	**2.99**		mg/l	0.0150	1.25	1.54	116	75-125		
Lead	**1.20**		mg/l	0.0075	1.25	0.0030	95	75-125		
Matrix Spike Dup (1331053-MSD1)			**Source: SB82475-01**		Prepared & Analyzed: 27-Dec-13					
Iron	**2.87**		mg/l	0.0150	1.25	1.54	106	75-125	4	20
Lead	**1.18**		mg/l	0.0075	1.25	0.0030	94	75-125	2	20
Post Spike (1331053-PS1)			**Source: SB82475-01**		Prepared & Analyzed: 27-Dec-13					
Iron	**3.00**		mg/l	0.0150	1.25	1.54	116	80-120		
Lead	**1.17**		mg/l	0.0075	1.25	0.0030	94	80-120		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1330957 - General Preparation										
Blank (1330957-BLK1)						Prepared: 26-Dec-13 Analyzed: 27-Dec-13				
Total Suspended Solids	< 5.0		mg/l	5.0						
LCS (1330957-BS1)						Prepared: 26-Dec-13 Analyzed: 27-Dec-13				
Total Suspended Solids	**94.0**		mg/l	10.0	100		94	90-110		

Notes and Definitions

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).

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:
Kimberly Wisk

SB 82475 GH

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 5 days
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: ECS
Worcester, Ma

Telephone #: 508-756-6151
Project Mgr. Matt Lyne

Invoice To: CFI
Framingham, Ma

P.O. No.: 48761 RQN:

Project No.: 03-221324
Site Name: CFI #0006
Location: 68 Main St Westminster State: Ma
Sampler(s): N. Holmes

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= Deionized Water 10=H_3PO_4 11=_____ 12=_____

List preservative code below: 2 | 2 | | | | | 3 |

QA/QC Reporting Notes:
* additional charges may apply

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: VOC's 8260	TPH by 1664 SG	TSS	Total Lead	Total Iron	PCB's	EPH	
SB82475-01	MW-1	12/23/13	12:15	G	GW	3	2		2	X	X	X	X	X	X	X	

MA DEP MCP CAM Report: Yes ☒ No ☐
CT DPH RCP Report: Yes ☐ No ☐

QA/QC Reporting Level
☒ Standard ☐ No QC ☐ DQA*
☐ NY ASP A* ☐ NY ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ TIER II* ☐ TIER IV*
☐ Other

State-specific reporting standards:

0.7 / 1 / 0.3 IR 01
GH 12/23

Relinquished by:	Received by:	Date:	Time:	Temp°C
		12-23-13	1330	
	GH	12/23/13	1535	

☐ EDD Format
☒ E-mail to mlyne@ecsconsult.com

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

SB 82475 JH

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 5 days
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: ECS
Worcester, Ma

Telephone #: 508-756-6157
Project Mgr. Matt Lyne

Invoice To: CFI
Framingham, Ma

P.O. No.: 48761 RQN:

Project No.: 03-221324
Site Name: CFI #0006
Location: 68 Main St Westminster State: Ma
Sampler(s): N. Holmes

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	List preservative code below:							Analyses: VOC's 8260	TPH by 1664 SG	TSS	Total Lead	Total Iron	PCB's	EPH *
										2	2					2							
SB82475-01	MW-1	12/23/13	12:15	G	GW	3	2		2								x	x	x	x	x	x	x

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report: Yes☑ No☐
CT DPH RCP Report: Yes☐ No☐

QA/QC Reporting Level
☑ Standard ☐ No QC ☐ DQA*
☐ NY ASP A* ☐ NY ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ TIER II* ☐ TIER IV*
☐ Other

State-specific reporting standards:

*Cancelled, NO additional sample for the EPH analysis per email 12/27 KC.

0.7 / 1 / 0.3 IR 01
JH 12/23

Relinquished by:	Received by:	Date:	Time:	Temp°C
Tim Fitz	JH	12-23-13	1330	
		12/23/13	1535	

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

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

eurofins | Spectrum Analytical

☐ Final Report
☐ Re-Issued Report
☑ Revised Report

Report Date:
15-Apr-16 15:20

Laboratory Report

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

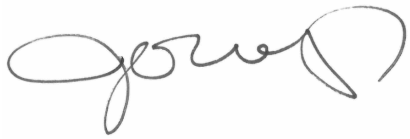
Project: CFI - Westminster, MA
Project #: 03-221324

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC19886-01	MW-1	Ground Water	06-Apr-16 09:45	07-Apr-16 14:24

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

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00098
USDA # S-51435

Authorized by:



June O'Connor
Laboratory Director

Eurofins 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 35 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc.	**Project #:** 03-221324
Project Location: CFI - Westminster, MA	**RTN:**
This form provides certifications for the following data set: SC19886-01	
Matrices: Ground Water	

CAM Protocol

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

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

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

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

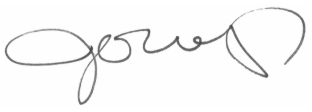
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	✓ Yes	No

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

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

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

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



June O'Connor
Laboratory Director
Date: 4/15/2016

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 1.3 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

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

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

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

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

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

Reactivity (40 CFR 261.23) Case Narrative:

These samples do not exhibit the characteristics of reactivity as defined in 40 CFR 261.23, sections (1), (2) and (4); however, Eurofins Spectrum Analytical, Inc. does not test for detonation, explosive reaction or potential, or forbidden explosives as defined in 40 CFR 261.23, sections (3), (6), (7) and (8).

Reactive sulfide and cyanide are tested at a pH of 2 and not tested at all conditions between pH 2 and12.5 as stated in 40 CFR 261.23, section (5); thus reactive cyanide and sulfide results as reported in this document can not be used to support the nonreactive properties of these samples.

The responsibility falls on the generator to use knowledge of the waste to determine if the waste meets or does not meet the descriptive, prose definition of reactivity.

April 15, 2016 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:

SC19886-01 *MW-1*

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

Chloride

SW846 6010C

Duplicates:

SW846 6010C

Duplicates:

1605811-DUP1 *Source: SC19886-01*

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

SW846 8260C

Calibration:

1603046

Analyte quantified by quadratic equation type calibration.

1,1-Dichloropropene
1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dibromo-3-chloropropane
1,3,5-Trimethylbenzene
1,4-Dioxane
2-Butanone (MEK)
2-Hexanone (MBK)
4-Chlorotoluene
4-Isopropyltoluene
4-Methyl-2-pentanone (MIBK)
Bromoform
Carbon tetrachloride
cis-1,3-Dichloropropene
Ethylbenzene
Isopropylbenzene
m,p-Xylene
Naphthalene
n-Butylbenzene
n-Propylbenzene
o-Xylene
sec-Butylbenzene
Styrene
tert-Butylbenzene
trans-1,3-Dichloropropene

This affected the following samples:

1605843-BLK1
1605843-BS1
1605843-BSD1
MW-1
S602442-ICV1
S602832-CCV1

S602442-ICV1

Analyte percent recovery is outside individual acceptance criteria.

2-Chlorotoluene (131%)

SW846 8260C

Calibration:

S602442-ICV1

This affected the following samples:

1605843-BLK1
1605843-BS1
1605843-BSD1
MW-1
S602832-CCV1

Laboratory Control Samples:

1605843 BS/BSD

2,2-Dichloropropane percent recoveries (153/148) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

MW-1

Samples:

S602832-CCV1

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

1,1,1,2-Tetrachloroethane (25.5%)
1,1,1-Trichloroethane (30.6%)
2,2-Dichloropropane (56.0%)
2-Chlorotoluene (26.4%)
Dibromochloromethane (25.4%)
Trichlorofluoromethane (Freon 11) (28.8%)

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

Bromoform (25.9%)
Carbon tetrachloride (27.6%)

This affected the following samples:

1605843-BLK1
1605843-BS1
1605843-BSD1
MW-1

SW846 8270D

Calibration:

1602028

Analyte quantified by quadratic equation type calibration.

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

This affected the following samples:

1605782-BLK1
1605782-BS1
1605782-BSD1
MW-1
S601180-ICV1
S602948-CCV1

SW846 8270D

Laboratory Control Samples:

1605782 BS/BSD

4-Nitrophenol percent recoveries (143/147) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

MW-1

Benzoic acid percent recoveries (20/22) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Pyridine percent recoveries (26/35) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

1605782 BSD

Pyridine RPD 27% (20%) is outside individual acceptance criteria.

Samples:

S602948-CCV1

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

1,2-Dichlorobenzene (-21.2%)
2,4,5-Trichlorophenol (23.8%)
2,4,6-Trichlorophenol (20.6%)
2,6-Dinitrotoluene (23.4%)
2-Nitroaniline (27.4%)
4-Nitroaniline (26.7%)
4-Nitrophenol (156%)
Indeno (1,2,3-cd) pyrene (25.9%)
Pyridine (-22.7%)

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

2,4-Dinitrophenol (28.2%)
Benzoic acid (24.2%)

This affected the following samples:

1605782-BLK1
1605782-BS1
1605782-BSD1
MW-1

Sample Acceptance Check Form

Client:	Environmental Compliance Services - Worcester, MA
Project:	CFI - Westminster, MA / 03-221324
Work Order:	SC19886
Sample(s) received on:	4/7/2016

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

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

Summary of Hits

Lab ID: SC19886-01 **Client ID:** MW-1

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Chloride	212	D, GS1	9.00	mg/l	EPA 300.0
Hardness	51.7		0.291	mg/l CaCO3	SM 2340B
Total Dissolved Solids	435		5	mg/l	SM2540C
Barium	0.0436		0.0050	mg/l	SW846 6010C
Barium (dissolved)	0.0418		0.0050	mg/l	SW846 6010C
Calcium	16.8		0.100	mg/l	SW846 6010C
Iron	0.261		0.0150	mg/l	SW846 6010C
Magnesium	2.35		0.0100	mg/l	SW846 6010C
Zinc	0.0061		0.0050	mg/l	SW846 6010C
Zinc (dissolved)	0.0056		0.0050	mg/l	SW846 6010C
Bromodichloromethane	2.3		0.5	µg/l	SW846 8260C
Chloroform	10.7		1.0	µg/l	SW846 8260C

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

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	03-221324	Ground Water	06-Apr-16 09:45	07-Apr-16
SC19886-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.0		µg/l	1.0	0.9	1	SW846 8260C	08-Apr-16	08-Apr-16	GMA	1605843	
67-64-1	Acetone	< 10.0		µg/l	10.0	3.4	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.5		µg/l	0.5	0.4	1	"	"	"	"	"	
71-43-2	Benzene	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	2.3		µg/l	0.5	0.2	1	"	"	"	"	"	
75-25-2	Bromoform	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
74-83-9	Bromomethane	< 2.0		µg/l	2.0	0.6	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 10.0		µg/l	10.0	1.2	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 2.0		µg/l	2.0	0.3	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 1.0		µg/l	1.0	0.6	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 2.0		µg/l	2.0	0.5	1	"	"	"	"	"	
67-66-3	Chloroform	10.7		µg/l	1.0	0.4	1	"	"	"	"	"	
74-87-3	Chloromethane	< 2.0		µg/l	2.0	0.4	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 1.0		µg/l	1.0	0.3	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	0.9	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.5		µg/l	0.5	0.2	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	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.0		µg/l	2.0	0.8	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	0.4	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.3	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	0.7	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	0.3	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	0.2	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	1.2	1	"	"	"	"	"	

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

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	03-221324	Ground Water	06-Apr-16 09:45	07-Apr-16
SC19886-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5030 Water MS													
98-82-8	Isopropylbenzene	< 1.0		µg/l	1.0	0.3	1	SW846 8260C	08-Apr-16	08-Apr-16	GMA	1605843	
99-87-6	4-Isopropyltoluene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0	0.9	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 2.0		µg/l	2.0	0.8	1	"	"	"	"	"	
91-20-3	Naphthalene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 1.0		µg/l	1.0	0.3	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	0.6	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.5		µg/l	0.5	0.3	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	0.5	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	0.3	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1.0		µg/l	1.0	0.2	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	0.6	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	0.2	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 2.0		µg/l	2.0	0.3	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 2.0		µg/l	2.0	0.9	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	6.0	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	12.7	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-butene	< 5.0		µg/l	5.0	3.1	1	"	"	"	"	"	
64-17-5	Ethanol	< 400		µg/l	400	23.6	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*89*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*96*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*119*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*113*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3510C													
83-32-9	Acenaphthene	< 5.95		µg/l	5.95	1.40	1	SW846 8270D	08-Apr-16	12-Apr-16	NAA	1605782	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	03-221324	Ground Water	06-Apr-16 09:45	07-Apr-16
SC19886-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3510C													
208-96-8	Acenaphthylene	< 5.95		µg/l	5.95	1.30	1	SW846 8270D	08-Apr-16	12-Apr-16	NAA	1605782	
62-53-3	Aniline	< 5.95		µg/l	5.95	1.68	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.95		µg/l	5.95	1.38	1	"	"	"	"	"	
103-33-3	Azobenzene/Diphenyldiazene	< 5.95		µg/l	5.95	1.23	1	"	"	"	"	"	
92-87-5	Benzidine	< 5.95		µg/l	5.95	3.40	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 5.95		µg/l	5.95	1.35	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.95		µg/l	5.95	1.20	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.95		µg/l	5.95	1.21	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.95		µg/l	5.95	1.58	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.95		µg/l	5.95	1.61	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 5.95		µg/l	5.95	2.37	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 5.95		µg/l	5.95	2.07	1	"	"	"	"	"	
111-91-1	Bis(2-chloroethoxy)methane	< 5.95		µg/l	5.95	1.18	1	"	"	"	"	"	
111-44-4	Bis(2-chloroethyl)ether	< 5.95		µg/l	5.95	1.33	1	"	"	"	"	"	
108-60-1	Bis(2-chloroisopropyl)ether	< 5.95		µg/l	5.95	1.43	1	"	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	< 5.95		µg/l	5.95	1.67	1	"	"	"	"	"	
101-55-3	4-Bromophenyl phenyl ether	< 5.95		µg/l	5.95	1.40	1	"	"	"	"	"	
85-68-7	Butyl benzyl phthalate	< 5.95		µg/l	5.95	1.57	1	"	"	"	"	"	
86-74-8	Carbazole	< 5.95		µg/l	5.95	1.48	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 5.95		µg/l	5.95	1.46	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 5.95		µg/l	5.95	1.56	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 5.95		µg/l	5.95	1.42	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 5.95		µg/l	5.95	1.50	1	"	"	"	"	"	
7005-72-3	4-Chlorophenyl phenyl ether	< 5.95		µg/l	5.95	1.37	1	"	"	"	"	"	
218-01-9	Chrysene	< 5.95		µg/l	5.95	1.24	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.95		µg/l	5.95	1.42	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 5.95		µg/l	5.95	1.29	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5.95		µg/l	5.95	1.89	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5.95		µg/l	5.95	1.43	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5.95		µg/l	5.95	1.35	1	"	"	"	"	"	
91-94-1	3,3´-Dichlorobenzidine	< 5.95		µg/l	5.95	1.85	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 5.95		µg/l	5.95	1.44	1	"	"	"	"	"	
84-66-2	Diethyl phthalate	< 5.95		µg/l	5.95	1.81	1	"	"	"	"	"	
131-11-3	Dimethyl phthalate	< 5.95		µg/l	5.95	1.76	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 5.95		µg/l	5.95	1.68	1	"	"	"	"	"	
84-74-2	Di-n-butyl phthalate	< 5.95		µg/l	5.95	1.32	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 5.95		µg/l	5.95	2.23	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 5.95		µg/l	5.95	2.56	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 5.95		µg/l	5.95	2.18	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 5.95		µg/l	5.95	1.95	1	"	"	"	"	"	
117-84-0	Di-n-octyl phthalate	< 5.95		µg/l	5.95	1.51	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	03-221324	Ground Water	06-Apr-16 09:45	07-Apr-16
SC19886-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3510C													
206-44-0	Fluoranthene	< 5.95		µg/l	5.95	1.42	1	SW846 8270D	08-Apr-16	12-Apr-16	NAA	1605782	
86-73-7	Fluorene	< 5.95		µg/l	5.95	1.42	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 5.95		µg/l	5.95	1.25	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5.95		µg/l	5.95	1.40	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	< 5.95		µg/l	5.95	2.48	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 5.95		µg/l	5.95	1.80	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.95		µg/l	5.95	1.54	1	"	"	"	"	"	
78-59-1	Isophorone	< 5.95		µg/l	5.95	1.26	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.95		µg/l	5.95	1.44	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 5.95		µg/l	5.95	1.73	1	"	"	"	"	"	
108-39-4, 106-44-5	3 & 4-Methylphenol	< 11.9		µg/l	11.9	1.73	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.95		µg/l	5.95	1.25	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 5.95		µg/l	5.95	1.65	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 5.95		µg/l	5.95	1.83	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 5.95		µg/l	5.95	2.55	1	"	"	"	"	"	
98-95-3	Nitrobenzene	< 5.95		µg/l	5.95	1.21	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 5.95		µg/l	5.95	1.73	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 23.8		µg/l	23.8	3.48	1	"	"	"	"	"	
62-75-9	N-Nitrosodimethylamine	< 5.95		µg/l	5.95	1.64	1	"	"	"	"	"	
621-64-7	N-Nitrosodi-n-propylamine	< 5.95		µg/l	5.95	1.56	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 5.95		µg/l	5.95	1.74	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 23.8		µg/l	23.8	2.23	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.95		µg/l	5.95	1.48	1	"	"	"	"	"	
108-95-2	Phenol	< 5.95		µg/l	5.95	1.17	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.95		µg/l	5.95	1.70	1	"	"	"	"	"	
110-86-1	Pyridine	< 5.95		µg/l	5.95	1.83	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5.95		µg/l	5.95	1.51	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 5.95		µg/l	5.95	1.30	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 5.95		µg/l	5.95	1.42	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 5.95		µg/l	5.95	1.29	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 5.95		µg/l	5.95	1.52	1	"	"	"	"	"	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 5.95		µg/l	5.95	1.24	1	"	"	"	"	"	
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*72*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*49*			*15-110 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*71*			*30-130 %*			"	"	"	"	"	
4165-62-2	*Phenol-d5*	*33*			*15-110 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*61*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*82*			*15-110 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GC													
Polychlorinated Biphenyls Prepared by method SW846 3510C													
12674-11-2	Aroclor-1016	< 0.206		µg/l	0.206	0.0741	1	SW846 8082A	11-Apr-16	11-Apr-16	TNS	1605945	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1 SC19886-01	03-221324	Ground Water	06-Apr-16 09:45	07-Apr-16

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Polychlorinated Biphenyls Prepared by method SW846 3510C													
11104-28-2	Aroclor-1221	< 0.206		µg/l	0.206	0.100	1	SW846 8082A	11-Apr-16	11-Apr-16	TNS	1605945	
11141-16-5	Aroclor-1232	< 0.206		µg/l	0.206	0.139	1	"	"	"	"	"	
53469-21-9	Aroclor-1242	< 0.206		µg/l	0.206	0.113	1	"	"	"	"	"	
12672-29-6	Aroclor-1248	< 0.206		µg/l	0.206	0.0913	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 0.206		µg/l	0.206	0.122	1	"	"	"	"	"	
11096-82-5	Aroclor-1260	< 0.206		µg/l	0.206	0.0721	1	"	"	"	"	"	
37324-23-5	Aroclor-1262	< 0.206		µg/l	0.206	0.103	1	"	"	"	"	"	
11100-14-4	Aroclor-1268	< 0.206		µg/l	0.206	0.0886	1	"	"	"	"	"	
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*55*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*55*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*40*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*50*			*30-150 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
	Non-polar material (SGT-HEM)	< 1.1		mg/l	1.1	0.3	1	EPA 1664B	08-Apr-16	11-Apr-16	SAL	1605850	
Total Metals by EPA 200/6000 Series Methods													
	Preservation	**Lab Preserved**		N/A			1	EPA 200/6000 methods	07-Apr-16		BK	1605829	
Total Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0008	1	SW846 6010C	08-Apr-16	11-Apr-16	BJW	1605806	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0016	1	"	"	"	"	"	
7440-39-3	Barium	**0.0436**		mg/l	0.0050	0.0002	1	"	"	"	"	"	
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0002	1	"	"	"	"	"	
7440-70-2	Calcium	**16.8**		mg/l	0.100	0.0115	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0002	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0007	1	"	"	"	"	"	
7440-50-8	Copper	< 0.0050		mg/l	0.0050	0.0012	1	"	"	"	"	"	
7439-89-6	Iron	**0.261**		mg/l	0.0150	0.0045	1	"	"	"	"	"	
7439-95-4	Magnesium	**2.35**		mg/l	0.0100	0.0016	1	"	"	"	"	"	
7440-02-0	Nickel	< 0.0050		mg/l	0.0050	0.0021	1	"	"	"	"	"	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0022	1	"	"	"	"	"	
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0011	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0036	1	"	"	"	"	"	
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0021	1	"	"	"	"	"	
7440-66-6	Zinc	**0.0061**		mg/l	0.0050	0.0024	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	08-Apr-16	11-Apr-16	TBC	1605810	X
Soluble Metals by EPA 200/6000 Series Methods													
	Filtration	**Field Filtered**		N/A			1	EPA 200.7/3005A/6010			LNB	1605825	
Soluble Metals by EPA 6000/7000 Series Methods													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1 SC19886-01	03-221324	Ground Water	06-Apr-16 09:45	07-Apr-16

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Soluble Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0008	1	SW846 6010C	08-Apr-16	11-Apr-16	BJW	1605811	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0016	1	"	"	"	"	"	
7440-39-3	Barium	**0.0418**		mg/l	0.0050	0.0002	1	"	"	"	"	"	
7440-41-7	Beryllium	< 0.0020		mg/l	0.0020	0.0002	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0002	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0007	1	"	"	"	"	"	
7440-50-8	Copper	< 0.0050		mg/l	0.0050	0.0012	1	"	"	"	"	"	
7439-89-6	Iron	< 0.0150		mg/l	0.0150	0.0045	1	"	"	"	"	"	
7440-02-0	Nickel	< 0.0050		mg/l	0.0050	0.0021	1	"	"	"	"	"	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0022	1	"	"	"	"	"	
7440-36-0	Antimony	< 0.0060		mg/l	0.0060	0.0011	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0036	1	"	"	"	"	"	
7440-28-0	Thallium	< 0.0050		mg/l	0.0050	0.0021	1	"	"	"	"	"	
7440-66-6	Zinc	**0.0056**		mg/l	0.0050	0.0024	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	08-Apr-16	11-Apr-16	TBC	1605812	X
General Chemistry Parameters													
	Flashpoint	**>150**		°F			1	SW846 1010A	08-Apr-16	08-Apr-16	VK	1605874	
	Hardness	**51.7**	HD	mg/l CaCO3	0.291	0.0351	1	SM 2340B	08-Apr-16	11-Apr-16	BJW	[CALC]	
16887-00-6	Chloride	**212**	D, GS1	mg/l	9.00	0.706	9	EPA 300.0	14-Apr-16	14-Apr-16	AHK	1606242	X
	pH	**6.07**	pH	pH Units			1	ASTM D 1293-99B	07-Apr-16 19:24	11-Apr-16 11:51	TDD	1605834	X
Reactivity Cyanide/Sulfide Prepared by method General Preparation													
	Reactivity	**See Narrative**		mg/l			1	SW846 Ch. 7.3	12-Apr-16	12-Apr-16	EEM	1606041	
57-12-5	Reactive Cyanide	< 25.0		mg/l	25.0	25.0	1	"	"	"	"	"	
18496-25-8	Reactive Sulfide	< 50.0		mg/l	50.0	50.0	1	"	"	"	"	"	
	Total Dissolved Solids	**435**		mg/l	5	3	1	SM2540C	08-Apr-16	12-Apr-16	CMB	1605859	X
	Total Suspended Solids	< 5.0		mg/l	5.0	2.8	1	SM2540D	08-Apr-16	12-Apr-16	CMB	1605857	X

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605843 - SW846 5030 Water MS										
Blank (1605843-BLK1)					Prepared & Analyzed: 08-Apr-16					
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						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605843 - SW846 5030 Water MS										
Blank (1605843-BLK1)					Prepared & Analyzed: 08-Apr-16					
1,1,2,2-Tetrachloroethane	< 0.5		µg/l	0.5						
Tetrachloroethene	< 1.0		µg/l	1.0						
Toluene	< 1.0		µg/l	1.0						
1,2,3-Trichlorobenzene	< 1.0		µg/l	1.0						
1,2,4-Trichlorobenzene	< 1.0		µg/l	1.0						
1,3,5-Trichlorobenzene	< 1.0		µg/l	1.0						
1,1,1-Trichloroethane	< 1.0		µg/l	1.0						
1,1,2-Trichloroethane	< 1.0		µg/l	1.0						
Trichloroethene	< 1.0		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	< 1.0		µg/l	1.0						
1,2,3-Trichloropropane	< 1.0		µg/l	1.0						
1,2,4-Trimethylbenzene	< 1.0		µg/l	1.0						
1,3,5-Trimethylbenzene	< 1.0		µg/l	1.0						
Vinyl chloride	< 1.0		µg/l	1.0						
m,p-Xylene	< 2.0		µg/l	2.0						
o-Xylene	< 1.0		µg/l	1.0						
Tetrahydrofuran	< 2.0		µg/l	2.0						
Ethyl ether	< 1.0		µg/l	1.0						
Tert-amyl methyl ether	< 1.0		µg/l	1.0						
Ethyl tert-butyl ether	< 1.0		µg/l	1.0						
Di-isopropyl ether	< 1.0		µg/l	1.0						
Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0						
1,4-Dioxane	< 20.0		µg/l	20.0						
trans-1,4-Dichloro-2-butene	< 5.0		µg/l	5.0						
Ethanol	< 400		µg/l	400						
Surrogate: 4-Bromofluorobenzene	*42.4*		µg/l		*50.0*		*85*	*70-130*		
Surrogate: Toluene-d8	*48.8*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*58.6*		µg/l		*50.0*		*117*	*70-130*		
Surrogate: Dibromofluoromethane	*56.8*		µg/l		*50.0*		*114*	*70-130*		
LCS (1605843-BS1)					Prepared & Analyzed: 08-Apr-16					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**24.0**		µg/l		20.0		120	70-130		
Acetone	**19.2**		µg/l		20.0		96	70-130		
Acrylonitrile	**20.0**		µg/l		20.0		100	70-130		
Benzene	**22.0**		µg/l		20.0		110	70-130		
Bromobenzene	**22.0**		µg/l		20.0		110	70-130		
Bromochloromethane	**20.8**		µg/l		20.0		104	70-130		
Bromodichloromethane	**22.8**		µg/l		20.0		114	70-130		
Bromoform	**23.0**		µg/l		20.0		115	70-130		
Bromomethane	**22.6**		µg/l		20.0		113	70-130		
2-Butanone (MEK)	**20.0**		µg/l		20.0		100	70-130		
n-Butylbenzene	**19.5**		µg/l		20.0		98	70-130		
sec-Butylbenzene	**21.7**		µg/l		20.0		108	70-130		
tert-Butylbenzene	**20.4**		µg/l		20.0		102	70-130		
Carbon disulfide	**21.5**		µg/l		20.0		108	70-130		
Carbon tetrachloride	**25.6**		µg/l		20.0		128	70-130		
Chlorobenzene	**21.4**		µg/l		20.0		107	70-130		
Chloroethane	**21.5**		µg/l		20.0		108	70-130		
Chloroform	**22.0**		µg/l		20.0		110	70-130		
Chloromethane	**23.0**		µg/l		20.0		115	70-130		
2-Chlorotoluene	**24.0**		µg/l		20.0		120	70-130		
4-Chlorotoluene	**21.1**		µg/l		20.0		106	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605843 - SW846 5030 Water MS										
LCS (1605843-BS1)					Prepared & Analyzed: 08-Apr-16					
1,2-Dibromo-3-chloropropane	**20.8**		µg/l		20.0		104	70-130		
Dibromochloromethane	**23.5**		µg/l		20.0		117	70-130		
1,2-Dibromoethane (EDB)	**21.2**		µg/l		20.0		106	70-130		
Dibromomethane	**20.6**		µg/l		20.0		103	70-130		
1,2-Dichlorobenzene	**20.5**		µg/l		20.0		102	70-130		
1,3-Dichlorobenzene	**23.6**		µg/l		20.0		118	70-130		
1,4-Dichlorobenzene	**18.5**		µg/l		20.0		93	70-130		
Dichlorodifluoromethane (Freon12)	**23.3**		µg/l		20.0		116	70-130		
1,1-Dichloroethane	**21.5**		µg/l		20.0		108	70-130		
1,2-Dichloroethane	**21.8**		µg/l		20.0		109	70-130		
1,1-Dichloroethene	**21.8**		µg/l		20.0		109	70-130		
cis-1,2-Dichloroethene	**20.9**		µg/l		20.0		104	70-130		
trans-1,2-Dichloroethene	**21.5**		µg/l		20.0		108	70-130		
1,2-Dichloropropane	**21.0**		µg/l		20.0		105	70-130		
1,3-Dichloropropane	**20.6**		µg/l		20.0		103	70-130		
2,2-Dichloropropane	**30.6**	QC2	µg/l		20.0		153	70-130		
1,1-Dichloropropene	**20.2**		µg/l		20.0		101	70-130		
cis-1,3-Dichloropropene	**22.0**		µg/l		20.0		110	70-130		
trans-1,3-Dichloropropene	**23.2**		µg/l		20.0		116	70-130		
Ethylbenzene	**20.1**		µg/l		20.0		100	70-130		
Hexachlorobutadiene	**21.2**		µg/l		20.0		106	70-130		
2-Hexanone (MBK)	**18.8**		µg/l		20.0		94	70-130		
Isopropylbenzene	**21.0**		µg/l		20.0		105	70-130		
4-Isopropyltoluene	**19.6**		µg/l		20.0		98	70-130		
Methyl tert-butyl ether	**22.0**		µg/l		20.0		110	70-130		
4-Methyl-2-pentanone (MIBK)	**22.5**		µg/l		20.0		112	70-130		
Methylene chloride	**20.9**		µg/l		20.0		105	70-130		
Naphthalene	**17.6**		µg/l		20.0		88	70-130		
n-Propylbenzene	**20.0**		µg/l		20.0		100	70-130		
Styrene	**19.0**		µg/l		20.0		95	70-130		
1,1,1,2-Tetrachloroethane	**24.0**		µg/l		20.0		120	70-130		
1,1,2,2-Tetrachloroethane	**19.7**		µg/l		20.0		98	70-130		
Tetrachloroethene	**21.3**		µg/l		20.0		106	70-130		
Toluene	**21.8**		µg/l		20.0		109	70-130		
1,2,3-Trichlorobenzene	**18.9**		µg/l		20.0		94	70-130		
1,2,4-Trichlorobenzene	**18.9**		µg/l		20.0		95	70-130		
1,3,5-Trichlorobenzene	**19.5**		µg/l		20.0		98	70-130		
1,1,1-Trichloroethane	**25.5**		µg/l		20.0		128	70-130		
1,1,2-Trichloroethane	**21.1**		µg/l		20.0		106	70-130		
Trichloroethene	**21.6**		µg/l		20.0		108	70-130		
Trichlorofluoromethane (Freon 11)	**25.6**		µg/l		20.0		128	70-130		
1,2,3-Trichloropropane	**22.0**		µg/l		20.0		110	70-130		
1,2,4-Trimethylbenzene	**20.7**		µg/l		20.0		104	70-130		
1,3,5-Trimethylbenzene	**20.1**		µg/l		20.0		100	70-130		
Vinyl chloride	**23.0**		µg/l		20.0		115	70-130		
m,p-Xylene	**19.6**		µg/l		20.0		98	70-130		
o-Xylene	**20.6**		µg/l		20.0		103	70-130		
Tetrahydrofuran	**20.7**		µg/l		20.0		103	70-130		
Ethyl ether	**19.7**		µg/l		20.0		98	70-130		
Tert-amyl methyl ether	**19.9**		µg/l		20.0		100	70-130		
Ethyl tert-butyl ether	**22.4**		µg/l		20.0		112	70-130		
Di-isopropyl ether	**21.4**		µg/l		20.0		107	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605843 - SW846 5030 Water MS										
LCS (1605843-BS1)						Prepared & Analyzed: 08-Apr-16				
Tert-Butanol / butyl alcohol	**207**		µg/l		200		103	70-130		
1,4-Dioxane	**199**		µg/l		200		100	70-130		
trans-1,4-Dichloro-2-butene	**19.2**		µg/l		20.0		96	70-130		
Ethanol	**398**		µg/l		400		99	70-130		
Surrogate: 4-Bromofluorobenzene	*54.6*		µg/l		*50.0*		*109*	*70-130*		
Surrogate: Toluene-d8	*51.1*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.8*		µg/l		*50.0*		*108*	*70-130*		
Surrogate: Dibromofluoromethane	*52.0*		µg/l		*50.0*		*104*	*70-130*		
LCS Dup (1605843-BSD1)						Prepared & Analyzed: 08-Apr-16				
1,1,2-Trichlorotrifluoroethane (Freon 113)	**24.0**		µg/l		20.0		120	70-130	0.2	20
Acetone	**19.6**		µg/l		20.0		98	70-130	2	20
Acrylonitrile	**20.0**		µg/l		20.0		100	70-130	0.1	20
Benzene	**21.9**		µg/l		20.0		109	70-130	0.5	20
Bromobenzene	**21.9**		µg/l		20.0		110	70-130	0.5	20
Bromochloromethane	**21.4**		µg/l		20.0		107	70-130	3	20
Bromodichloromethane	**23.2**		µg/l		20.0		116	70-130	2	20
Bromoform	**23.2**		µg/l		20.0		116	70-130	0.8	20
Bromomethane	**21.6**		µg/l		20.0		108	70-130	5	20
2-Butanone (MEK)	**17.6**		µg/l		20.0		88	70-130	13	20
n-Butylbenzene	**19.8**		µg/l		20.0		99	70-130	1	20
sec-Butylbenzene	**21.8**		µg/l		20.0		109	70-130	0.3	20
tert-Butylbenzene	**20.3**		µg/l		20.0		102	70-130	0.2	20
Carbon disulfide	**21.1**		µg/l		20.0		106	70-130	2	20
Carbon tetrachloride	**25.1**		µg/l		20.0		125	70-130	2	20
Chlorobenzene	**21.8**		µg/l		20.0		109	70-130	2	20
Chloroethane	**21.6**		µg/l		20.0		108	70-130	0.5	20
Chloroform	**22.0**		µg/l		20.0		110	70-130	0.3	20
Chloromethane	**22.5**		µg/l		20.0		112	70-130	2	20
2-Chlorotoluene	**24.2**		µg/l		20.0		121	70-130	0.8	20
4-Chlorotoluene	**21.4**		µg/l		20.0		107	70-130	1	20
1,2-Dibromo-3-chloropropane	**23.0**		µg/l		20.0		115	70-130	10	20
Dibromochloromethane	**23.9**		µg/l		20.0		119	70-130	2	20
1,2-Dibromoethane (EDB)	**21.0**		µg/l		20.0		105	70-130	1	20
Dibromomethane	**20.5**		µg/l		20.0		103	70-130	0.2	20
1,2-Dichlorobenzene	**20.8**		µg/l		20.0		104	70-130	2	20
1,3-Dichlorobenzene	**23.8**		µg/l		20.0		119	70-130	1	20
1,4-Dichlorobenzene	**18.9**		µg/l		20.0		94	70-130	2	20
Dichlorodifluoromethane (Freon12)	**22.7**		µg/l		20.0		113	70-130	3	20
1,1-Dichloroethane	**18.7**		µg/l		20.0		93	70-130	14	20
1,2-Dichloroethane	**21.9**		µg/l		20.0		109	70-130	0.4	20
1,1-Dichloroethene	**22.3**		µg/l		20.0		111	70-130	2	20
cis-1,2-Dichloroethene	**21.4**		µg/l		20.0		107	70-130	3	20
trans-1,2-Dichloroethene	**20.4**		µg/l		20.0		102	70-130	5	20
1,2-Dichloropropane	**21.4**		µg/l		20.0		107	70-130	2	20
1,3-Dichloropropane	**20.9**		µg/l		20.0		105	70-130	2	20
2,2-Dichloropropane	**29.6**	QC2	µg/l		20.0		148	70-130	3	20
1,1-Dichloropropene	**20.3**		µg/l		20.0		102	70-130	0.8	20
cis-1,3-Dichloropropene	**22.4**		µg/l		20.0		112	70-130	2	20
trans-1,3-Dichloropropene	**23.0**		µg/l		20.0		115	70-130	0.8	20
Ethylbenzene	**20.4**		µg/l		20.0		102	70-130	2	20
Hexachlorobutadiene	**21.8**		µg/l		20.0		109	70-130	2	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605843 - SW846 5030 Water MS										
LCS Dup (1605843-BSD1)					Prepared & Analyzed: 08-Apr-16					
2-Hexanone (MBK)	**19.2**		µg/l		20.0		96	70-130	2	20
Isopropylbenzene	**21.1**		µg/l		20.0		105	70-130	0.3	20
4-Isopropyltoluene	**20.0**		µg/l		20.0		100	70-130	2	20
Methyl tert-butyl ether	**22.6**		µg/l		20.0		113	70-130	3	20
4-Methyl-2-pentanone (MIBK)	**19.6**		µg/l		20.0		98	70-130	14	20
Methylene chloride	**21.3**		µg/l		20.0		106	70-130	2	20
Naphthalene	**18.8**		µg/l		20.0		94	70-130	7	20
n-Propylbenzene	**20.0**		µg/l		20.0		100	70-130	0.2	20
Styrene	**19.4**		µg/l		20.0		97	70-130	2	20
1,1,1,2-Tetrachloroethane	**24.1**		µg/l		20.0		121	70-130	0.4	20
1,1,2,2-Tetrachloroethane	**20.0**		µg/l		20.0		100	70-130	2	20
Tetrachloroethene	**21.0**		µg/l		20.0		105	70-130	2	20
Toluene	**20.8**		µg/l		20.0		104	70-130	5	20
1,2,3-Trichlorobenzene	**19.8**		µg/l		20.0		99	70-130	5	20
1,2,4-Trichlorobenzene	**19.3**		µg/l		20.0		97	70-130	2	20
1,3,5-Trichlorobenzene	**19.8**		µg/l		20.0		99	70-130	2	20
1,1,1-Trichloroethane	**25.2**		µg/l		20.0		126	70-130	1	20
1,1,2-Trichloroethane	**21.8**		µg/l		20.0		109	70-130	3	20
Trichloroethene	**21.7**		µg/l		20.0		108	70-130	0.4	20
Trichlorofluoromethane (Freon 11)	**25.4**		µg/l		20.0		127	70-130	0.8	20
1,2,3-Trichloropropane	**23.1**		µg/l		20.0		116	70-130	5	20
1,2,4-Trimethylbenzene	**20.6**		µg/l		20.0		103	70-130	0.5	20
1,3,5-Trimethylbenzene	**20.1**		µg/l		20.0		100	70-130	0.05	20
Vinyl chloride	**23.1**		µg/l		20.0		115	70-130	0.3	20
m,p-Xylene	**19.8**		µg/l		20.0		99	70-130	0.7	20
o-Xylene	**20.6**		µg/l		20.0		103	70-130	0.1	20
Tetrahydrofuran	**21.6**		µg/l		20.0		108	70-130	4	20
Ethyl ether	**20.5**		µg/l		20.0		103	70-130	4	20
Tert-amyl methyl ether	**20.9**		µg/l		20.0		105	70-130	5	20
Ethyl tert-butyl ether	**22.8**		µg/l		20.0		114	70-130	2	20
Di-isopropyl ether	**22.4**		µg/l		20.0		112	70-130	4	20
Tert-Butanol / butyl alcohol	**227**		µg/l		200		114	70-130	9	20
1,4-Dioxane	**217**		µg/l		200		108	70-130	8	20
trans-1,4-Dichloro-2-butene	**22.8**		µg/l		20.0		114	70-130	17	20
Ethanol	**408**		µg/l		400		102	70-130	2	20
Surrogate: 4-Bromofluorobenzene	*53.5*		µg/l		*50.0*		*107*	*70-130*		
Surrogate: Toluene-d8	*50.2*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*53.1*		µg/l		*50.0*		*106*	*70-130*		
Surrogate: Dibromofluoromethane	*50.8*		µg/l		*50.0*		*102*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605782 - SW846 3510C										
Blank (1605782-BLK1)					Prepared: 08-Apr-16 Analyzed: 12-Apr-16					
Acenaphthene	< 5.00		µg/l	5.00						
Acenaphthylene	< 5.00		µg/l	5.00						
Aniline	< 5.00		µg/l	5.00						
Anthracene	< 5.00		µg/l	5.00						
Azobenzene/Diphenyldiazene	< 5.00		µg/l	5.00						
Benzidine	< 5.00		µg/l	5.00						
Benzo (a) anthracene	< 5.00		µg/l	5.00						
Benzo (a) pyrene	< 5.00		µg/l	5.00						
Benzo (b) fluoranthene	< 5.00		µg/l	5.00						
Benzo (g,h,i) perylene	< 5.00		µg/l	5.00						
Benzo (k) fluoranthene	< 5.00		µg/l	5.00						
Benzoic acid	< 5.00		µg/l	5.00						
Benzyl alcohol	< 5.00		µg/l	5.00						
Bis(2-chloroethoxy)methane	< 5.00		µg/l	5.00						
Bis(2-chloroethyl)ether	< 5.00		µg/l	5.00						
Bis(2-chloroisopropyl)ether	< 5.00		µg/l	5.00						
Bis(2-ethylhexyl)phthalate	< 5.00		µg/l	5.00						
4-Bromophenyl phenyl ether	< 5.00		µg/l	5.00						
Butyl benzyl phthalate	< 5.00		µg/l	5.00						
Carbazole	< 5.00		µg/l	5.00						
4-Chloro-3-methylphenol	< 5.00		µg/l	5.00						
4-Chloroaniline	< 5.00		µg/l	5.00						
2-Chloronaphthalene	< 5.00		µg/l	5.00						
2-Chlorophenol	< 5.00		µg/l	5.00						
4-Chlorophenyl phenyl ether	< 5.00		µg/l	5.00						
Chrysene	< 5.00		µg/l	5.00						
Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00						
Dibenzofuran	< 5.00		µg/l	5.00						
1,2-Dichlorobenzene	< 5.00		µg/l	5.00						
1,3-Dichlorobenzene	< 5.00		µg/l	5.00						
1,4-Dichlorobenzene	< 5.00		µg/l	5.00						
3,3´-Dichlorobenzidine	< 5.00		µg/l	5.00						
2,4-Dichlorophenol	< 5.00		µg/l	5.00						
Diethyl phthalate	< 5.00		µg/l	5.00						
Dimethyl phthalate	< 5.00		µg/l	5.00						
2,4-Dimethylphenol	< 5.00		µg/l	5.00						
Di-n-butyl phthalate	< 5.00		µg/l	5.00						
4,6-Dinitro-2-methylphenol	< 5.00		µg/l	5.00						
2,4-Dinitrophenol	< 5.00		µg/l	5.00						
2,4-Dinitrotoluene	< 5.00		µg/l	5.00						
2,6-Dinitrotoluene	< 5.00		µg/l	5.00						
Di-n-octyl phthalate	< 5.00		µg/l	5.00						
Fluoranthene	< 5.00		µg/l	5.00						
Fluorene	< 5.00		µg/l	5.00						
Hexachlorobenzene	< 5.00		µg/l	5.00						
Hexachlorobutadiene	< 5.00		µg/l	5.00						
Hexachlorocyclopentadiene	< 5.00		µg/l	5.00						
Hexachloroethane	< 5.00		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00						
Isophorone	< 5.00		µg/l	5.00						
2-Methylnaphthalene	< 5.00		µg/l	5.00						
2-Methylphenol	< 5.00		µg/l	5.00						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605782 - SW846 3510C										
Blank (1605782-BLK1)					Prepared: 08-Apr-16 Analyzed: 12-Apr-16					
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	< 5.00		µg/l	5.00						
Nitrobenzene	< 5.00		µg/l	5.00						
2-Nitrophenol	< 5.00		µg/l	5.00						
4-Nitrophenol	< 20.0		µg/l	20.0						
N-Nitrosodimethylamine	< 5.00		µg/l	5.00						
N-Nitrosodi-n-propylamine	< 5.00		µg/l	5.00						
N-Nitrosodiphenylamine	< 5.00		µg/l	5.00						
Pentachlorophenol	< 20.0		µg/l	20.0						
Phenanthrene	< 5.00		µg/l	5.00						
Phenol	< 5.00		µg/l	5.00						
Pyrene	< 5.00		µg/l	5.00						
Pyridine	< 5.00		µg/l	5.00						
1,2,4-Trichlorobenzene	< 5.00		µg/l	5.00						
1-Methylnaphthalene	< 5.00		µg/l	5.00						
2,4,5-Trichlorophenol	< 5.00		µg/l	5.00						
2,4,6-Trichlorophenol	< 5.00		µg/l	5.00						
Pentachloronitrobenzene	< 5.00		µg/l	5.00						
1,2,4,5-Tetrachlorobenzene	< 5.00		µg/l	5.00						
Surrogate: 2-Fluorobiphenyl	*25.7*		µg/l		*50.0*		*51*	*30-130*		
Surrogate: 2-Fluorophenol	*16.9*		µg/l		*50.0*		*34*	*15-110*		
Surrogate: Nitrobenzene-d5	*24.4*		µg/l		*50.0*		*49*	*30-130*		
Surrogate: Phenol-d5	*11.0*		µg/l		*50.0*		*22*	*15-110*		
Surrogate: Terphenyl-dl4	*28.5*		µg/l		*50.0*		*57*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*34.1*		µg/l		*50.0*		*68*	*15-110*		
LCS (1605782-BS1)					Prepared: 08-Apr-16 Analyzed: 12-Apr-16					
Acenaphthene	**33.0**		µg/l	5.00	50.0		66	40-140		
Acenaphthylene	**33.7**		µg/l	5.00	50.0		67	40-140		
Aniline	**27.0**		µg/l	5.00	50.0		54	40-140		
Anthracene	**37.6**		µg/l	5.00	50.0		75	40-140		
Azobenzene/Diphenyldiazene	**30.1**		µg/l	5.00	50.0		60	40-140		
Benzidine	**32.5**		µg/l	5.00	50.0		65	40-140		
Benzo (a) anthracene	**37.4**		µg/l	5.00	50.0		75	40-140		
Benzo (a) pyrene	**37.7**		µg/l	5.00	50.0		75	40-140		
Benzo (b) fluoranthene	**36.3**		µg/l	5.00	50.0		73	40-140		
Benzo (g,h,i) perylene	**38.9**		µg/l	5.00	50.0		78	40-140		
Benzo (k) fluoranthene	**35.9**		µg/l	5.00	50.0		72	40-140		
Benzoic acid	**10.0**	QC2	µg/l	5.00	50.0		20	30-130		
Benzyl alcohol	**29.6**		µg/l	5.00	50.0		59	40-140		
Bis(2-chloroethoxy)methane	**32.4**		µg/l	5.00	50.0		65	40-140		
Bis(2-chloroethyl)ether	**29.4**		µg/l	5.00	50.0		59	40-140		
Bis(2-chloroisopropyl)ether	**28.9**		µg/l	5.00	50.0		58	40-140		
Bis(2-ethylhexyl)phthalate	**46.2**		µg/l	5.00	50.0		92	40-140		
4-Bromophenyl phenyl ether	**36.9**		µg/l	5.00	50.0		74	40-140		
Butyl benzyl phthalate	**42.6**		µg/l	5.00	50.0		85	40-140		
Carbazole	**39.7**		µg/l	5.00	50.0		79	40-140		
4-Chloro-3-methylphenol	**37.2**		µg/l	5.00	50.0		74	30-130		
4-Chloroaniline	**34.2**		µg/l	5.00	50.0		68	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605782 - SW846 3510C										
LCS (1605782-BS1)						Prepared: 08-Apr-16 Analyzed: 12-Apr-16				
2-Chloronaphthalene	**32.2**		µg/l	5.00	50.0		64	40-140		
2-Chlorophenol	**32.4**		µg/l	5.00	50.0		65	30-130		
4-Chlorophenyl phenyl ether	**36.0**		µg/l	5.00	50.0		72	40-140		
Chrysene	**39.2**		µg/l	5.00	50.0		78	40-140		
Dibenzo (a,h) anthracene	**29.0**		µg/l	5.00	50.0		58	40-140		
Dibenzofuran	**35.0**		µg/l	5.00	50.0		70	40-140		
1,2-Dichlorobenzene	**29.3**		µg/l	5.00	50.0		59	40-140		
1,3-Dichlorobenzene	**27.4**		µg/l	5.00	50.0		55	40-140		
1,4-Dichlorobenzene	**26.6**		µg/l	5.00	50.0		53	40-140		
3,3´-Dichlorobenzidine	**38.5**		µg/l	5.00	50.0		77	40-140		
2,4-Dichlorophenol	**35.5**		µg/l	5.00	50.0		71	30-130		
Diethyl phthalate	**38.8**		µg/l	5.00	50.0		78	40-140		
Dimethyl phthalate	**37.9**		µg/l	5.00	50.0		76	40-140		
2,4-Dimethylphenol	**31.6**		µg/l	5.00	50.0		63	30-130		
Di-n-butyl phthalate	**41.5**		µg/l	5.00	50.0		83	40-140		
4,6-Dinitro-2-methylphenol	**34.9**		µg/l	5.00	50.0		70	30-130		
2,4-Dinitrophenol	**34.0**		µg/l	5.00	50.0		68	30-130		
2,4-Dinitrotoluene	**41.7**		µg/l	5.00	50.0		83	40-140		
2,6-Dinitrotoluene	**39.9**		µg/l	5.00	50.0		80	40-140		
Di-n-octyl phthalate	**40.0**		µg/l	5.00	50.0		80	40-140		
Fluoranthene	**40.0**		µg/l	5.00	50.0		80	40-140		
Fluorene	**35.1**		µg/l	5.00	50.0		70	40-140		
Hexachlorobenzene	**37.3**		µg/l	5.00	50.0		75	40-140		
Hexachlorobutadiene	**28.5**		µg/l	5.00	50.0		57	40-140		
Hexachlorocyclopentadiene	**32.9**		µg/l	5.00	50.0		66	40-140		
Hexachloroethane	**27.8**		µg/l	5.00	50.0		56	40-140		
Indeno (1,2,3-cd) pyrene	**44.3**		µg/l	5.00	50.0		89	40-140		
Isophorone	**29.6**		µg/l	5.00	50.0		59	40-140		
2-Methylnaphthalene	**29.7**		µg/l	5.00	50.0		59	40-140		
2-Methylphenol	**31.2**		µg/l	5.00	50.0		62	30-130		
3 & 4-Methylphenol	**29.3**		µg/l	10.0	50.0		59	30-130		
Naphthalene	**30.1**		µg/l	5.00	50.0		60	40-140		
2-Nitroaniline	**40.2**		µg/l	5.00	50.0		80	40-140		
3-Nitroaniline	**39.0**		µg/l	5.00	50.0		78	40-140		
4-Nitroaniline	**44.3**		µg/l	5.00	50.0		89	40-140		
Nitrobenzene	**31.2**		µg/l	5.00	50.0		62	40-140		
2-Nitrophenol	**34.5**		µg/l	5.00	50.0		69	30-130		
4-Nitrophenol	**71.7**	QC2	µg/l	20.0	50.0		143	30-130		
N-Nitrosodimethylamine	**24.1**		µg/l	5.00	50.0		48	40-140		
N-Nitrosodi-n-propylamine	**31.6**		µg/l	5.00	50.0		63	40-140		
N-Nitrosodiphenylamine	**38.2**		µg/l	5.00	50.0		76	40-140		
Pentachlorophenol	**22.9**		µg/l	20.0	50.0		46	30-130		
Phenanthrene	**35.4**		µg/l	5.00	50.0		71	40-140		
Phenol	**17.0**		µg/l	5.00	50.0		34	30-130		
Pyrene	**39.6**		µg/l	5.00	50.0		79	40-140		
Pyridine	**13.2**	QC2	µg/l	5.00	50.0		26	40-140		
1,2,4-Trichlorobenzene	**30.1**		µg/l	5.00	50.0		60	40-140		
1-Methylnaphthalene	**37.4**		µg/l	5.00	50.0		75	40-140		
2,4,5-Trichlorophenol	**37.2**		µg/l	5.00	50.0		74	30-130		
2,4,6-Trichlorophenol	**34.2**		µg/l	5.00	50.0		68	30-130		
Pentachloronitrobenzene	**45.7**		µg/l	5.00	50.0		91	40-140		
1,2,4,5-Tetrachlorobenzene	**35.1**		µg/l	5.00	50.0		70	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605782 - SW846 3510C										
LCS (1605782-BS1)					Prepared: 08-Apr-16 Analyzed: 12-Apr-16					
Surrogate: 2-Fluorobiphenyl	*32.9*		µg/l		*50.0*		*66*	*30-130*		
Surrogate: 2-Fluorophenol	*21.2*		µg/l		*50.0*		*42*	*15-110*		
Surrogate: Nitrobenzene-d5	*31.1*		µg/l		*50.0*		*62*	*30-130*		
Surrogate: Phenol-d5	*15.3*		µg/l		*50.0*		*31*	*15-110*		
Surrogate: Terphenyl-dl4	*39.6*		µg/l		*50.0*		*79*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*44.8*		µg/l		*50.0*		*90*	*15-110*		
LCS Dup (1605782-BSD1)					Prepared: 08-Apr-16 Analyzed: 12-Apr-16					
Acenaphthene	**31.9**		µg/l	5.00	50.0		64	40-140	3	20
Acenaphthylene	**33.4**		µg/l	5.00	50.0		67	40-140	0.9	20
Aniline	**30.7**		µg/l	5.00	50.0		61	40-140	13	20
Anthracene	**37.0**		µg/l	5.00	50.0		74	40-140	2	20
Azobenzene/Diphenyldiazene	**28.5**		µg/l	5.00	50.0		57	40-140	5	20
Benzidine	**38.1**		µg/l	5.00	50.0		76	40-140	16	20
Benzo (a) anthracene	**38.3**		µg/l	5.00	50.0		77	40-140	3	20
Benzo (a) pyrene	**39.1**		µg/l	5.00	50.0		78	40-140	4	20
Benzo (b) fluoranthene	**39.8**		µg/l	5.00	50.0		80	40-140	9	20
Benzo (g,h,i) perylene	**40.2**		µg/l	5.00	50.0		80	40-140	3	20
Benzo (k) fluoranthene	**33.6**		µg/l	5.00	50.0		67	40-140	7	20
Benzoic acid	**10.8**	QC2	µg/l	5.00	50.0		22	30-130	7	20
Benzyl alcohol	**32.1**		µg/l	5.00	50.0		64	40-140	8	20
Bis(2-chloroethoxy)methane	**31.9**		µg/l	5.00	50.0		64	40-140	2	20
Bis(2-chloroethyl)ether	**27.2**		µg/l	5.00	50.0		54	40-140	8	20
Bis(2-chloroisopropyl)ether	**27.7**		µg/l	5.00	50.0		55	40-140	4	20
Bis(2-ethylhexyl)phthalate	**43.1**		µg/l	5.00	50.0		86	40-140	7	20
4-Bromophenyl phenyl ether	**36.9**		µg/l	5.00	50.0		74	40-140	0.007	20
Butyl benzyl phthalate	**43.1**		µg/l	5.00	50.0		86	40-140	1	20
Carbazole	**41.0**		µg/l	5.00	50.0		82	40-140	3	20
4-Chloro-3-methylphenol	**40.6**		µg/l	5.00	50.0		81	30-130	9	20
4-Chloroaniline	**37.6**		µg/l	5.00	50.0		75	40-140	9	20
2-Chloronaphthalene	**30.6**		µg/l	5.00	50.0		61	40-140	5	20
2-Chlorophenol	**32.2**		µg/l	5.00	50.0		64	30-130	0.6	20
4-Chlorophenyl phenyl ether	**33.3**		µg/l	5.00	50.0		67	40-140	8	20
Chrysene	**38.9**		µg/l	5.00	50.0		78	40-140	0.7	20
Dibenzo (a,h) anthracene	**32.7**		µg/l	5.00	50.0		65	40-140	12	20
Dibenzofuran	**33.9**		µg/l	5.00	50.0		68	40-140	3	20
1,2-Dichlorobenzene	**27.4**		µg/l	5.00	50.0		55	40-140	7	20
1,3-Dichlorobenzene	**26.5**		µg/l	5.00	50.0		53	40-140	3	20
1,4-Dichlorobenzene	**25.0**		µg/l	5.00	50.0		50	40-140	6	20
3,3´-Dichlorobenzidine	**35.4**		µg/l	5.00	50.0		71	40-140	8	20
2,4-Dichlorophenol	**36.6**		µg/l	5.00	50.0		73	30-130	3	20
Diethyl phthalate	**40.1**		µg/l	5.00	50.0		80	40-140	3	20
Dimethyl phthalate	**41.6**		µg/l	5.00	50.0		83	40-140	9	20
2,4-Dimethylphenol	**33.3**		µg/l	5.00	50.0		67	30-130	5	20
Di-n-butyl phthalate	**40.9**		µg/l	5.00	50.0		82	40-140	1	20
4,6-Dinitro-2-methylphenol	**41.3**		µg/l	5.00	50.0		83	30-130	17	20
2,4-Dinitrophenol	**41.5**		µg/l	5.00	50.0		83	30-130	20	20
2,4-Dinitrotoluene	**46.0**		µg/l	5.00	50.0		92	40-140	10	20
2,6-Dinitrotoluene	**43.2**		µg/l	5.00	50.0		86	40-140	8	20
Di-n-octyl phthalate	**39.2**		µg/l	5.00	50.0		78	40-140	2	20
Fluoranthene	**39.1**		µg/l	5.00	50.0		78	40-140	2	20
Fluorene	**33.3**		µg/l	5.00	50.0		67	40-140	5	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605782 - SW846 3510C										
LCS Dup (1605782-BSD1)					Prepared: 08-Apr-16 Analyzed: 12-Apr-16					
Hexachlorobenzene	**37.6**		µg/l	5.00	50.0		75	40-140	0.8	20
Hexachlorobutadiene	**27.1**		µg/l	5.00	50.0		54	40-140	5	20
Hexachlorocyclopentadiene	**35.8**		µg/l	5.00	50.0		72	40-140	9	20
Hexachloroethane	**26.7**		µg/l	5.00	50.0		53	40-140	4	20
Indeno (1,2,3-cd) pyrene	**47.9**		µg/l	5.00	50.0		96	40-140	8	20
Isophorone	**30.7**		µg/l	5.00	50.0		61	40-140	3	20
2-Methylnaphthalene	**28.4**		µg/l	5.00	50.0		57	40-140	4	20
2-Methylphenol	**31.9**		µg/l	5.00	50.0		64	30-130	2	20
3 & 4-Methylphenol	**30.0**		µg/l	10.0	50.0		60	30-130	3	20
Naphthalene	**28.0**		µg/l	5.00	50.0		56	40-140	7	20
2-Nitroaniline	**45.7**		µg/l	5.00	50.0		91	40-140	13	20
3-Nitroaniline	**40.8**		µg/l	5.00	50.0		82	40-140	4	20
4-Nitroaniline	**49.7**		µg/l	5.00	50.0		99	40-140	11	20
Nitrobenzene	**31.0**		µg/l	5.00	50.0		62	40-140	0.8	20
2-Nitrophenol	**35.5**		µg/l	5.00	50.0		71	30-130	3	20
4-Nitrophenol	**73.7**	QC2	µg/l	20.0	50.0		147	30-130	3	20
N-Nitrosodimethylamine	**26.9**		µg/l	5.00	50.0		54	40-140	11	20
N-Nitrosodi-n-propylamine	**34.5**		µg/l	5.00	50.0		69	40-140	9	20
N-Nitrosodiphenylamine	**38.8**		µg/l	5.00	50.0		78	40-140	1	20
Pentachlorophenol	**25.0**		µg/l	20.0	50.0		50	30-130	9	20
Phenanthrene	**34.4**		µg/l	5.00	50.0		69	40-140	3	20
Phenol	**18.0**		µg/l	5.00	50.0		36	30-130	6	20
Pyrene	**40.3**		µg/l	5.00	50.0		81	40-140	2	20
Pyridine	**17.4**	QC2	µg/l	5.00	50.0		35	40-140	27	20
1,2,4-Trichlorobenzene	**28.7**		µg/l	5.00	50.0		57	40-140	4	20
1-Methylnaphthalene	**36.4**		µg/l	5.00	50.0		73	40-140	3	20
2,4,5-Trichlorophenol	**40.1**		µg/l	5.00	50.0		80	30-130	7	20
2,4,6-Trichlorophenol	**35.8**		µg/l	5.00	50.0		72	30-130	5	20
Pentachloronitrobenzene	**48.6**		µg/l	5.00	50.0		97	40-140	6	20
1,2,4,5-Tetrachlorobenzene	**32.8**		µg/l	5.00	50.0		66	40-140	7	20
Surrogate: 2-Fluorobiphenyl	*30.9*		µg/l		*50.0*		*62*	*30-130*		
Surrogate: 2-Fluorophenol	*22.2*		µg/l		*50.0*		*44*	*15-110*		
Surrogate: Nitrobenzene-d5	*31.3*		µg/l		*50.0*		*63*	*30-130*		
Surrogate: Phenol-d5	*16.4*		µg/l		*50.0*		*33*	*15-110*		
Surrogate: Terphenyl-dl4	*39.9*		µg/l		*50.0*		*80*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*47.4*		µg/l		*50.0*		*95*	*15-110*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605945 - SW846 3510C										
Blank (1605945-BLK1)					Prepared & Analyzed: 11-Apr-16					
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)	*0.170*		µg/l		*0.200*		*85*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.190*		µg/l		*0.200*		*95*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.190*		µg/l		*0.200*		*95*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.210*		µg/l		*0.200*		*105*	*30-150*		
LCS (1605945-BS1)					Prepared & Analyzed: 11-Apr-16					
Aroclor-1016	**1.83**		µg/l	0.200	2.50		73	40-140		
Aroclor-1016 [2C]	**1.76**		µg/l	0.200	2.50		70	40-140		
Aroclor-1260	**1.53**		µg/l	0.200	2.50		61	40-140		
Aroclor-1260 [2C]	**1.81**		µg/l	0.200	2.50		72	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.110*		µg/l		*0.200*		*55*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.120*		µg/l		*0.200*		*60*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.120*		µg/l		*0.200*		*60*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.130*		µg/l		*0.200*		*65*	*30-150*		
LCS Dup (1605945-BSD1)					Prepared & Analyzed: 11-Apr-16					
Aroclor-1016	**1.79**		µg/l	0.200	2.50		72	40-140	2	20
Aroclor-1016 [2C]	**1.79**		µg/l	0.200	2.50		72	40-140	2	20
Aroclor-1260	**1.43**		µg/l	0.200	2.50		57	40-140	7	20
Aroclor-1260 [2C]	**1.91**		µg/l	0.200	2.50		76	40-140	5	20
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.110*		µg/l		*0.200*		*55*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.120*		µg/l		*0.200*		*60*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.0900*		µg/l		*0.200*		*45*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.130*		µg/l		*0.200*		*65*	*30-150*		

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605850 - SW846 3510C										
Blank (1605850-BLK1)						Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Non-polar material (SGT-HEM)	< 1.0		mg/l	1.0						
LCS (1605850-BS1)						Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Non-polar material (SGT-HEM)	**45.0**		mg/l	1.0	53.6		84	83-101		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605806 - SW846 3005A										
Blank (1605806-BLK1)					Prepared: 08-Apr-16 Analyzed: 11-Apr-16					
Magnesium	< 0.0100		mg/l	0.0100						
Iron	< 0.0150		mg/l	0.0150						
Lead	< 0.0075		mg/l	0.0075						
Nickel	< 0.0050		mg/l	0.0050						
Copper	< 0.0050		mg/l	0.0050						
Chromium	< 0.0050		mg/l	0.0050						
Calcium	< 0.100		mg/l	0.100						
Arsenic	< 0.0040		mg/l	0.0040						
Antimony	< 0.0060		mg/l	0.0060						
Barium	< 0.0050		mg/l	0.0050						
Zinc	< 0.0050		mg/l	0.0050						
Beryllium	< 0.0020		mg/l	0.0020						
Cadmium	< 0.0025		mg/l	0.0025						
Thallium	< 0.0050		mg/l	0.0050						
Silver	< 0.0050		mg/l	0.0050						
Selenium	< 0.0150		mg/l	0.0150						
LCS (1605806-BS1)					Prepared: 08-Apr-16 Analyzed: 11-Apr-16					
Magnesium	**1.32**		mg/l	0.0100	1.25		106	85-115		
Iron	**1.30**		mg/l	0.0150	1.25		104	85-115		
Chromium	**1.33**		mg/l	0.0050	1.25		106	85-115		
Nickel	**1.29**		mg/l	0.0050	1.25		103	85-115		
Antimony	**1.29**		mg/l	0.0060	1.25		103	85-115		
Selenium	**1.34**		mg/l	0.0150	1.25		107	85-115		
Thallium	**1.27**		mg/l	0.0050	1.25		102	85-115		
Zinc	**1.31**		mg/l	0.0050	1.25		105	85-115		
Beryllium	**1.34**		mg/l	0.0020	1.25		107	85-115		
Cadmium	**1.23**		mg/l	0.0025	1.25		98	85-115		
Copper	**1.29**		mg/l	0.0050	1.25		103	85-115		
Arsenic	**1.30**		mg/l	0.0040	1.25		104	85-115		
Barium	**1.35**		mg/l	0.0050	1.25		108	85-115		
Lead	**1.36**		mg/l	0.0075	1.25		109	85-115		
Silver	**1.28**		mg/l	0.0050	1.25		102	85-115		
Calcium	**6.60**		mg/l	0.100	6.25		106	85-115		
LCS Dup (1605806-BSD1)					Prepared: 08-Apr-16 Analyzed: 11-Apr-16					
Magnesium	**1.30**		mg/l	0.0100	1.25		104	85-115	1	20
Iron	**1.27**		mg/l	0.0150	1.25		101	85-115	3	20
Nickel	**1.26**		mg/l	0.0050	1.25		101	85-115	2	20
Lead	**1.33**		mg/l	0.0075	1.25		106	85-115	2	20
Arsenic	**1.26**		mg/l	0.0040	1.25		101	85-115	4	20
Silver	**1.30**		mg/l	0.0050	1.25		104	85-115	2	20
Beryllium	**1.34**		mg/l	0.0020	1.25		107	85-115	0.3	20
Calcium	**6.58**		mg/l	0.100	6.25		105	85-115	0.5	20
Cadmium	**1.22**		mg/l	0.0025	1.25		97	85-115	0.7	20
Chromium	**1.34**		mg/l	0.0050	1.25		107	85-115	0.7	20
Copper	**1.29**		mg/l	0.0050	1.25		103	85-115	0.04	20
Antimony	**1.25**		mg/l	0.0060	1.25		100	85-115	3	20
Barium	**1.30**		mg/l	0.0050	1.25		104	85-115	4	20
Selenium	**1.29**		mg/l	0.0150	1.25		103	85-115	3	20
Thallium	**1.26**		mg/l	0.0050	1.25		101	85-115	0.9	20
Zinc	**1.29**		mg/l	0.0050	1.25		103	85-115	1	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605810 - EPA200/SW7000 Series										
Blank (1605810-BLK1)						Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	< 0.00020		mg/l	0.00020						
LCS (1605810-BS1)						Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	**0.00461**		mg/l	0.00020	0.00500		92	85-115		
Duplicate (1605810-DUP1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	< 0.00020		mg/l	0.00020		BRL				20
Matrix Spike (1605810-MS1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	**0.00482**		mg/l	0.00020	0.00500	BRL	96	80-120		
Matrix Spike Dup (1605810-MSD1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	**0.00451**		mg/l	0.00020	0.00500	BRL	90	80-120	7	20
Post Spike (1605810-PS1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	**0.00443**		mg/l	0.00020	0.00500	BRL	89	85-115		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605811 - SW846 3005A										
Blank (1605811-BLK1)					Prepared: 08-Apr-16 Analyzed: 11-Apr-16					
Iron	< 0.0150		mg/l	0.0150						
Nickel	< 0.0050		mg/l	0.0050						
Zinc	< 0.0050		mg/l	0.0050						
Arsenic	< 0.0040		mg/l	0.0040						
Thallium	< 0.0050		mg/l	0.0050						
Selenium	< 0.0150		mg/l	0.0150						
Lead	< 0.0075		mg/l	0.0075						
Copper	< 0.0050		mg/l	0.0050						
Chromium	< 0.0050		mg/l	0.0050						
Cadmium	< 0.0025		mg/l	0.0025						
Silver	< 0.0050		mg/l	0.0050						
Barium	< 0.0050		mg/l	0.0050						
Beryllium	< 0.0020		mg/l	0.0020						
Antimony	< 0.0060		mg/l	0.0060						
LCS (1605811-BS1)					Prepared: 08-Apr-16 Analyzed: 11-Apr-16					
Iron	**1.23**		mg/l	0.0150	1.25		99	85-115		
Chromium	**1.32**		mg/l	0.0050	1.25		106	85-115		
Arsenic	**1.31**		mg/l	0.0040	1.25		105	85-115		
Silver	**1.30**		mg/l	0.0050	1.25		104	85-115		
Barium	**1.33**		mg/l	0.0050	1.25		107	85-115		
Cadmium	**1.20**		mg/l	0.0025	1.25		96	85-115		
Copper	**1.26**		mg/l	0.0050	1.25		101	85-115		
Nickel	**1.28**		mg/l	0.0050	1.25		102	85-115		
Lead	**1.36**		mg/l	0.0075	1.25		109	85-115		
Antimony	**1.29**		mg/l	0.0060	1.25		103	85-115		
Selenium	**1.35**		mg/l	0.0150	1.25		108	85-115		
Thallium	**1.26**		mg/l	0.0050	1.25		101	85-115		
Zinc	**1.30**		mg/l	0.0050	1.25		104	85-115		
Beryllium	**1.31**		mg/l	0.0020	1.25		105	85-115		
LCS Dup (1605811-BSD1)					Prepared: 08-Apr-16 Analyzed: 11-Apr-16					
Iron	**1.20**		mg/l	0.0150	1.25		96	85-115	2	20
Cadmium	**1.17**		mg/l	0.0025	1.25		94	85-115	2	20
Copper	**1.23**		mg/l	0.0050	1.25		98	85-115	3	20
Barium	**1.31**		mg/l	0.0050	1.25		105	85-115	2	20
Zinc	**1.29**		mg/l	0.0050	1.25		103	85-115	1	20
Thallium	**1.23**		mg/l	0.0050	1.25		98	85-115	2	20
Selenium	**1.31**		mg/l	0.0150	1.25		105	85-115	3	20
Antimony	**1.25**		mg/l	0.0060	1.25		100	85-115	3	20
Nickel	**1.25**		mg/l	0.0050	1.25		100	85-115	2	20
Chromium	**1.31**		mg/l	0.0050	1.25		105	85-115	1	20
Beryllium	**1.29**		mg/l	0.0020	1.25		103	85-115	1	20
Arsenic	**1.27**		mg/l	0.0040	1.25		102	85-115	3	20
Silver	**1.28**		mg/l	0.0050	1.25		103	85-115	0.9	20
Lead	**1.33**		mg/l	0.0075	1.25		106	85-115	2	20
Duplicate (1605811-DUP1)			**Source: SC19886-01**		Prepared: 08-Apr-16 Analyzed: 11-Apr-16					
Iron	**0.0076**	J	mg/l	0.0150		0.0066			14	20
Beryllium	< 0.0020		mg/l	0.0020		BRL				20
Chromium	< 0.0050		mg/l	0.0050		BRL				20
Barium	**0.0412**		mg/l	0.0050		0.0418			1	20
Silver	< 0.0050		mg/l	0.0050		BRL				20
Cadmium	< 0.0025		mg/l	0.0025		BRL				20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605811 - SW846 3005A										
Duplicate (1605811-DUP1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Zinc	**0.0056**		mg/l	0.0050		0.0056			2	20
Thallium	< 0.0050		mg/l	0.0050		BRL				20
Selenium	< 0.0150		mg/l	0.0150		BRL				20
Antimony	**0.0014**	J	mg/l	0.0060		BRL				20
Lead	< 0.0075		mg/l	0.0075		BRL				20
Nickel	< 0.0050		mg/l	0.0050		BRL				20
Copper	< 0.0050		mg/l	0.0050		BRL				20
Arsenic	**0.0020**	J,QR8	mg/l	0.0040		0.0026			24	20
Matrix Spike (1605811-MS1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Iron	**1.20**		mg/l	0.0150	1.25	0.0066	96	75-125		
Barium	**1.33**		mg/l	0.0050	1.25	0.0418	103	75-125		
Nickel	**1.21**		mg/l	0.0050	1.25	BRL	96	75-125		
Copper	**1.25**		mg/l	0.0050	1.25	BRL	100	75-125		
Chromium	**1.33**		mg/l	0.0050	1.25	BRL	106	75-125		
Cadmium	**1.18**		mg/l	0.0025	1.25	BRL	94	75-125		
Beryllium	**1.34**		mg/l	0.0020	1.25	BRL	107	75-125		
Arsenic	**1.31**		mg/l	0.0040	1.25	0.0026	105	75-125		
Zinc	**1.30**		mg/l	0.0050	1.25	0.0056	104	75-125		
Thallium	**1.20**		mg/l	0.0050	1.25	BRL	96	75-125		
Lead	**1.28**		mg/l	0.0075	1.25	BRL	102	75-125		
Silver	**1.35**		mg/l	0.0050	1.25	BRL	108	75-125		
Selenium	**1.33**		mg/l	0.0150	1.25	BRL	106	75-125		
Antimony	**1.25**		mg/l	0.0060	1.25	BRL	100	75-125		
Matrix Spike Dup (1605811-MSD1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Iron	**1.20**		mg/l	0.0150	1.25	0.0066	96	75-125	0.2	20
Zinc	**1.32**		mg/l	0.0050	1.25	0.0056	105	75-125	2	20
Copper	**1.24**		mg/l	0.0050	1.25	BRL	100	75-125	0.7	20
Nickel	**1.23**		mg/l	0.0050	1.25	BRL	98	75-125	2	20
Selenium	**1.37**		mg/l	0.0150	1.25	BRL	109	75-125	3	20
Antimony	**1.28**		mg/l	0.0060	1.25	BRL	103	75-125	2	20
Lead	**1.30**		mg/l	0.0075	1.25	BRL	104	75-125	2	20
Chromium	**1.32**		mg/l	0.0050	1.25	BRL	106	75-125	0.5	20
Silver	**1.34**		mg/l	0.0050	1.25	BRL	107	75-125	0.9	20
Thallium	**1.21**		mg/l	0.0050	1.25	BRL	97	75-125	0.7	20
Beryllium	**1.35**		mg/l	0.0020	1.25	BRL	108	75-125	0.2	20
Arsenic	**1.35**		mg/l	0.0040	1.25	0.0026	108	75-125	3	20
Barium	**1.37**		mg/l	0.0050	1.25	0.0418	106	75-125	3	20
Cadmium	**1.19**		mg/l	0.0025	1.25	BRL	95	75-125	0.4	20
Post Spike (1605811-PS1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Iron	**1.18**		mg/l	0.0150	1.25	0.0066	94	80-120		
Selenium	**1.30**		mg/l	0.0150	1.25	BRL	104	80-120		
Zinc	**1.30**		mg/l	0.0050	1.25	0.0056	103	80-120		
Thallium	**1.19**		mg/l	0.0050	1.25	BRL	95	80-120		
Antimony	**1.23**		mg/l	0.0060	1.25	BRL	98	80-120		
Lead	**1.26**		mg/l	0.0075	1.25	BRL	101	80-120		
Nickel	**1.19**		mg/l	0.0050	1.25	BRL	95	80-120		
Copper	**1.22**		mg/l	0.0050	1.25	BRL	97	80-120		
Chromium	**1.32**		mg/l	0.0050	1.25	BRL	106	80-120		
Beryllium	**1.33**		mg/l	0.0020	1.25	BRL	106	80-120		
Barium	**1.31**		mg/l	0.0050	1.25	0.0418	102	80-120		
Arsenic	**1.29**		mg/l	0.0040	1.25	0.0026	103	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605811 - SW846 3005A										
Post Spike (1605811-PS1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Silver	**1.33**		mg/l	0.0050	1.25	BRL	106	80-120		
Cadmium	**1.16**		mg/l	0.0025	1.25	BRL	93	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605812 - EPA200/SW7000 Series										
Blank (1605812-BLK1)						Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	< 0.00020		mg/l	0.00020						
LCS (1605812-BS1)						Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	**0.00423**		mg/l	0.00020	0.00500		85	85-115		
Duplicate (1605812-DUP1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	< 0.00020		mg/l	0.00020		BRL				20
Matrix Spike (1605812-MS1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	**0.00426**		mg/l	0.00020	0.00500	BRL	85	80-120		
Matrix Spike Dup (1605812-MSD1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	**0.00425**		mg/l	0.00020	0.00500	BRL	85	80-120	0.2	20
Post Spike (1605812-PS1)			**Source: SC19886-01**			Prepared: 08-Apr-16 Analyzed: 11-Apr-16				
Mercury	**0.00446**		mg/l	0.00020	0.00500	BRL	89	85-115		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1605834 - General Preparation										
Reference (1605834-SRM1)						Prepared: 07-Apr-16 Analyzed: 11-Apr-16				
pH	**5.94**		pH Units		6.00		99	97.5-102.5		
Reference (1605834-SRM2)						Prepared: 07-Apr-16 Analyzed: 11-Apr-16				
pH	**6.01**		pH Units		6.00		100	97.5-102.5		
Batch 1605857 - General Preparation										
Blank (1605857-BLK1)						Prepared: 08-Apr-16 Analyzed: 12-Apr-16				
Total Suspended Solids	< 5.0		mg/l	5.0						
LCS (1605857-BS1)						Prepared: 08-Apr-16 Analyzed: 12-Apr-16				
Total Suspended Solids	**94.0**		mg/l	10.0	100		94	90-110		
Batch 1605859 - General Preparation										
Blank (1605859-BLK1)						Prepared: 08-Apr-16 Analyzed: 12-Apr-16				
Total Dissolved Solids	< 5		mg/l	5						
LCS (1605859-BS1)						Prepared: 08-Apr-16 Analyzed: 12-Apr-16				
Total Dissolved Solids	**1000**		mg/l	10	1000		100	90-110		
Batch 1605874 - General Preparation										
Reference (1605874-SRM1)						Prepared & Analyzed: 08-Apr-16				
Flashpoint	**80**		°F		81.0		99	95-105		
Batch 1606041 - General Preparation										
Blank (1606041-BLK1)						Prepared & Analyzed: 12-Apr-16				
Reactivity	**See Narrative**		mg/l							
Reactive Cyanide	< 25.0		mg/l	25.0						
Reactive Sulfide	< 50.0		mg/l	50.0						
Duplicate (1606041-DUP1)			**Source: SC19886-01**			Prepared & Analyzed: 12-Apr-16				
Reactivity	**See Narrative**		mg/l			ee Narrativ				200
Reactive Cyanide	< 25.0		mg/l	25.0		BRL				20
Reactive Sulfide	< 50.0		mg/l	50.0		BRL				20
Reference (1606041-SRM1)						Prepared & Analyzed: 12-Apr-16				
Reactive Cyanide	< 25.0		mg/l	25.0	100		0	0-200		
Reference (1606041-SRM2)						Prepared & Analyzed: 12-Apr-16				
Reactive Sulfide	< 50.0		mg/l	50.0	6700		0	0-200		
Batch 1606242 - General Preparation										
Blank (1606242-BLK1)						Prepared & Analyzed: 14-Apr-16				
Chloride	< 1.00		mg/l	1.00						
LCS (1606242-BS1)						Prepared & Analyzed: 14-Apr-16				
Chloride	**20.1**		mg/l	1.00	20.0		101	90-110		
Reference (1606242-SRM1)						Prepared & Analyzed: 14-Apr-16				
Chloride	**25.2**		mg/l	1.00	25.0		101	90-110		

Notes and Definitions

D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
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.
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).
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.
HD	Total Hardness is a calculation based on the reported values of Ca and Mg.

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:
Christina White
Derek Swist
Emily Kinney
Erica Troy
June O'Connor
Raquel Thomas
Thomas Dunn

SC19886 8m

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 3Day

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

Report To: ECS, 997 Millbury St, Worcester MA 01610
Telephone #: 508 756 0151
Project Mgr: Matt Lyne

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

Project No: 03-221324
Site Name: Westminster CFI #0006
Location: 68 Main St, Westminster State: MA
Sampler(s): Andrew Clarke

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=___ 12=___

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

G= Grab C=Compsite

List Preservative Code below: 2 (TPH 1664); ✓ (RCRA 8 Total Metals, RCRA 8 Dissolved Metals, TSS/TDS/PCBS, pH/Flashpoint/Reactivity)

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TPH 1664	RCRA 8 Total Metals	RCRA 8 Dissolved Metals	TSS/TDS/PCBS	pH/Flashpoint/Reactivity	VOC 8260	SVOC 8270	Check if chlorinated
SC19886-01	MW-1	4/6/16	9:45	G	GW	3	2		6	X	X	X	X	X	X	X	☐
																	☐
																	☐
																	☐
																	☐
																	☐
																	☐
																	☐
																	☐
																	☐

QA/QC Reporting Notes:
* additional charges may appply

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

Relinquished by:	Received by:	Date:	Time:	Temp °C
[signature]	[signature]	~~4/6/16~~ 4/7/16	~~1303~~ 1613	Observed: 1.3
DBC	[signature]	4/7/16	1424	Correction Factor: 0
				Corrected: 1.3
				IR ID #: 02

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

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

SC19886 8m

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 3 Day
- All TATs subject to laboratory approval
- Min. 24-hr notification needed for rushes
- Samples disposed after 60 days unless otherwise instructed.

Report To: ECS
997 Millbury St
Worcester MA 01610

Telephone #: 508 756 0151
Project Mgr: Matt Lyne

Invoice To: CEI

73522 PO 4/8
P.O No.: Pending Quote/RQN:

Project No: 03-221324
Site Name: Westminster CEI #0006
Location: 68 Main St, Westminster State: MA
Sampler(s): Andrew Clark

F=Field Filtered **1**=Na_2S2O_3 **2**=HCl **3**=H_2SO_4 **4**=HNO_3 **5**=NaOH **6**=Ascorbic Acid
7=CH_3OH **8**=$NaHSO_4$ **9**=Deionized Water **10**=H_3PO_4 **11**=_____ **12**=_____

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

G= Grab **C**=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: List Preservative Code below: 2							Check if chlorinated
										TPH 1664	RCRA 8 Total Metals	RCRA 8 Dissolved Metals	PAHs 8270 SIM	TPH 1664 SGT-HEM	VOC 8260	SVOC 8270	
SC19886-01	MW-1	4/6/16	9:45	G	GW	3	2		6	X	X	X	X	X	X	X	☐
																	☐
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																	☐
																	☐
																	☐
																	☐
																	☐
																	☐
						7											☐

QA/QC Reporting Notes:
* additional charges may appply

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

Relinquished by:	Received by:	Date:	Time:
		4/6/16	1303
		4/7/16	1424

Temp °C: Observed 1.3 | Correction Factor 0 | Corrected 1.3 | IR ID # 02

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

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

✓ SC19886 8pm

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 3 Day
- All TATs subject to laboratory approval
- Min. 24-hr notification needed for rushes
- Samples disposed after 60 days unless otherwise instructed.

Report To: ECS
997 Millbury St
Worcester MA 01610

Telephone #: 508 756 0151
Project Mgr: Matt Lync

Invoice To: CEI

73522 On 4/8

P.O No.: Pending Quote/RQN:

Project No: 03-221324
Site Name: Westminster CEI #0006
Location: 68 Main St, Westminster State: MA
Sampler(s): Andrew Clark

F=Field Filtered **1**=Na_2S2O_3 **2**=HCl **3**=H_2SO_4 **4**=HNO_3 **5**=NaOH **6**=Ascorbic Acid
7=CH_3OH **8**=$NaHSO_4$ **9**=Deionized Water **10**=H_3PO_4 **11**= **12**=

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

G= Grab **C**=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic
SC19886-01	MW-1	4/6/16	9:45	G	GW	3	2		6

List Preservative Code below: 2 / 4 4/8

Analysis

TPH 1664	RCRA 8 Total Metals	RCRA 8 Dissolved Metals	VOC 8260	PAH/Target/Naphthalene	VOC 8260	SVOC 8270
X	X	X	X	X	X	X

Check if chlorinated: ☐ (all rows)

QA/QC Reporting Notes:
* additional charges may appply

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

Relinquished by:	Received by:	Date:	Time:
[signature] DSC	[signature]	4/6/16	1303
	[signature]	4/7/16	1424

Temp °C: Observed 1.3 / Correction Factor 0 / Corrected 1.3 / IR ID # 02

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

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

SC1988601

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 3 day (4/12/16)

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

Report To: ECS - Worcester

Invoice To: CFI

Project No: 03-221324

Site Name: Westminster - CFI # 0006

Location: 68 Main St, Westminster State: MA

Telephone #:

Project Mgr: Matt Lyne

P.O No.: 73522 Quote/RQN:

Sampler(s): Andrew Clark

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

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

G= Grab **C**=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: PCBs	Check if chlorinated
SC1988601	MW-1	4-6-16	9:45	G	GW		1			X	☐
											☐
											☐
											☐
											☐
											☐
											☐
											☐
											☐
											☐
											☐

List Preservative Code below:

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☒ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No

- ☒ Standard ☐ No QC
- ☐ DQA*
- ☐ ASP A* ☐ ASP B*
- ☐ NJ Reduced* ☐ NJ Full*
- ☐ Tier II* ☐ Tier IV*
- ☐ Other:

State-specific reporting standards:

* Combine this sample with others collected the previous day

Relinquished by:	Received by:	Date:	Time:
Matt Lyne DSC		4-8-16	1431
		4-8-16	16:12

Temp °C: Observed 2.8; Correction Factor 0; Corrected 2.8; IR ID # 01

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

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

eurofins | Spectrum Analytical

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

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

Laboratory ID	*Client ID*	*Analysis*	*Added*
SC19886-01	MW-1	Polychlorinated Biphenyls	4/8/2016
SC19886-01	MW-1	Semivolatile Organic Compounds	4/8/2016
SC19886-01	MW-1	Chloride	4/13/2016
SC19886-01	MW-1	Soluble Antimony by ICP	4/13/2016
SC19886-01	MW-1	Soluble Beryllium by ICP	4/13/2016
SC19886-01	MW-1	Soluble Copper by ICP	4/13/2016
SC19886-01	MW-1	Soluble Iron by ICP	4/13/2016
SC19886-01	MW-1	Soluble Nickel by ICP	4/13/2016
SC19886-01	MW-1	Soluble Thallium by ICP	4/13/2016
SC19886-01	MW-1	Soluble Zinc by ICP	4/13/2016
SC19886-01	MW-1	Total Antimony by ICP	4/13/2016
SC19886-01	MW-1	Total Beryllium by ICP	4/13/2016
SC19886-01	MW-1	Total Calcium by ICP	4/13/2016
SC19886-01	MW-1	Total Copper by ICP	4/13/2016
SC19886-01	MW-1	Total Hardness	4/13/2016
SC19886-01	MW-1	Total Iron by ICP	4/13/2016
SC19886-01	MW-1	Total Magnesium by ICP	4/13/2016
SC19886-01	MW-1	Total Nickel by ICP	4/13/2016
SC19886-01	MW-1	Total Thallium by ICP	4/13/2016
SC19886-01	MW-1	Total Zinc by ICP	4/13/2016

ATTACHMENT III

MassDEP - Bureau of Waste Site Cleanup

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

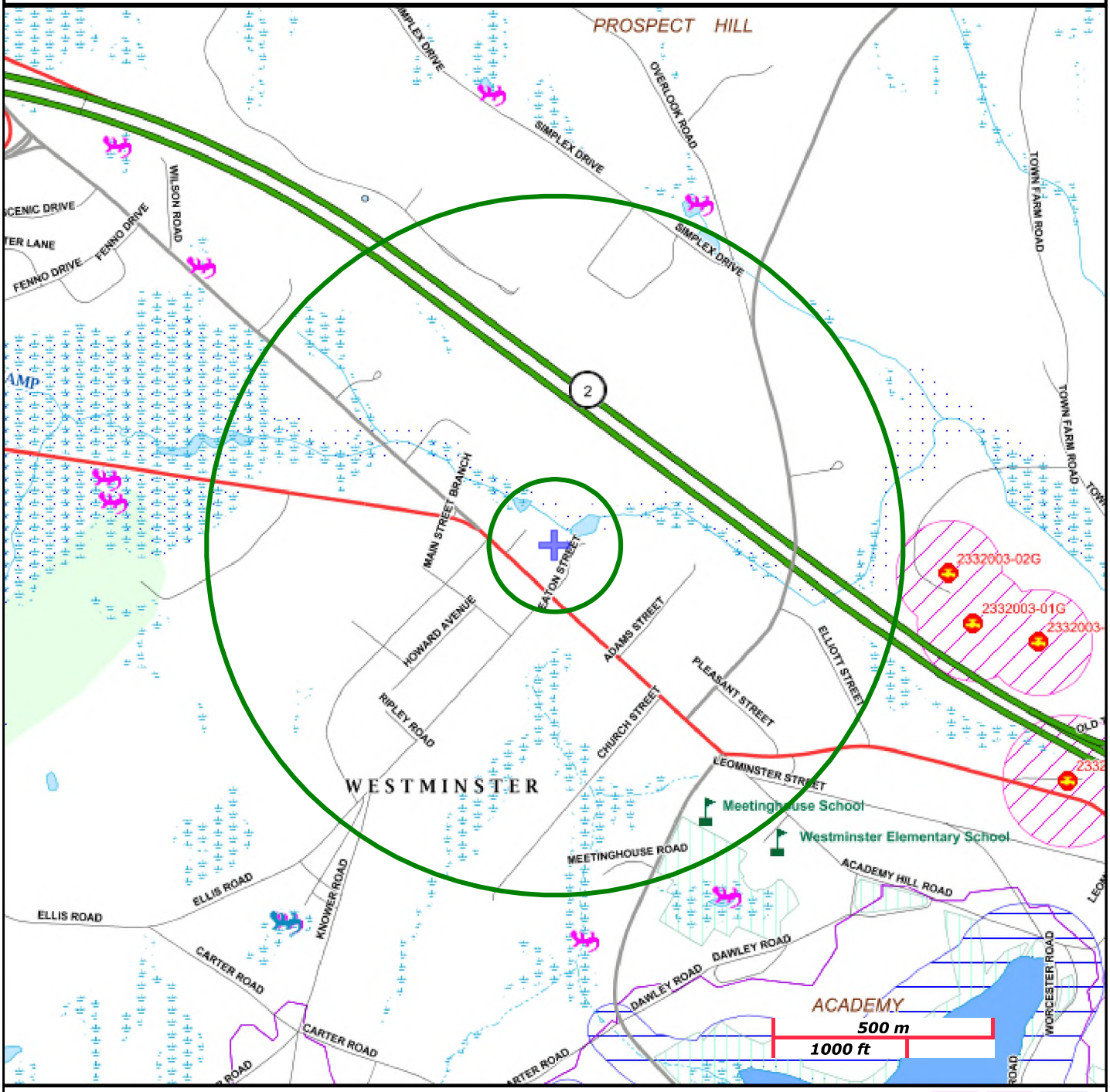
Site Information:

68 MAIN STREET WESTMINSTER, MA

NAD83 UTM Meters:
4714860mN , 260612mE (Zone: 19)
April 13, 2016

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

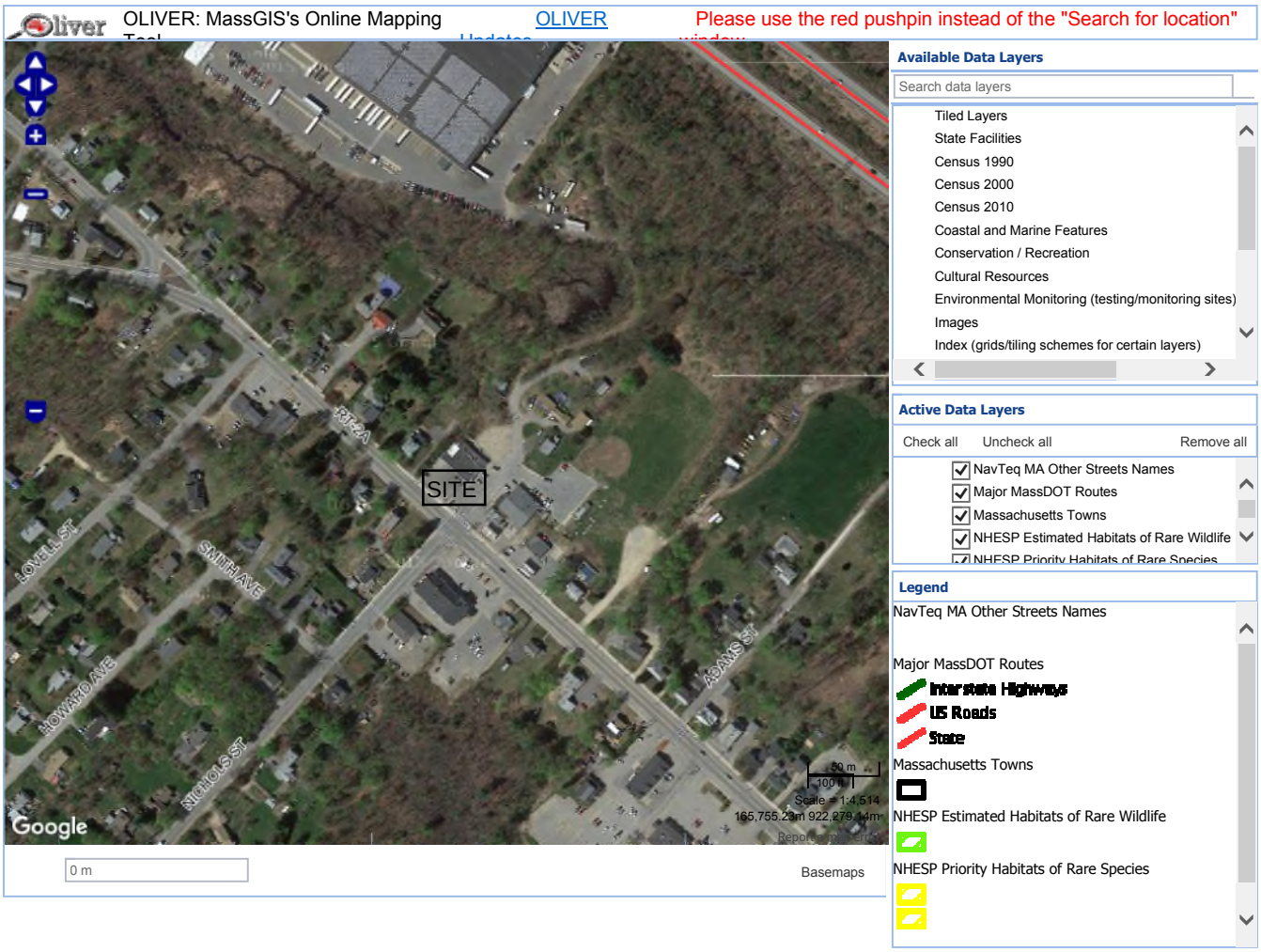
Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

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

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


OLIVER: MassGIS's Online Mapping Tool
OLIVER
Please use the red pushpin instead of the "Search for location" window.
SITE
LOVELL ST
SMITH AVE
HOWARD AVE
NICHOLS ST
ADAMS ST
Google
0 m
Basemaps
Available Data Layers
Search data layers
Tiled Layers
State Facilities
Census 1990
Census 2000
Census 2010
Coastal and Marine Features
Conservation / Recreation
Cultural Resources
Environmental Monitoring (testing/monitoring sites)
Images
Index (grids/tiling schemes for certain layers)
Active Data Layers
Check all
Uncheck all
Remove all
NavTeq MA Other Streets Names
Major MassDOT Routes
Massachusetts Towns
NHESP Estimated Habitats of Rare Wildlife
Legend
NavTeq MA Other Streets Names
Major MassDOT Routes
Interstate Highways
US Roads
State
Massachusetts Towns
NHESP Estimated Habitats of Rare Wildlife
NHESP Priority Habitats of Rare Species

ATTACHMENT IV

Massachusetts Cultural Resource Information System
MACRIS

Results

Get Results in Report Format
(•) PDF ( ) Spreadsheet

Below are the results of your search, using the following search criteria:
Town(s): Westminster
Street No: 68
Street Name: Main
Resource Type(s): Area, Building

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

No Results Found.

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

MHC Home | MACRIS Home