ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

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February 9, 2018
Project Number 03-224773

Ms. Shelley Puleo
U.S. Environmental Protection Agency
Office of Ecosystem Processing
RGP Applications Coordinator (OEP06-1)
5 Post Office Square, Suite 100
Boston, MA 02109-3912

RE: Notice of Intent for Dewatering General Permit
Vacant McDonald's Restaurant
Proposed Cumberland Farms Property #MA3163
550 Kimball Street
Fitchburg, MA 01420
MassDEP RTN: 2-20376

Dear Ms. Puleo:

ATC Group Services LLC (ATC) is pleased to provide supporting documentation for the Notice of Intent (NOI) for the Remediation General Permit (RGP) on behalf of Cumberland Farms, Inc. (CFI), for the above-referenced property (the "Site"). This NOI is being submitted in order to obtain approval for the discharge of treated groundwater at the Site. The discharge and dewatering is necessary to allow for the installation of gasoline USTs on a portion of the Site. A Site Locus is provided as Figure 1 and a Site Plan depicting the dewatering and discharge locations is provided as Figure 2. A copy of the NOI form is provided as Attachment I.

Background

The Site is a former McDonald's restaurant with one single-story 4,628-square foot building, which closed in November 2015. According to the Assessor's Property Card, the Site building was reportedly constructed in 1990. The topography of the Site is generally flat with slight downward relief toward the eastern and southern portions of the property where the bank of the Nashua River is located. Site access is provided via asphalt paved egresses on Daniels Street and Kimball Street. The Site is in an area of commercial and industrial use with residential properties located approximately 200 feet south/southeast of the Site.

The Site is currently connected to municipal water and sewer systems. The sewer connection was made in 1990. Electricity service is provided to the Site buildings via an underground electric line extending from a utility pole located on the northern property boundary to the Site building. The building is heated via a natural gas burner which utilizes natural gas line that enters the property from the south.

Trichloroethylene, vinyl chloride, and cis 1,2-dichloroethene were detected in soil and groundwater samples at concentrations that exceeds MassDEP reportable concentrations and

required MassDEP notification. CVOCs were detected in groundwater throughout the site in both the shallow aquifer and the deep aquifer. As such, the CVOCs plume is widespread, both vertically and horizontally, and extends to the northern and southern portions of the Site. Based on extensive historical file reviews, due diligence, and site sampling, no on-site sources of CVOCs have been identified at the Site. However, it is possible that prior development of the Site utilized off-site fill soil that may have contained CVOCs.

On November 2, 2017, CFI notified the MassDEP of the Reportable Concentrations of CVOC analytes detected in soil and groundwater samples exceeding the applicable RCS-1 and RCGW-2 limits via a Release Notification Form submitted through the eDEP electronic filing system. MassDEP subsequently issued RTN 2-20376 for this 120-day regulatory notification condition. A Release Abatement Measure (RAM) Plan was submitted to MassDEP on December 11, 2017 and outlined the steps to be taken to manage soil and groundwater at the Site during upcoming redevelopment activities.

Pretreatment

The excavation will be dewatered by installing a recovery well using slotted pipe and well gravel around the screen to reduce solids. A pump will be used so that collected groundwater from the excavation area will be pumped into a 20,000 gallon frac tank (to settle out solids). An aerator will be used in the frac tank, as needed, to aid in the settling of solids and heavy metals, as well as a flocculant sock. The flocculant material to be used is called HaloKlear DMP-2100 (Socks) and is manufactured by HaloSource, INc. in Bothell, Washington. The HaloKlear material specifications and safety data sheet are included in Attachment II. The floc socks will be used as needed, depending on the solid content of the influent raw water. The floc socks will be installed in line with the influent hose and used intermittently during dewatering activities. The floc socks are commonly used in discharge treatment and have previously been authorized in general permit activities. The water in the frac tank will then be pumped through bag filters to remove solids and then through 1,000 lbs of carbon for removal of VOCs prior to discharge to a catch basin located on-site. Treated water will be discharged to an on-site storm water drainage system, which is connected to an outfall located along the bank of the Nashua River on the southern portion of the Site. Please refer to Figure 2 for a depiction of the discharge and outfall locations and Figure 3 for the Treatment System Schematic.

Average flow rate of discharge of treated groundwater from the Site to the storm drainage line is expected to be approximately 50 gallons per minute (gpm). The design capacity of the groundwater treatment system is 80 gpm based upon data collected from comparable sites operated/designed by ATC.

Influent Sample Analysis

Groundwater samples were collected from the raw water/influent location (MW-5) on September 18, 2017 and were submitted to Spectrum/Eurofins Analytical, Inc. of Agawam, Massachusetts for laboratory analysis for the following parameters:

- Total Petroleum Hydrocarbons (TPH) by EPA method 1664,
- Volatile Organic Compounds (VOCs) by EPA Method 8260/624/524.2,

- Semi-Volatile Organic Compounds (SVOCs) by EPA method 625,
- PCBs by EPA method 8082,
- Total metals by EPA Method 200.7,
- Cyanide,
- Ammonia,
- Flashpoint,
- pH,
- Salinity,
- Hardness, and,
- Total Suspended Solids (TSS).

Also, a sample of the receiving water (Nashua River) was collected on this date for laboratory analysis of pH, Hardness, Ammonia, and Metals. A summary of the sampling data is provided on Table 1 and a copy of the laboratory report is included in Attachment VI. Based on the location of the outfall and receiving waters and the proposed design discharge flow, the seven day-ten year low flow (7Q10) of the receiving waters was determined to be 2.66 MGD and the calculated dilution factor was determined to be 24.1. MassDEP reviewed and approved the 7Q10 low flow determination and the calculated dilution factor (Attachment III).

Groundwater analytical results were compared to the Appendix III effluent limitations (www.epa.gov/region1/npdes/rgp.html). These results indicate that various parameters were detected in the samples and the following parameters were detected at concentrations that exceed the applicable EPA Appendix III effluent limitations:

- Iron
- TSS

Total suspended solids and metals are expected to be reduced by pretreatment with settling and filtration.

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 work area. No NHESP Estimated Habitats of Rare Wildlife in Wetland Areas Protected Open Spaces are located within 500 feet of the Site. Based on this information, 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 IV.

Review of National Register of Historic Places

Listings of Historic Places within the City of Fitchburg were obtained from the Massachusetts Cultural Resources Information System (MACRIS) online database at http://mhc-macris.net/towns.aspx (accessed December 14, 2017). A copy of the MACRIS report is provided as Attachment V. 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.

The proposed redevelopment project is scheduled to start on January 22, 2018 and last for approximately 6 months. The duration of the dewatering aspect of the project is only expected to be for 1-2 weeks. Should you have any questions or concerns regarding the contents of this letter or the NOI for the RGP, please do not hesitate to contact the undersigned at (508) 756-0151.

Sincerely,
ATC GROUP SERVICES LLC

Matthew J. Lyne
Senior Project Manager

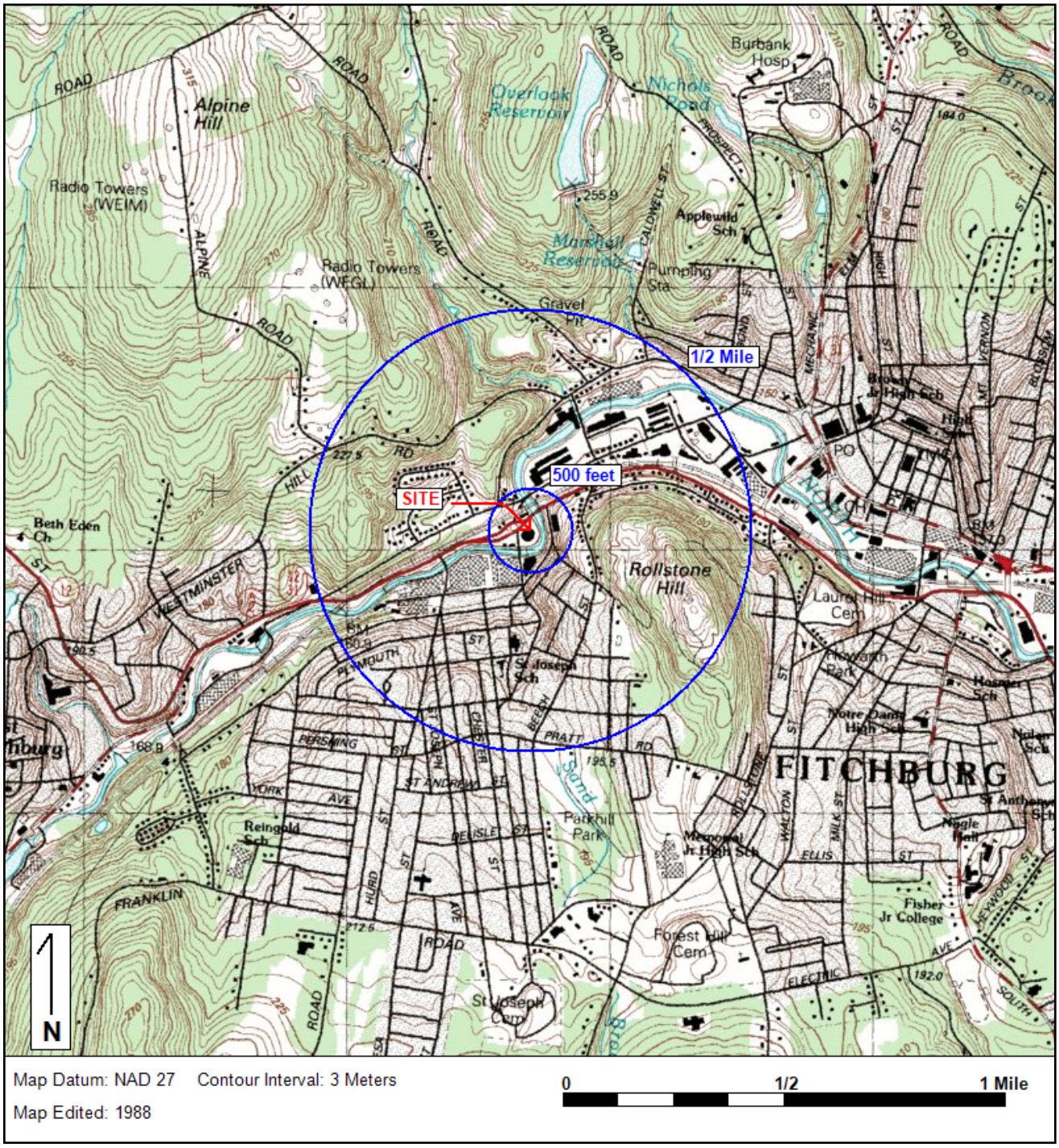
cc: Matthew Young, Cumberland Farms, Inc., 165 Flanders Road, Westborough, MA
Cathy Vakalopoulus, MassDEP, Surface Water Discharge Permit Program, One Winter Street, 5th Floor, Boston, MA 02108
City of Fitchburg Department of Public Works-301 Broad Street, Fitchburg, MA

Attachments
Figure 1: Site Locus
Figure 2: Site Plan
Figure 3: Treatment System Schematic
Table 1: Summary of Influent Sampling Data
Attachment I: NOI for the RGP
Attachment II: Flocculant Material-Product Specification and Safety Data Sheet
Attachment III: MassDEP Approval of 7Q10 Low Flow Determination & Dilution Factor Calculation
Attachment IV: MassGIS Resource Priority and NHESP Map
Attachment V: MACRIS Database Search Results, PNF
Attachment VI: Laboratory Analytical Report

FIGURES

MA-NTI- Fitchburg- 550 Kimball Street
550 Kimball Street
Fitchburg, MA

Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Fitchburg, MA

Lat/Lon: 42 34' 56.83" NORTH, 71 49' 5.17" WEST - UTM Coordinates: 19 268743.9 EAST / 4718298.5 NORTH

Generated By: Carol Farrington

METES & BOUNDS DESCRIPTION

RECORD DESCRIPTION:

Beginning at an iron pin on the easterly sideline of Daniels Street, a public way 50' wide, said point being a point on the westerly property line of the herein described parcel;

Thence north 10° 24' 30" west along said easterly sideline, one hundred and 00/100 (100.00) feet to an iron pin marking a point of curvature at the southeasterly corner of Daniels Street and Kimball Street, a public way 49.5" wide;

Thence northeasterly along a curve to the right having a radius of 110.00', a central angle of 59° 37' 00", a tangent length of 63.02', an arc length of one hundred fourteen and 46/100 (114.46) feet to an iron pin marking a point of tangency on the southerly sideline of said Kimball Street;

Thence north 49° 12' 30" east along said southerly sideline, one hundred and 00/100 (100.00) feet to an iron pin on the northerly property line of the herein described parcel;

Thence continuing north 49° 12' 30" east along said southerly sideline, eighty–nine (89) feet, more or less, to the high water mark of the westerly side of the Nashua River;

Thence southeasterly, southwesterly and westerly by said high water mark, six hundred thirty–four (634) feet, more or less, to a point on the easterly sideline of Daniels Street;

Thence north 10° 24' 30" west by said Daniels Street, eighty–nine (89) feet, more or less, to an iron pin and the point of beginning.

SURVEYED DESCRIPTION:

Beginning at an iron pin on the easterly sideline of Daniels Street, a public way 50' wide, said point being a point on the westerly property line of the herein described parcel;

Thence north 10° 24' 30" west along said easterly sideline, one hundred and 00/100 (100.00) feet to an iron pin marking a point of curvature at the southeasterly corner of Daniels Street and Kimball Street, a public way 49.5" wide;

Thence northeasterly along a curve to the right having a radius of 110.00', a central angle of 59° 37' 00", a tangent length of 63.02', an arc length of one hundred fourteen and 46/100 (114.46) feet to an iron pin marking a point of tangency on the southerly sideline of said Kimball Street;

Thence north 49° 12' 30" east along said southerly sideline, one hundred and twenty–three and 79/100 (123.79) feet to a point;

Thence south 40°47'30" east five and 00/100 (5.00) feet to a Massachusetts Highway Bound;

Thence N49°12'30"E sixty–four and 30/100 feet to a point on the high water mark of the westerly side of the Nashua River;

Thence southeasterly, southwesterly and westerly by said high water mark, six hundred thirty–four (634) feet, more or less, to a point on the easterly sideline of Daniels Street;

Thence north 10° 24' 30" west by said Daniels Street, eighty–nine (89) feet, more or less, to an iron pin and the point of beginning.

SCHEDULE B–2 EXCEPTIONS

(7) Notice of Taking issued by the City Council of the City of Fitchburg dated December 4, 1934 and recorded in Book 517, Page 554 as shown on a plan recorded in Plan Book 58, Plan 19. **NO LONGER AFFECTS THE SURVEY TRACT, SUPERCEDED BY TAKING IN EXCEPTION #8.**

(8) Notice of Taking issued by the City Council of the City of Fitchburg dated August 23, 1948 and recorded in Book 653, Page 242. **CURRENT RIGHT OF WAY LINE OF DANIELS & KIMBALL STREETS.**

(9) Rights and/or reservations as set forth in a Deed from Charles T. Crocker and William Roscoe Lyon to Grant Yard Company dated June 30, 1905 and recorded in Book 195, Page 119. **DOES NOT AFFECT THE SURVEY TRACT.**

(10) Subject to the existing water and flowage rights set forth in a Deed from Mill Properties, Inc., to Swanson Banking Company dated June 2, 1930 and recorded in Book 478, Page 195. **GAS STATION RESTRICTION DOES AFFECT THE SURVEY TRACT (BLANKET IN NATURE, NOT PLOTTABLE), FLOWAGE RIGHTS DO NOT AFFECT THE SURVEY TRACT.**

(11) Easement from Swanson Banking Co., to the City of Fitchburg dated May 6, 1936 and recorded in Book 531, Page 310. **NO LONGER APPEARS TO AFFECT THE SURVEY TRACT, DAM APPEARS TO HAVE BEEN REMOVED.**

(12) Restrictions as set forth in a Deed from Swanson Baking Company to Krikor Marijanian et al., recorded in Book 690, Page 325. **GAS STATION RESTRICTION DOES AFFEXCT THE SURVEY TRACT (BLANKET IN NATURE, NOT PLOTTABLE).**

(13) Easement from Kostas Rodopoulos to the City of Fitchburg dated July 7, 1983 and recorded in Book 1701, Page 342. **DOES AFFECT THE SURVEY TRACT.**

(14) Order of Taking (Layout No. 8120) issued by the Massachusetts Department of Transportation dated February 16, 2011 and recorded in Book 7364, Page 311. **DOES AFFECT THE SURVEY TRACT AND IS SHOWN HEREON.**

(15) Grant of Easement from McDonald's USA, LLC to Fitchburg Gas and Electric Light Company and Verizon New England Inc., dated September 13, 2011 and recorded in Book 7487, Page 197. **DOES AFFECT THE SURVEY TRACT AND IS SHOWN HEREON.**

(16) Special Permit #2012–5 & Site Plan Approval issued by the Planning Board of the City of Fitchburg dated July 27, 2012 and recorded in Book 7704, Page 312. **NO LONGER AFFECTS THE SURVEY TRACT, THE SIGN HAS BEEN REMOVED.**

(17) Grant of Easement from Swanson Baking Company, Inc. to the City of Fitchburg for River Channel maintenance dated February 9, 1937 and recorded in Book 535, Page 157. **DOES AFFECT THE SURVEY TRACT (BLANKET IN NATURE, NOT PLOTTABLE).**

(18) Rights of the Public, federal, state or local governments in and to so much of the premises as lies below the present or former high water mark of the Nashua River. **DOES AFFECT THE SURVEY TRACT & THE CURRENT APPROXIMATE HIGH WATER MARK IS SHOWN HEREON.**

(19) Title to so much of the premises including any buildings or improvements thereon as lies below the former mean high water mark of the Nashua River. **DOES AFFECT THE SURVEY TRACT & THE CURRENT APPROXIMATE HIGH WATER MARK IS SHOWN HEREON.**

(20) Title to so much of the premises including any buildings or improvements thereon as lies within the present or former bed or bottom of the Nashua River, its arms, branches or tributaries by whatever name. **DOES AFFECT THE SURVEY TRACT & THE CURRENT LOCATION OF THE NASHUA RIVER IS SHOWN HEREON.**

(21) Order of Conditions issued by the Fitchburg Conservation Commission (DEP File No. 155–662) to Cumberland Farms, Inc. recorded in Book 8913, Page 281. **DOES AFFECT THE SURVEY TRACT (BLANKET IN NATURE, NOT PLOTTABLE).**

LEGEND

- UTILITY POLE
- SEWER MANHOLE
- CATCH BASIN
- WATER VALVE
- FIRE HYDRANT
- GAS VALVE
- WATER LINE
- GAS LINE
- UGE — UNDERGROUND ELECTRIC
- OVERHEAD SERVICE WIRES
- STOCKADE FENCE
- DSYL — DOUBLE SOLID YELLOW LINE
- SSWL — SINGLE SOLID WHITE LINE
- EOP — EDGE OF PAVEMENT
- CHAINLINK FENCE
- ENTRY
- SIGN
- LIGHT POLE
- TREELINE
- SPOT ELEVATION
- 490 — CONTOUR ELEVATION
- (9) — TITLE EXCEPTION #
- RESOURCE AREA BUFFER ZONE
- 495 — FLOODPLAIN ELEVATION

ABUTTER ACROSS RIVER
MAP 39 LOT 46
N/F JAMES FEMINO
61 WALL STREET
FITCHBURG, MA 01420
ZONE: C & A
(COMMERCIAL & AUTOMOTIVE)

APPROXIMATE FLOODPLAIN ELEVATION BASED ON FLOOD INSURANCE RATE MAPS – (TYP) (SEE NOTE 3 ON CFG02.0)

SOUTHEASTERLY, SOUTHWESTERLY & WESTERLY 634' BY THE HIGH WATER MARK OF THE NASHUA RIVER (18)(19)

ABUTTER ACROSS RIVER
N/F DCR PROPERTIES OF MASSACHUSETTS, LLC
1127 SOUTH MAIN STREET
PALMER, MA 01069
BOOK 7118 PAGE 364
ZONE: C & A
(COMMERCIAL & AUTOMOTIVE)

NASHUA RIVER (20)

Outfall Location

WETLAND RESOURCE AREA AS DELINEATED BY EPSILON ASSOCIATES, INC. ON 6/7/16

MAP 39 LOT 47
85,813 Sq.Ft.
1.97 Ac±

100' WETLAND BUFFER

75' NO BUILD ZONE

50' NO DISTURBANCE ZONE

Proposed UST Area- Dewatering Area

Proposed Discharge Locations

1 STORY MASONRY BUILDING FF=496.56

(TIE-LINE FOR CLOSURE ONLY)

THRU DRIVE

DRIVE THRU CLEARANCE BAR

DUMPSTER ENCLOSURE

BRICK WALL

CONCRETE TRANSFORMER PAD

CONCRETE PAD

GAS SERVICE

BRICK WALKWAY

PAINTED PARKING STALLS (TYP)

ROOF OVERHANG (TYP)

FLAGPOLE

ROW OF ARBORVITAE

TREELINE (TYP)

EDGE OF WATER (TYP)

VENT PIPE

BITUMINOUS CONCRETE

BITUMINOUS CONCRETE SIDEWALK

CONCRETE SIDEWALK

PAINTED CROSSWALK

METAL GUARD RAIL

LSA

SIGN NO PARKING

SIGN STOP

SIGN RTE 31

SIGN RTE 2A RTE 12

SIGN RTE 2A, 3

SIGN PEDESTRIAN CROSSING SYMBOL

SIGN KEEP RIGHT

SIGN DO NOT ENTER

MASS DOT LAYOUT NO. 8120 BASELINE

PAINTED CROSSWALK (TYP)

EXISTING CUMBERLAND FARMS OVERHEAD CANOPY

EXISTING CUMBERLAND FARMS BUILDING (C–STORE)

MAP 51 LOT 10
N/F VSH REALTY TRUST
100 CROSSING BLVD.
FRAMINGHAM, MA
BOOK 1146 PAGE 369
ZONE: C & A
(COMMERCIAL & AUTOMOTIVE)

MAP 39 LOT 54
N/F DOROTHY TAYLOR
c/o DOROTHY ROULEAU
320 RIVER STREET
FITCHBURG, MASSACHUSETTS 01420
BOOK 1738 PAGE 232
ZONE: C & A
(COMMERCIAL & AUTOMOTIVE)

BRICK BUILDING (FORMER FACTORY)

KIMBALL STREET
(PUBLIC – BIT. CONC. – VARIABLE WIDTH R.O.W.)

DANIELS STREET
(PUBLIC – BIT. CONC. – 50' WIDE R.O.W.)

P.O.B.

1.5" IRON PIPE FOUND DOWN 0.8'

1/2" IRON ROD FOUND UP 0.05'

1" IRON ROD FOUND DOWN 0.2'

GRANITE BOUND FOUND DOWN 0.1' W/DRILL HOLE

GRANITE BOUND FOUND FLUSH

GRANITE BOUND FOUND FLUSH W/DRILL HOLE

N49°12'30"E 64.30'

N49°12'30"E 123.79'

S40°47'30"E 5.00'

N10°24'30"W 100.00'

N10°24'30"W 114.46'

S81°43'10"W 284.42'

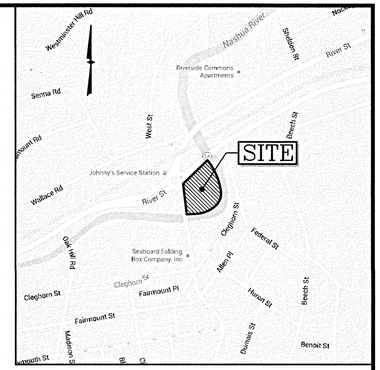
S10°24'30"E 266.12'

R=110.00'
Δ=59°37'00"

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

ENCROACHMENTS

A — UTILITY POLE ENCROACHES ONTO SURVEY TRACT 1.6'±



LOCATION MAP
(NOT TO SCALE)

NOTES:

1) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED.
2) ELEVATIONS SHOWN HEREON ARE ON NGVD29 PER GPS OBSERVATIONS PERFORMED ON JUNE 29, 2016 (ADJUSTED FROM NAVD88 TO NGVD29 UTILIZING VERTCON). CURB ELEVATIONS SHOWN ARE AT THE "TOE" OF CURB. CURBS ARE 0.50'± HIGH.
3) THE SURVEY TRACT IS LOCATED IN ZONE 'A17' AS SHOWN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL #2503040008C FOR WORCESTER COUNTY ME. EFFECTIVE DATE: SEPTEMBER 18, 1991.
4) REFER TO FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE #NCS–794985–HOU1; EFFECTIVE: SEPTEMBER 21, 2017.
5) NONE OF THE SURVEY TRACT LIES WITHIN THE BOUNDS OF ANY ADJACENT STREETS, ROADS OR WAYS.
6) THERE IS NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING FIELDWORK.

PLAN REFERENCES:

1) MASSACHUSETTS DEPARTMENT OF TRANSPORTATION PLAN OF ROAD IN THE CITY OF FITCHBURG, WORCESTER COUNTY ALTERED AND LAID OUT AS A STATE HIGHWAY BY THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION. LAYOUT NO. 8120 DATED FEBRUARY 16, 2011 WITH A DRAWING SCALE OF 1:20.
2) WORCESTER NORTHERN DISTRICT REGISTRY OF DEEDS (W.N.D.R.D.) PLAN #10350.
3) W.N.D.R.D. PLAN #10351
4) ARMY CORP. OF ENGINEERS PLAN ENTITLED NASHUA CHANNEL IMPROVEMENTS FITCHBURG, MASS. PLAN BOOK 65 PAGE 3.
5) ARMY CORP. OF ENGINEERS PLAN ENTITLED NASHUA CHANNEL IMPROVEMENTS FITCHBURG, MASS. PLAN BOOK 65 PAGE 5.
6) PLAN ENTITLED CITY OF FITCHBURG SEWAGE DISPOSAL COMMISSIONERS CLEGHORN CONNECTION SHEET NO. 1 DATED JULY 3, 1914 WITH A DRAWING SCALE OF 1:40.

OWNER OF RECORD:

McDONALD'S CORPORATION
PO BOX 182571
COLUMBUS, OH 43218
BOOK 1982 PAGE 130

CERTIFICATION:

TO: CUMBERLAND FARMS, INC. AND FIRST AMERICAN TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1–5, 6a, 7a, 7b, 8–10, 11 –14, 16 & 19 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON JUNE 29, 2016.

DAVID R. JORDAN, MA PLS #38710
DATE OF PLAT OR MAP: 10/10/17

COMMONWEALTH OF MASSACHUSETTS
DAVID R. JORDAN
No. 38710
10/10/17

MHF Design Consultants, Inc.
44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893–0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

REVISIONS			
NO.	DATE	REV. BY:	DESCRIPTION
1	2/3/17	CMT	ADD WETLAND BUFFERS
2	9/12/17	CMT	MISC. REVISIONS
3	10/9/17	JAC	UPDATE PER TITLE COMM.

85,813 SQUARE FEET	
1.97 Acres	
V# NEW	
Store# NEW	
Gas Station# NEW	

550 KIMBALL STREET
FITCHBURG, MA 01420

CUMBERLAND FARMS INC.
100 CROSSING BLVD.
FRAMINGHAM, MA 01702

SCALE:	1"=20'
DATE:	DECEMBER 5, 2016
FILE:	3954TWS.DWG
DRAWN BY:	MJK
CHECKED BY:	CMF

ALTA/NSPS LAND TITLE SURVEY — CFG02.0

MHF PROJECT NO. 395416 SHEET 2 OF 12

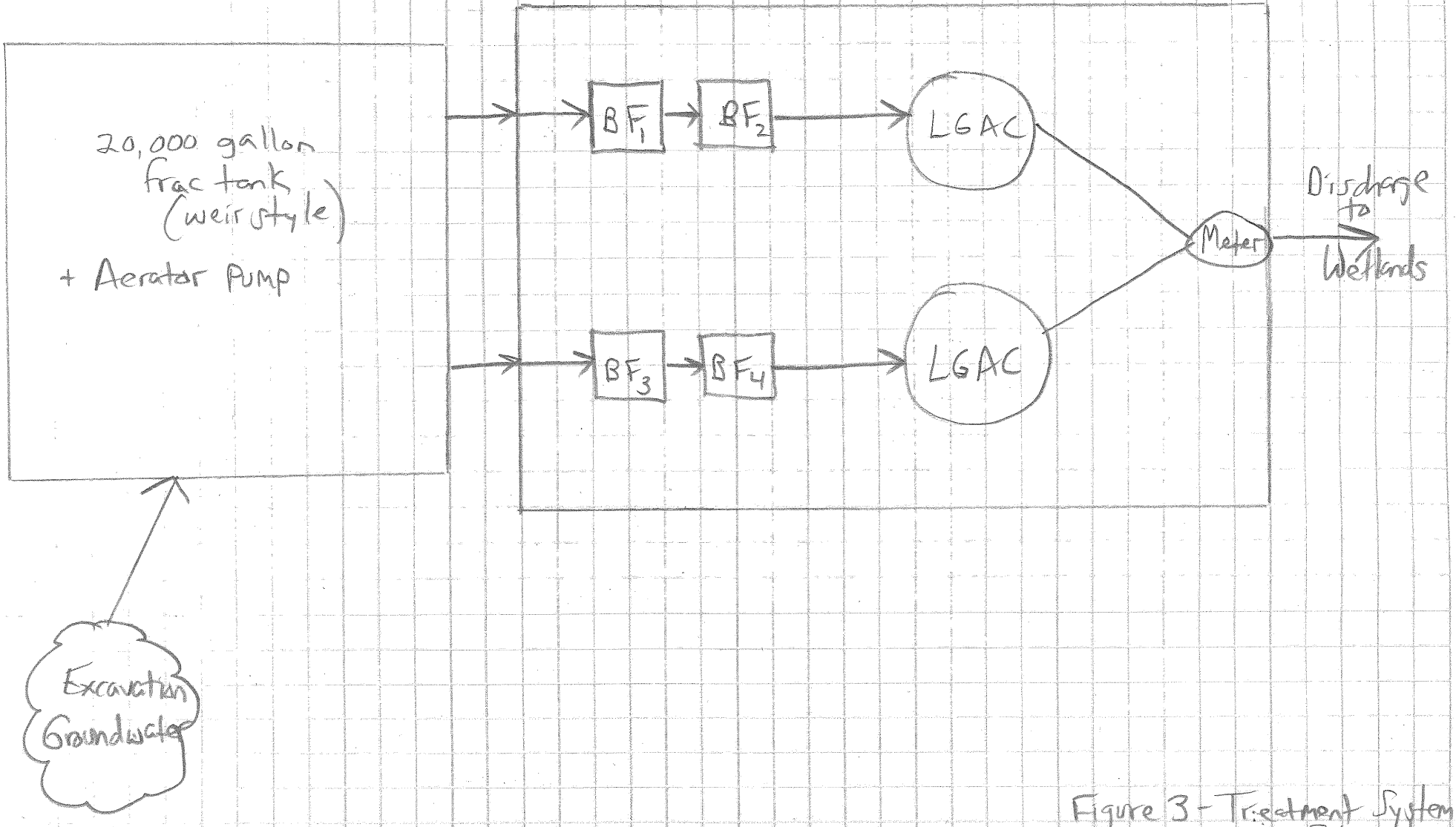


Figure 3 - Treatment System Schematic

TABLES

Table 1
Summary of Groundwater Analytical Data
CFI #MA3163
550 Kimball Street
Fitchburg, MA

		Influent	River-Receiving Water		Minimum Lab ML	MassDEP RCGW-2	EPA RGP Discharge Limit-TBEL
Sampling Date		9-18-17	9-18-17				
Depth to Groundwater (ft)		14.44					
VOCs by 624/8260 (µg/L)							
Benzene		< 0.50	NS		5	1,000	5
Total BTEX		< 0.50	NS		NS	NA	100
MTBE		0.69	NS		20	5,000	70
Acetone		< 10.0	NS		7,970	50,000	7,970
Tert-amyl methyl ether (TAME)		< 0.50	NS		90	NS	90
Tert Butyl Alcohol (TBA)		< 10.0	NS		120	NS	120
Ethanol		< 200	NS		400	NS	NS
cis-1,2-Dichloroethene		4.68	NS		70	20	70
trans-1,2-Dichloroethene		0.61	NS		70	80	NS
Trichloroethene		0.58	NS		5.0	5	5
Vinyl Chloride		1.00	NS		2.0	2	2
SVOCs by 625 SIM (µg/L)							
Naphthalene		< 0.05	NS		20	700	20
Benzo(a)anthracene		< 0.05	NS		0.1	1,000	NS
Acenaphthene		< 0.05	NS		0.1	10,000	NS
Fluorene		< 0.05	NS		0.1	40	NS
Phenathrene		< 0.05	NS		0.1	10,000	NS
Total Group 1 PAHs		< 0.05	NS		1.0	NS	1.0
Total Group 1I PAHs		< 5.0	NS		100	NS	100
Pentachlorophenol		< 5.0	NS		1.0	NS	1.0
Total Pthalates		< 5.0	NS		190	NS	290
TPH by EPA 8100M (mg/L)		< 1.5	NS		5	5	5
PCBs by EPA 608 (mg/L)		< 0.00019	NS		0.0005	0.005	0.064
PP13 Metals by 6010 (mg/L)							
Iron (Total)		45.2	NS		1	NS	5
Arsenic (Total)		0.09	NS		0.01	0.90	0.104
Cadmium (Total)		0.001	NS		0.00025	0.004	0.010
Nickel (Total)		0.006	0.002		0.052	0.20	1.45
Selenium (Total)		0.011	NS		0.005	0.10	0.235
Zinc (Total)		0.003	0.005		0.120	0.90	0.420
Chromium (Hex) by 7196A		< 0.005	NS		0.011	0.3	0.323
Cyanide (mg/L)		< 0.005			0.005	0.03	178
Ammonia (mg/L)		4.44	0.24		0.1	10	NS
Flashpoint		> 150 F	NS		NS	No Flash	NS
pH		6.39	7.22		NS	0-4, 10-14	6.3-8.5
Chloride (mg/L)		98.0	NS		NS	NS	NS
Total Residual Chlorine (mg/L)		NS	NS		0.050	NS	NS
Hardness (mg/L)		212	25.2		NS	NS	NS
Total Suspended Solids (mg/L)		62.3	NS		30	NS	30

NOTE NA = Not Applicable. NS = Not Sampled
RCGW-2: Reportable Concentration for groundwater classifi Site is classified as RCGW-2.
EPA RGP Discharge Limit: Discharge Limits promulgated in 2017 RGP effective April 10, 2017.
Underline: Concentration exceeds EPA TBEL.
BOLD: Exceeds MassDEP RCGW-2.

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ATTACHMENT I

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Vacant McDonald's Restaurant</td><td colspan="3">Site address: 550 Kimball Street
Street:</td></tr>
<tr><td>City: Fitchburg</td><td>State: MA</td><td>Zip: 01420</td></tr>
<tr><td rowspan="4">2. Site owner
Cumberland Farms, Inc.

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

NPDES permit is (check all that apply: ☐ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="2">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 2-20376
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Nashua River	Source to Leominster POTW Mile Point 51.	B

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

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

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

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

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	4.12 cfs/2.66 MGD
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	24.1

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No
If yes, indicate date confirmation received: 12-13-17

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

C. Source water information:

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

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

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

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): Outfall 001: Bank of Nashua River along southern portion of Site.	Outfall location(s): (Latitude, Longitude) Lat: 42 34'56" Long: 71 49'5"
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Discharge to enter the receiving water via on-site storm drainage system with 24" outfall pipe that discharges to the Nashua River. ■ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ■ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: The operator and the owner are the same. Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ■ No	
Provide the expected start and end dates of discharge(s) (month/year): March 15, 2018 to July 30, 2018 (intermittently) Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	350.1	0.05	4.44	4.44	Report mg/L	---
Chloride		✔	1	300.0	4,000	98,000	98,000	Report µg/l	---
Total Residual Chlorine	✔							0.2 mg/L	
Total Suspended Solids		✔	1	2540	0.5	62.3	62.3	30 mg/L	---
Antimony	✔		1	6010	5			206 µg/L	
Arsenic		✔	1	6010	4	90	90	104 µg/L	
Cadmium		✔	1	6010	1	1	1	10.2 µg/L	
Chromium III	✔		1	6010	1			323 µg/L	
Chromium VI	✔		1	6010	5			323 µg/L	
Copper	✔		1	6010	5			242 µg/L	
Iron		✔	1	6010	10	45,200	45,200	5,000 µg/L	
Lead	✔		1	6010	2			160 µg/L	
Mercury	✔		1	7470	0.2			0.739 µg/L	
Nickel		✔	1	6010	2	3	3	1,450 µg/L	
Selenium		✔	1	6010	10	11	11	235.8 µg/L	
Silver	✔		1	6010	1			35.1 µg/L	
Zinc	✔		1	6010	1	6	6	420 µg/L	
Cyanide	✔		1	335.4	0.005			178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		1	524.2	0.50			100 µg/L	---
Benzene	✔		1	524.2	0.50			5.0 µg/L	---
1,4 Dioxane	✔			624	20			200 µg/L	---
Acetone	✔		1	524.2	10,000			7.97 mg/L	---
Phenol	✔		1	625	5			1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	624	0.50			4.4 µg/L	
1,2 Dichlorobenzene	✔		1	624	0.50			600 µg/L	---
1,3 Dichlorobenzene	✔		1	624	0.50			320 µg/L	---
1,4 Dichlorobenzene	✔		1	624	0.50			5.0 µg/L	---
Total dichlorobenzene	✔		1	624	0.50			763 µg/L in NH	---
1,1 Dichloroethane	✔		1	624	0.50			70 µg/L	---
1,2 Dichloroethane	✔		1	624	0.50			5.0 µg/L	---
1,1 Dichloroethylene	✔		1	624	0.50			3.2 µg/L	---
Ethylene Dibromide	✔		1	624	0.50			0.05 µg/L	---
Methylene Chloride	✔		1	624	0.50			4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	624	0.50			200 µg/L	---
1,1,2 Trichloroethane	✔		1	624	0.50			5.0 µg/L	---
Trichloroethylene		✔	1	624	0.50	0.58	0.58	5.0 µg/L	---
Tetrachloroethylene	✔		1	624	0.50			5.0 µg/L	
cis-1,2 Dichloroethylene		✔	1	624	0.50	4.68	4.68	70 µg/L	---
Vinyl Chloride		✔	1	624	0.50	1.00	1.00	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	625	5.0			190 µg/L	
Diethylhexyl phthalate	✔		1	625	5.0			101 µg/L	
Total Group I PAHs	✔		1	625	0.05			1.0 µg/L	---
Benzo(a)anthracene	✔		1	625	0.05			As Total PAHs	
Benzo(a)pyrene	✔		1	625	0.05				
Benzo(b)fluoranthene	✔		1	625	0.05				
Benzo(k)fluoranthene	✔		1	625	0.05				
Chrysene	✔		1	625	0.05				
Dibenzo(a,h)anthracene	✔		1	625	0.05				
Indeno(1,2,3-cd)pyrene	✔		1	625	0.05				

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs	✔		1	625	5.0			100 µg/L	---
Naphthalene	✔		1	625	5.0			20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	608	0.19			0.000064 µg/L	---
Pentachlorophenol	✔		1	625	5.0			1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		1	1664	1.5			5.0 mg/L	---
Ethanol	✔		1	8260	0.200			Report mg/L	---
Methyl-tert-Butyl Ether		✔	1	524.2	0.50	0.69	0.69	70 µg/L	
tert-Butyl Alcohol	✔		1	524.2	10.0			120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	524.2	0.50			90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH		✔	1	1293	NA	6.39	6.39		
Hardness		✔	1	E200.7	0.1	212	212		

E. Treatment system information

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

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ■ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ■ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ■ Other; if so, specify:
Aeration of frac tank to aid in precipitation of Iron.

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
See cover letter supplied with this notice of intent.

Identify each major treatment component (check any that apply):
■ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ■ Media filter
☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: 80 gpm Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	80 gpm
Provide the proposed maximum effluent flow in gpm.	80 gpm
Provide the average effluent flow in gpm.	50 gpm
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

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

F. Chemical and additive information

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

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

2. Provide the following information for each chemical/additive, using attachments, if necessary:
See cover letter supplied with the notice of intent for this information and Attachment II.
a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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

I. Supplemental information

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

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

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

J. Certification requirement

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

BMPP certification statement: A BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ☒ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ☒ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☐ No ☐ NA ☒
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ☒
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ☒
Signature: Matthew D Young	Date: 2-6-18
Print Name and Title: Matthew Young, Sr. Project Manager	

ATTACHMENT II

DBP-2100™

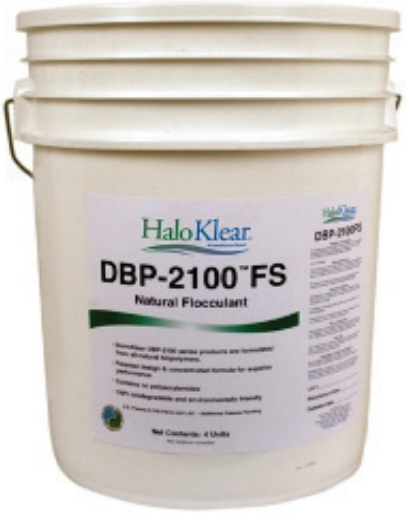
HaloKlear™ DBP-2100 is formulated from natural biopolymers and is 100% biodegradeable through enzymatic activity thus preventing bioaccumulation. The patented design & concentrated formula delivers cost effective, superior and consistent performance. It is used in conjunction with HaloKlear LiquiFloc™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

SPECIFICATIONS

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

Works well for contaminant removal applications including:

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



DELIVERY METHOD

DBP-2100 may be applied using several delivery methods:

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

For more information, please contact a qualified HaloKlear sales representative at 1-888-282-6766 or visit the HaloKlear website at www.haloklear.com.

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

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

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

Distributed By:

HaloKlear™
A HaloSource Brand

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

www.halosource.com • www.haloklear.com

HaloKlear DBP-2100 Socks

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/24/2016 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Substance name	:	HaloKlear DBP-2100 Socks
Chemical name	:	Xanthan Gum
CAS No	:	11138-66-2
Product code	:	210014

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	:	Flocculant

1.3. Details of the supplier of the safety data sheet

Dober Chemical Corp.
11230 Katherine's Crossing
Suite 100
Woodridge, IL 60517 - USA
T 630-410-7300 - F 630-410-7444
regulatory@dobergroup.com - www.dober.com

1.4. Emergency telephone number

Emergency number	:	1-800-255-3924 / 1-813-248-0585 ChemTel

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labelling

No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification	:	May form combustible dust concentrations in air. May cause eye irritation.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type	:	Mono-constituent
Name	:	HaloKlear DBP-2100 Socks
CAS No	:	11138-66-2

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

4.1. Description of first aid measures

First-aid measures general	:	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	:	Allow breathing of fresh air. Allow the victim to rest.
First-aid measures after skin contact	:	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	:	Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	:	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Eliminate all ignition sources if safe to do so. Use water spray or fog for cooling exposed containers.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Spills produce extremely slippery surfaces. Avoid dust formation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

None known.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well-ventilated place. Keep container closed when not in use.

Incompatible products : Oxidizing agent.

Incompatible materials : Sources of ignition.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HaloKlear DBP-2100 Socks (11138-66-2)	
ACGIH	Not applicable
OSHA	Not applicable

8.2. Exposure controls

Personal protective equipment	:	Avoid all unnecessary exposure.
Hand protection	:	Wear protective gloves/protective clothing/eye protection/face protection protective gloves.
Eye protection	:	Chemical goggles or safety glasses.
Respiratory protection	:	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Other information	:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	White to tan
Odour	:	odourless
Odour threshold	:	No data available
pH	:	approximately neutral (1% solution)
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Water: 100 %
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid dust formation.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon dioxide. Carbon monoxide. Fume.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Not classified pH: approximately neutral (1% solution)
Serious eye damage/irritation	:	Not classified pH: approximately neutral (1% solution)
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

HaloKlear DBP-2100 Socks (11138-66-2)	
LC50 fish 1	491 mg/l Rainbow Trout; 96 hour

12.2. Persistence and degradability

HaloKlear DBP-2100 Socks (11138-66-2)	
Persistence and degradability	This product is biodegradable.

12.3. Bioaccumulative potential

HaloKlear DBP-2100 Socks (11138-66-2)	
Bioaccumulative potential	Inherently biodegradable.

12.4. Mobility in soil

HaloKlear DBP-2100 Socks (11138-66-2)	
Mobility in soil	Not available

12.5. Other adverse effects

Effect on the global warming	:	No known ecological damage caused by this product.
Other information	:	No other effects known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Ecology - waste materials	:	None known.

SECTION 14: Transport information

UN-No.(DOT)	:	Non Regulated
UN-No. (IMDG)	:	Non Regulated
UN-No. (IATA)	:	Non Regulated

14.2. UN proper shipping name

Proper Shipping Name (DOT)	:	Not applicable

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

Transport hazard class(es) (DOT) : Not applicable

:

Transport hazard class(es) (IMDG) : Not applicable

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

14.5. Environmental hazards

Marine pollutant(IMDG) : No

Marine pollutant(IATA) : No

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA
No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

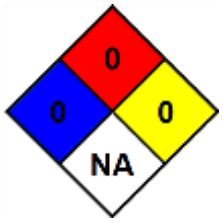
Other information : None.

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

NFPA specific hazard : NA - Not Applicable



HMIS III Rating	
Health	: 0 - No significant risk to health
Flammability	: 0
Physical	: 0
Personal Protection	: B

Dober SDS US

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

ATTACHMENT III

Matthew Lyne

From: Ruan, Xiaodan (DEP) <Xiaodan.Ruan@MassMail.State.MA.US>
Sent: Wednesday, December 13, 2017 3:40 PM
To: Matthew Lyne
Cc: Vakalopoulos, Catherine (DEP)
Subject: RE: RGP NOI: Request for Dilution Factor approval

Hi Matt,

Thanks. I can confirm that the 7Q10 of 2.66 MGD and using a design flow of 0.115 MGD, the dilution factor is 24.1 are correct.

The receiving water Nashua River is not listed as Outstanding Resource Waters, therefore you are all set from DEP. Please either attach this email to the NOI or add today's date where you indicate that you have consulted with MassDEP on the NOI. This will be helpful when EPA reviews the NOI.

The spreadsheet that contains the limits was developed by Shauna Little at EPA. If you have any questions regarding those numbers, please contact Shauna.

Please let us know if you have any further questions.

Thanks,
Xiaodan

From: Matthew Lyne [mailto:Matthew.Lyne@atcassociates.com]
Sent: Wednesday, December 13, 2017 3:25 PM
To: Ruan, Xiaodan (DEP)
Cc: Vakalopoulos, Catherine (DEP)
Subject: RE: RGP NOI: Request for Dilution Factor approval

Also, it looks like there will be a lower WQBEL for Cadmium, very low standard. 0.08 ug/L. It was detected in raw water at 1.0. ug/L. TBEL is 10 ug/L.
Any idea why the WQBEL is so so low? Lab limit is 1.0.

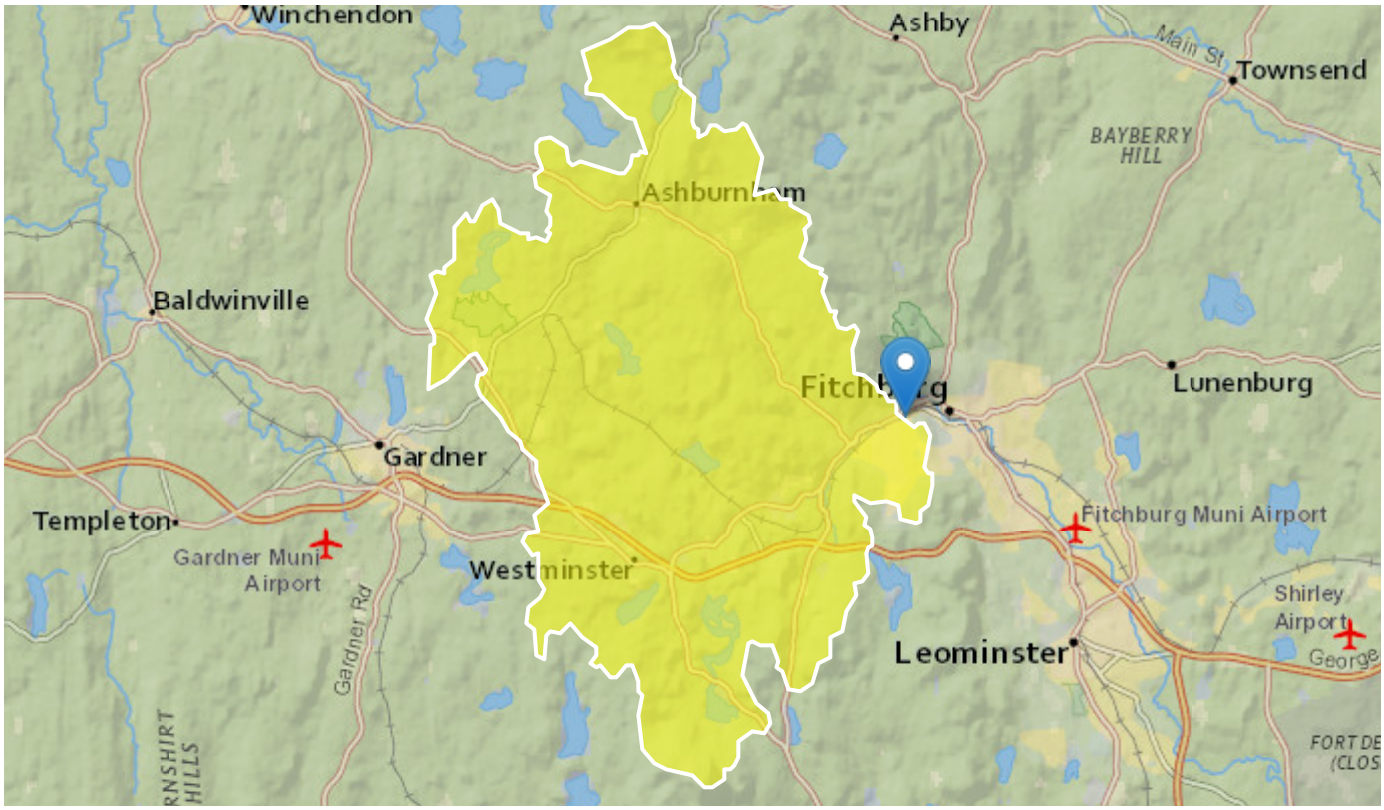
Please note new email address: matthew.lyne@atcassociates.com

Matt Lyne | SENIOR PROJECT MANAGER | **ATC Group Services LLC**
+1 508 641 0476 mobile

997 Millbury Street, Worcester, MA 01607
+1 508 756-0151 phone | matthew.lyne@atcassociates.com | www.atcgroupservices.com

Fitchburg-550 Kimball Street: StreamStats Report

Region ID: MA
Workspace ID: MA20171212205034345000
Clicked Point (Latitude, Longitude): 42.58195, -71.81767
Time: 2017-12-12 15:50:48 -0500



For 7Q10 Determination

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	60.9	square miles
DRFTPERSTR	Area of stratified drift per unit of stream length	0.13	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
BSLDEM250	Mean basin slope computed from 1:250K DEM	5.424	percent

Flow-Duration Statistics Parameters [Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	60.9	square miles	1.61	149

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRFTPERSTR	Stratified Drift per Stream Length	0.13	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	5.424	percent	0.32	24.6

Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SE	SEp
50 Percent Duration	63.1	ft^3/s	33.9	117	17.6	17.6
60 Percent Duration	47.6	ft^3/s	23.7	95	19.8	19.8
70 Percent Duration	29.2	ft^3/s	11.4	73.9	23.5	23.5
75 Percent Duration	22.8	ft^3/s	8.84	58.2	25.8	25.8
80 Percent Duration	19.7	ft^3/s	7.01	54.6	28.4	28.4
85 Percent Duration	15.9	ft^3/s	5.5	45	31.9	31.9
90 Percent Duration	12.8	ft^3/s	4.19	38.1	36.6	36.6
95 Percent Duration	8.51	ft^3/s	2.54	27.6	45.6	45.6
98 Percent Duration	5.32	ft^3/s	1.38	19.4	60.3	60.3
99 Percent Duration	4.24	ft^3/s	1.05	16.2	65.1	65.1

Flow-Duration Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

Low-Flow Statistics Parameters [Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	60.9	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	5.424	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.13	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Flow Report [Statewide Low Flow WRIR00 4135]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SE	SEp
7 Day 2 Year Low Flow	8.07	ft^3/s	2.3	27.3	49.5	49.5
7 Day 10 Year Low Flow	4.12	ft^3/s	0.961	16.5	70.8	70.8

Low-Flow Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

August Flow-Duration Statistics Parameters [Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	60.9	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	5.424	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.13	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

August Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	PIu	SE	SEp
August 50 Percent Duration	15.9	ft^3/s	5.5	45.2	33.2	33.2

August Flow-Duration Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

Enter number values in green boxes below

Enter values in the units specified

↓

2.66	Q_R = Enter upstream flow in **MGD**
0.1152	Q_P = Enter discharge flow in **MGD**
0	Downstream 7Q10

Enter a dilution factor, if other than zero

↓

24.1

Enter values in the units specified

↓

212	C_d = Enter influent hardness in **mg/L** $CaCO_3$
25.2	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$

Enter **receiving water** concentrations in the units specified

↓

7.22	pH in **Standard Units**
22	Temperature in **°C**
0.24	Ammonia in **mg/L**
25.2	Hardness in **mg/L** $CaCO_3$
0	Salinity in **ppt**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
0	Copper in **µg/L**
0	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
2	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
5	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓

0	TRC in **µg/L**
4.44	Ammonia in **mg/L**
0	Antimony in **µg/L**
90	Arsenic in **µg/L**
1	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
0	Copper in **µg/L**
45,200	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
6	Nickel in **µg/L**
11	Selenium in **µg/L**
0	Silver in **µg/L**
3	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Dilution Factor	24.1					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	**Report**	mg/L	---			
Chloride	**Report**	µg/L	---			
Total Residual Chlorine	**0.2**	mg/L	265	µg/L	---	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	15418	µg/L		
Arsenic	**104**	µg/L	241	µg/L		
Cadmium	**10.2**	µg/L	2.8643	µg/L		
Chromium III	**323**	µg/L	836.4	µg/L		
Chromium VI	**323**	µg/L	275.5	µg/L		
Copper	**242**	µg/L	87.0	µg/L		
Iron	**5000**	µg/L	24090	µg/L		
Lead	**160**	µg/L	18.65	µg/L		
Mercury	**0.739**	µg/L	21.82	µg/L		
Nickel	**1450**	µg/L	445.1	µg/L		
Selenium	**235.8**	µg/L	120.5	µg/L		
Silver	**35.1**	µg/L	13.5	µg/L		
Zinc	**420**	µg/L	1011.4	µg/L		
Cyanide	**178**	mg/L	125.3	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	**100**	µg/L	---			
Benzene	**5.0**	µg/L	---			
1,4 Dioxane	**200**	µg/L	---			
Acetone	**7970**	µg/L	---			
Phenol	**1,080**	µg/L	7227	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**	µg/L	38.5	µg/L		
1,2 Dichlorobenzene	**600**	µg/L	---			
1,3 Dichlorobenzene	**320**	µg/L	---			
1,4 Dichlorobenzene	**5.0**	µg/L	---			
Total dichlorobenzene	**---**	µg/L	---			
1,1 Dichloroethane	**70**	µg/L	---			
1,2 Dichloroethane	**5.0**	µg/L	---			
1,1 Dichloroethylene	**3.2**	µg/L	---			
Ethylene Dibromide	**0.05**	µg/L	---			
Methylene Chloride	**4.6**	µg/L	---			
1,1,1 Trichloroethane	**200**	µg/L	---			
1,1,2 Trichloroethane	**5.0**	µg/L	---			
Trichloroethylene	**5.0**	µg/L	---			
Tetrachloroethylene	**5.0**	µg/L	79.5	µg/L		
cis-1,2 Dichloroethylene	**70**	µg/L	---			
Vinyl Chloride	**2.0**	µg/L	---			
D. Non-Halogenated SVOCs						
Total Phthalates	**190**	µg/L	---	µg/L		
Diethylhexyl phthalate	**101**	µg/L	53.0	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	**1.0**	µg/L	0.0915	µg/L	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0915	µg/L	---	µg/L

Benzo(b)fluoranthene	**1.0**	µg/L	0.0915	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0915	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.0915	µg/L	---	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0915	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0915	µg/L	---	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	**100**	µg/L	---			
Naphthalene	**20**	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	**0.000064**	µg/L	---		0.5	µg/L
Pentachlorophenol	**1.0**	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	**5.0**	mg/L	---			
Ethanol	**Report**	mg/L	---			
Methyl-tert-Butyl Ether	**70**	µg/L	482	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

ATTACHMENT IV

MassDEP - Bureau of Waste Site Cleanup

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

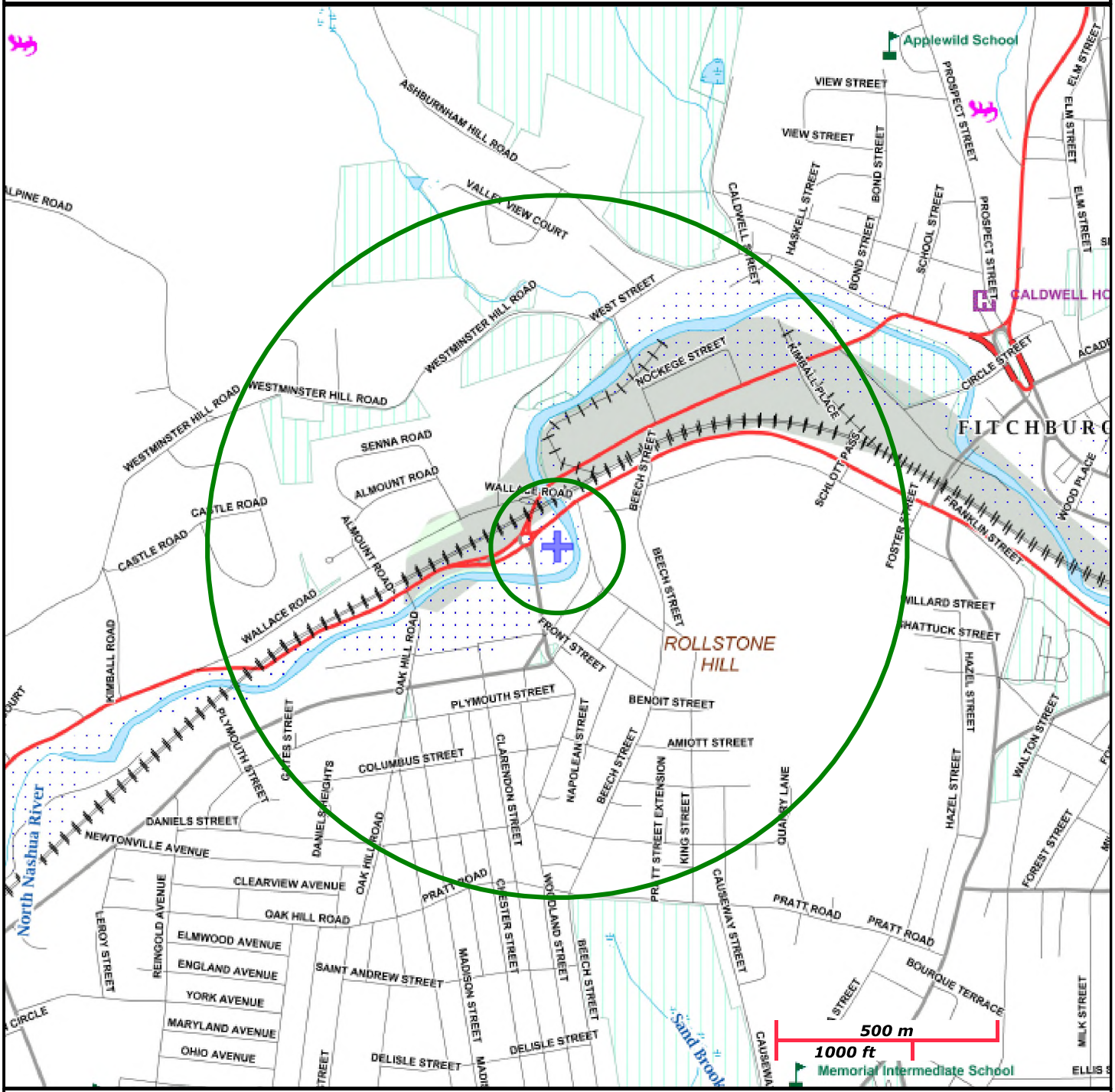
Site Information:

550 KIMBALL STREET FITCHBURG, MA

NAD83 UTM Meters:
4718288mN , 268751mE (Zone: 19)
September 20, 2017

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

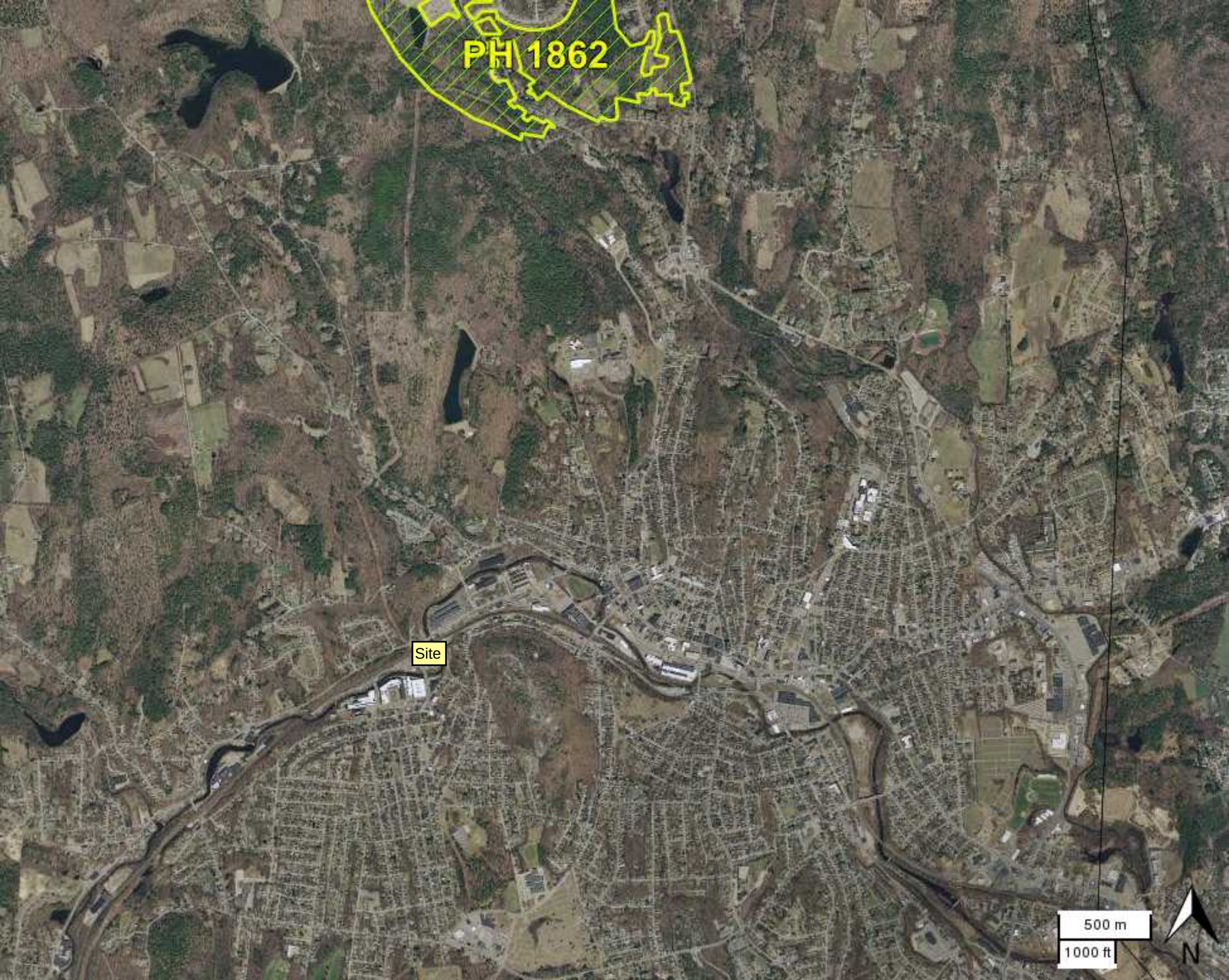
Hydrography: Open Water, PWS Reservoir, Tidal Flat

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.


PH 1862
Site
500 m
1000 ft
N

ATTACHMENT V

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Fitchburg; Place: Cleghorn; Street No: 550; Street Name: Kimball St; Resource Type(s): Building, Burial Ground, Area, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

997 Millbury Street, Unit 6
Worcester, MA 01607
Telephone 508-756-0151
Fax 508-757-7063
www.atcgroupservices.com

December 15, 2017
File No. 03-224773

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125

RE: **Project Notification Form**
Vacant McDonald's Restaurant
Proposed Cumberland Farms Property #MA3163
550 Kimball Street
Fitchburg, Massachusetts

To whom it may concern:

On behalf of Cumberland Farms, Inc. (CFI), ATC Group Services LLC (ATC), is submitting this Project Notification Form (PNF) for the above referenced facility (i.e., the "Site"). CFI is proposing to redevelop the property in January 2018. Approval for dewatering through EPA is necessary and this PNF is required as part of the Notice of Intent process. A Site Locus map is included as Figure 1.

The subject property currently is a vacant McDonald's Restaurant. The vacant building is of concrete block construction and is a slab on grade structure with no basement. Land use in the vicinity of the Site is mainly commercial. The Nashua River surrounds the Site to the south and east, Kimball Street abuts the site to the north, and Daniels Street abuts the site to the west. Across Kimball Street is a self storage facility and across Daniels Street is a gas station. A Site Plan depicting the current setting of the property and surrounding area is included as Figures 2.

If there are any questions regarding this submittal, please do not hesitate to contact the undersigned or Mr. Matthew Young of Cumberland Farms, Inc. at (508) 270-1400.

Sincerely,
ATC Group Services LLC

Matthew Lyne
Senior Project Manager

cc: Matt Young, Cumberland Farms Inc, 165 Flanders Road, Westborough, MA 01581

Figure 1- Site Locus
Figure 2- Site Plan

ATTACHMENT VI

eurofins | Spectrum Analytical

☐ Final Report
☑ Revised Report

Report Date:
12-Dec-17 13:53

Laboratory Report
SC39416

ATC Group Services, LLC
997 Millbury Street, Unit G
Worcester, MA 01607
Attn: Matt Lyne

Project: CFI - Fitchburg, MA
Project #: 03-224773.05

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

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Dawn Wojcik
Laboratory Director

Eurofins Spectrum Analytical holds primary 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 41 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

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

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

Sample Summary

Work Order: SC39416

Project: CFI - Fitchburg, MA

Project Number: 03-224773.05

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC39416-01	MW-5	Ground Water	18-Sep-17 13:20	19-Sep-17 15:50
SC39416-02	River-1	Surface Water	18-Sep-17 14:40	19-Sep-17 15:50

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc.	**Project #:** 03-224773.05
Project Location: CFI - Fitchburg, MA	**RTN:**
This form provides certifications for the following data set:	SC39416-01 through SC39416-02
Matrices: Ground Water Surface 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

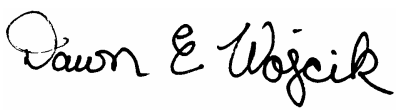
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	✓ Yes No

***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.



Dawn E. Wojcik
Laboratory Director
Date: 12/12/2017

CASE NARRATIVE:

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

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

The samples were received 0.4 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

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.

SC39416 Report Revision Case Narrative Issued December 12, 2017:

This report was revised to include 1,4-Dioxane by 624, per client request.

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

E350.1

BZ03269-MS

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

Ammonia as Nitrogen

EPA 300.0

Samples:

SC39416-01 *MW-5*

EPA 300.0

Samples:

SC39416-01 *MW-5*

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

Chloride

EPA 524.2

Calibration:

1709039

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
2-Chlorotoluene
2-Hexanone (MBK)
4-Chlorotoluene
4-Isopropyltoluene
4-Methyl-2-pentanone (MIBK)
Bromoform
cis-1,3-Dichloropropene
Dibromochloromethane
Ethylbenzene
m,p-Xylene
Naphthalene
n-Butylbenzene
n-Propylbenzene
o-Xylene
sec-Butylbenzene
Styrene
tert-Butylbenzene
trans-1,3-Dichloropropene
Vinyl chloride

This affected the following samples:

1716332-BLK1
1716332-BS1
MW-5
S708366-ICV1
S708473-CCV1

Laboratory Control Samples:

1716332 BS

Dichlorodifluoromethane (Freon12) percent recovery 77 (80-120) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-5

EPA 624

Calibration:

1709048

EPA 624

Calibration:

1709048

Analyte quantified by quadratic equation type calibration.

2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Bromoform
cis-1,3-Dichloropropene
m,p-Xylene
Methylene chloride
o-Xylene
Styrene
trans-1,3-Dichloropropene

This affected the following samples:

1716230-BLK1
1716230-BS1
1716230-BSD1
MW-5
S708418-CCV1
S708503-ICV1

EPA 625

Calibration:

1709033

Analyte quantified by quadratic equation type calibration.

2,4-Dinitrophenol
4,6-Dinitro-2-methylphenol

This affected the following samples:

1716152-BLK1
1716152-BLK3
1716152-BS1
1716152-BS3
1716152-BSD1
1716152-BSD3
MW-5
S708282-ICV1
S708448-CCV1
S708595-CCV1

Laboratory Control Samples:

1716152 BS/BSD

Benzidine percent recoveries (14/16) 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-5

Bis(2-chloroisopropyl)ether percent recoveries (35/39) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-5

EPA 625

Laboratory Control Samples:

1716152 BS/BSD

Fluorene percent recoveries (51/52) 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-5

N-Nitrosodimethylamine percent recoveries (32/36) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-5

Phenanthrene percent recoveries (53/52) 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-5

Phenanthrene percent recoveries (53/59) 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-5

1716152 BSD

2,4-Dinitrophenol RPD 37% (20%) is outside individual acceptance criteria.

2-Nitrophenol RPD 22% (20%) is outside individual acceptance criteria.

4,6-Dinitro-2-methylphenol RPD 32% (20%) is outside individual acceptance criteria.

4-Nitrophenol RPD 23% (20%) is outside individual acceptance criteria.

Benzidine RPD 41% (20%) is outside individual acceptance criteria.

Pentachlorophenol RPD 31% (20%) is outside individual acceptance criteria.

1716152-BSD1

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

2,4-Dinitrophenol
2-Nitrophenol
4,6-Dinitro-2-methylphenol
4-Nitrophenol
Benzidine
Pentachlorophenol

Samples:

S708448-CCV1

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

4-Nitrophenol (21.9%)
Benzidine (-36.7%)

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

2,4-Dinitrophenol (21.9%)

EPA 625

Samples:

S708448-CCV1

This affected the following samples:

1716152-BLK1
1716152-BS1
1716152-BSD1

S708595-CCV1

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

Benzidine (20.7%)

This affected the following samples:

1716152-BLK3
1716152-BS3
1716152-BSD3
MW-5

Mod. EPA 625

Calibration:

1709035

Analyte quantified by quadratic equation type calibration.

Benzo (a) pyrene

This affected the following samples:

1716294-BLK2
1716294-BS2
1716294-BSD2
MW-5
S708328-ICV1
S708558-CCV1

Laboratory Control Samples:

1716294 BS/BSD

Acenaphthylene percent recoveries (36/37) 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-5

Fluorene percent recoveries (39/47) 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-5

SM3500-Cr-B (11)/7196A

Samples:

SC39416-01 *MW-5*

This sample was received outside the EPA recommended holding time for the analysis specified.

Hexavalent Chromium

Sample Acceptance Check Form

Client:	ATC Group Services, LLC - Worcester, MA
Project:	CFI - Fitchburg, MA / 03-224773.05
Work Order:	SC39416
Sample(s) received on:	9/19/2017

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

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples 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: SC39416-01 **Client ID:** MW-5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Hardness (CaCO3)	212		0.1	mg/L	E200.7
Ammonia as Nitrogen	4.44		0.05	mg/L	E350.1
Chloride	98.0	GS1, D	4.00	mg/l	EPA 300.0
cis-1,2-Dichloroethene	4.68		0.50	µg/l	EPA 524.2
Methyl tert-butyl ether	0.69		0.50	µg/l	EPA 524.2
trans-1,2-Dichloroethene	0.61		0.50	µg/l	EPA 524.2
Trichloroethene	0.58		0.50	µg/l	EPA 524.2
Vinyl chloride	1.00		0.50	µg/l	EPA 524.2
cis-1,2-Dichloroethene	5.0		1.0	µg/l	EPA 624
Vinyl chloride	1.2		1.0	µg/l	EPA 624
Total Suspended Solids	62.3		0.5	mg/l	SM2540D (11)
Arsenic	0.090		0.004	mg/L	SW6010C
Cadmium	0.001		0.001	mg/L	SW6010C
Iron	45.2		0.010	mg/L	SW6010C
Nickel	0.006		0.001	mg/L	SW6010C
Selenium	0.011		0.010	mg/L	SW6010C
Zinc	0.003		0.002	mg/L	SW6010C

Lab ID: SC39416-02 **Client ID:** River-1

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Hardness (CaCO3)	25.2		0.1	mg/L	E200.7
Ammonia as Nitrogen	0.24		0.05	mg/L	E350.1
Nickel	0.002		0.001	mg/L	SW6010C
Zinc	0.005		0.002	mg/L	SW6010C

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-5	03-224773.05	Ground Water	18-Sep-17 13:20	19-Sep-17
SC39416-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Purgeable Organic Compounds													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.50		µg/l	0.50	0.35	1	EPA 524.2	23-Sep-17	24-Sep-17	GMA	1716332	
67-64-1	Acetone	< 10.0		µg/l	10.0	0.80	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 0.50		µg/l	0.50	0.44	1	"	"	"	"	"	
71-43-2	Benzene	< 0.50		µg/l	0.50	0.21	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.50		µg/l	0.50	0.30	1	"	"	"	"	"	
75-25-2	Bromoform	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	
74-83-9	Bromomethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
78-93-3	2-Butanone (MEK)	< 2.00		µg/l	2.00	0.55	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 0.50		µg/l	0.50	0.41	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 0.50		µg/l	0.50	0.26	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
75-00-3	Chloroethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
67-66-3	Chloroform	< 0.50		µg/l	0.50	0.23	1	"	"	"	"	"	
74-87-3	Chloromethane	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 0.50		µg/l	0.50	0.17	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 0.50		µg/l	0.50	0.24	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 0.50		µg/l	0.50	0.48	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50	0.16	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 0.50		µg/l	0.50	0.31	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.50		µg/l	0.50	0.20	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 0.50		µg/l	0.50	0.25	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 0.50		µg/l	0.50	0.24	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	**4.68**		µg/l	0.50	0.33	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	**0.61**		µg/l	0.50	0.35	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 0.50		µg/l	0.50	0.27	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 0.50		µg/l	0.50	0.22	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 0.50		µg/l	0.50	0.42	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.50		µg/l	0.50	0.32	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.50		µg/l	0.50	0.23	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.50		µg/l	0.50	0.47	1	"	"	"	"	"	
591-78-6	2-Hexanone (MBK)	< 2.00		µg/l	2.00	0.53	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-5	03-224773.05	Ground Water	18-Sep-17 13:20	19-Sep-17
SC39416-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Purgeable Organic Compounds													
98-82-8	Isopropylbenzene	< 0.50		µg/l	0.50	0.23	1	EPA 524.2	23-Sep-17	24-Sep-17	GMA	1716332	
99-87-6	4-Isopropyltoluene	< 0.50		µg/l	0.50	0.28	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	**0.69**		µg/l	0.50	0.15	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00	0.35	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.50		µg/l	0.50	0.40	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
100-42-5	Styrene	< 0.50		µg/l	0.50	0.40	1	"	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 0.50		µg/l	0.50	0.39	1	"	"	"	"	"	
108-88-3	Toluene	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 0.50		µg/l	0.50	0.34	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.50		µg/l	0.50	0.35	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
79-01-6	Trichloroethene	**0.58**		µg/l	0.50	0.38	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 0.50		µg/l	0.50	0.22	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 0.50		µg/l	0.50	0.36	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 0.50		µg/l	0.50	0.43	1	"	"	"	"	"	
75-01-4	Vinyl chloride	**1.00**		µg/l	0.50	0.45	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	< 0.50		µg/l	0.50	0.38	1	"	"	"	"	"	
95-47-6	o-Xylene	< 0.50		µg/l	0.50	0.26	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 2.00		µg/l	2.00	0.39	1	"	"	"	"	"	
994-05-8	Tert-amyl methyl ether	< 0.50		µg/l	0.50	0.49	1	"	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	< 0.50		µg/l	0.50	0.33	1	"	"	"	"	"	
108-20-3	Di-isopropyl ether	< 0.50		µg/l	0.50	0.16	1	"	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0	3.55	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*93*			*80-120 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*97*			*80-120 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*108*			*80-120 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*80-120 %*			"	"	"	"	"	
Volatile Organic Compounds by GCMS													
67-64-1	Acetone	< 10.0		µg/l	10.0	0.8	1	EPA 624	22-Sep-17	22-Sep-17	GMA	1716230	
71-43-2	Benzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	X
75-25-2	Bromoform	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 2.0		µg/l	2.0	0.9	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 10.0		µg/l	10.0	1.1	1	"	"	"	"	"	
75-15-0	Carbon disulfide	< 5.0		µg/l	5.0	0.4	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-5	03-224773.05	Ground Water	18-Sep-17 13:20	19-Sep-17
SC39416-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by GCMS													
75-00-3	Chloroethane	< 2.0		µg/l	2.0	0.6	1	EPA 624	22-Sep-17	22-Sep-17	GMA	1716230	X
67-66-3	Chloroform	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 2.0		µg/l	2.0	0.4	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
74-95-3	Dibromomethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.0		µg/l	1.0	0.7	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	**5.0**		µg/l	1.0	0.3	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 10.0		µg/l	10.0	0.5	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	< 1.0		µg/l	1.0	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0	0.5	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 10.0		µg/l	10.0	0.7	1	"	"	"	"	"	X
100-42-5	Styrene	< 1.0		µg/l	1.0	0.4	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 1.0		µg/l	1.0	0.6	1	"	"	"	"	"	X
108-88-3	Toluene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 1.0		µg/l	1.0	0.5	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	**1.2**		µg/l	1.0	0.5	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 2.0		µg/l	2.0	0.4	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 1.0		µg/l	1.0	0.3	1	"	"	"	"	"	X
123-91-1	1,4-Dioxane	< 20.0		µg/l	20.0	11.4	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*78*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*101*			*70-130 %*			"	"	"	"	"	
17060-07-0	*1,2-Dichloroethane-d4*	*119*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*121*			*70-130 %*			"	"	"	"	"	
Ethanol by SW846 8260 Prepared by method SW846 5030 Water MS													
64-17-5	Ethanol	< 200		µg/l	200	30.9	1	SW846 8260C	23-Sep-17	24-Sep-17	GMA	1716332	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*93*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*97*			*70-130 %*			"	"	"	"	"	

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Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-5	03-224773.05	Ground Water	18-Sep-17 13:20	19-Sep-17
SC39416-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Ethanol by SW846 8260													
17060-07-0	*1,2-Dichloroethane-d4*	*108*			*70-130 %*			SW846 8260C	23-Sep-17	24-Sep-17	GMA	1716332	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
PAHs by SIM													
83-32-9	Acenaphthene	< 0.050		µg/l	0.050	0.030	1	Mod. EPA 625	25-Sep-17	26-Sep-17	MSL	1716294	
208-96-8	Acenaphthylene	< 0.050		µg/l	0.050	0.032	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 0.050		µg/l	0.050	0.024	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.050		µg/l	0.050	0.026	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 0.050		µg/l	0.050	0.024	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 0.050		µg/l	0.050	0.036	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 0.050		µg/l	0.050	0.035	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 0.050		µg/l	0.050	0.027	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 0.050		µg/l	0.050	0.028	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.050		µg/l	0.050	0.023	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 0.050		µg/l	0.050	0.026	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.050		µg/l	0.050	0.020	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.050		µg/l	0.050	0.030	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 0.050		µg/l	0.050	0.022	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 0.050		µg/l	0.050	0.023	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.050		µg/l	0.050	0.027	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.050		µg/l	0.050	0.026	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.050		µg/l	0.050	0.022	1	"	"	"	"	"	
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*31*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*44*			*30-130 %*			"	"	"	"	"	
205440-82-0	*Benzo (e) pyrene-d12*	*41*			*30-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds													
83-32-9	Acenaphthene	< 5.00		µg/l	5.00	0.691	1	EPA 625	21-Sep-17	27-Sep-17	MSL	1716152	X
208-96-8	Acenaphthylene	< 5.00		µg/l	5.00	0.683	1	"	"	"	"	"	X
120-12-7	Anthracene	< 5.00		µg/l	5.00	0.608	1	"	"	"	"	"	X
92-87-5	Benzidine	< 5.00		µg/l	5.00	1.15	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	< 5.00		µg/l	5.00	0.536	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	< 5.00		µg/l	5.00	0.562	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	< 5.00		µg/l	5.00	0.437	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 5.00		µg/l	5.00	0.530	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	< 5.00		µg/l	5.00	0.480	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 5.00		µg/l	5.00	0.666	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 5.00		µg/l	5.00	0.734	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 5.00		µg/l	5.00	0.778	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 5.00		µg/l	5.00	0.638	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 5.00		µg/l	5.00	0.602	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 5.00		µg/l	5.00	0.438	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 5.00		µg/l	5.00	0.501	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-5	03-224773.05	Ground Water	18-Sep-17 13:20	19-Sep-17
SC39416-01				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
91-58-7	2-Chloronaphthalene	< 5.00		µg/l	5.00	0.590	1	EPA 625	21-Sep-17	27-Sep-17	MSL	1716152	X
95-57-8	2-Chlorophenol	< 5.00		µg/l	5.00	0.748	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 5.00		µg/l	5.00	0.603	1	"	"	"	"	"	X
218-01-9	Chrysene	< 5.00		µg/l	5.00	0.532	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00	0.450	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.00		µg/l	5.00	0.562	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.00		µg/l	5.00	0.647	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 5.00		µg/l	5.00	0.614	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 5.00		µg/l	5.00	1.99	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 5.00		µg/l	5.00	0.530	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 5.00		µg/l	5.00	0.623	1	"	"	"	"	"	X
131-11-3	Dimethyl phthalate	< 5.00		µg/l	5.00	0.758	1	"	"	"	"	"	X
105-67-9	2,4-Dimethylphenol	< 5.00		µg/l	5.00	0.653	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 5.00		µg/l	5.00	0.457	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 5.00		µg/l	5.00	0.319	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 5.00		µg/l	5.00	0.561	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 5.00		µg/l	5.00	0.673	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 5.00		µg/l	5.00	0.593	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 5.00		µg/l	5.00	0.406	1	"	"	"	"	"	X
206-44-0	Fluoranthene	< 5.00		µg/l	5.00	0.638	1	"	"	"	"	"	X
86-73-7	Fluorene	< 5.00		µg/l	5.00	0.612	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 5.00		µg/l	5.00	0.571	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 5.00		µg/l	5.00	0.388	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 5.00		µg/l	5.00	1.04	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 5.00		µg/l	5.00	0.639	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00	0.580	1	"	"	"	"	"	X
78-59-1	Isophorone	< 5.00		µg/l	5.00	0.586	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 5.00		µg/l	5.00	0.685	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 5.00		µg/l	5.00	0.690	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 5.00		µg/l	5.00	0.465	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 5.00		µg/l	5.00	0.838	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 5.00		µg/l	5.00	0.673	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 5.00		µg/l	5.00	0.578	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 5.00		µg/l	5.00	0.651	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 5.00		µg/l	5.00	0.373	1	"	"	"	"	"	X
85-01-8	Phenanthrene	< 5.00		µg/l	5.00	0.586	1	"	"	"	"	"	X
108-95-2	Phenol	< 5.00		µg/l	5.00	0.645	1	"	"	"	"	"	X
129-00-0	Pyrene	< 5.00		µg/l	5.00	0.610	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.00		µg/l	5.00	0.687	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 5.00		µg/l	5.00	0.518	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*45*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*26*			*15-110 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*33*			*30-130 %*			"	"	"	"	"	

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

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-5	03-224773.05	Ground Water	18-Sep-17 13:20	19-Sep-17
SC39416-01				

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													
4165-62-2	*Phenol-d5*	*20*			*15-110 %*			EPA 625	21-Sep-17	27-Sep-17	MSL	1716152	
1718-51-0	*Terphenyl-dl4*	*47*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*43*			*15-110 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GC													
Polychlorinated Biphenyls													
12674-11-2	Aroclor-1016	< 0.190		µg/l	0.190	0.0990	1	EPA 608	25-Sep-17	25-Sep-17	IMR	1716296	X
11104-28-2	Aroclor-1221	< 0.190		µg/l	0.190	0.110	1	"	"	"	"	"	X
11141-16-5	Aroclor-1232	< 0.190		µg/l	0.190	0.106	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	< 0.190		µg/l	0.190	0.102	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	< 0.190		µg/l	0.190	0.130	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	< 0.190		µg/l	0.190	0.110	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	< 0.190		µg/l	0.190	0.0810	1	"	"	"	"	"	X
37324-23-5	Aroclor-1262	< 0.190		µg/l	0.190	0.0853	1	"	"	"	"	"	
11100-14-4	Aroclor-1268	< 0.190		µg/l	0.190	0.0871	1	"	"	"	"	"	
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*45*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*45*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*55*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*50*			*30-150 %*			"	"	"	"	"	
General Chemistry Parameters													
	Flashpoint	**>150**		°F			1	SW846 1010A	26-Sep-17	26-Sep-17	BD	1716461	
16887-00-6	Chloride	**98.0**	GS1, D	mg/l	4.00	0.398	4	EPA 300.0	20-Sep-17	20-Sep-17	LNB	1716144	X
18540-29-9	Hexavalent Chromium	< 0.005	HT2	mg/l	0.005	0.002	1	SM3500-Cr-B (11)/7196A	20-Sep-17 17:32	20-Sep-17 17:48	TN	1716158	
57-12-5	Cyanide (total)	< 0.00500		mg/l	0.00500	0.00474	1	EPA 335.4 / SW846 9012B	21-Sep-17	21-Sep-17	RLT	1716181	X
	pH	**6.39**	pH	pH Units			1	ASTM D 1293-99B	20-Sep-17 13:20	21-Sep-17 14:39	TN	1716162	X
Reactivity Cyanide/Sulfide													
	Reactivity	**See Narrative**		mg/l			1	SW846 Ch. 7.3	21-Sep-17	22-Sep-17	TN	1716211	
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 Suspended Solids	**62.3**		mg/l	0.5	0.2	1	SM2540D (11)	21-Sep-17	22-Sep-17	CMB	1716177	X
Subcontracted Analyses													
Prepared by method 402922													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
	O&G, Non-polar Material	< 1.5		mg/L	1.5	1.5	1.1	E1664A	18-Sep-17 13:20	26-Sep-17 06:45	M-CT007	402922A	
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
	Hardness (CaCO3)	**212**		mg/L	0.1	0.1	1	E200.7	"	26-Sep-17 11:28	M-CT007	'[none]'	
Prepared by method 402779													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7664-41-7	Ammonia as Nitrogen	**4.44**		mg/L	0.05	0.05	1	E350.1	"	26-Sep-17 12:43	M-CT007	402779A	
Prepared by method 402630-SM3113B/S													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-5 SC39416-01	03-224773.05	Ground Water	18-Sep-17 13:20	19-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Prepared by method 402630-SM3113B/S													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7440-28-0	Thallium	< 0.001		mg/L	0.001	0.001	1	SM3113B/SW7010-0	22-Sep-17	25-Sep-17 17:46	M-CT007	402630A	
Subcontracted Analyses													
Prepared by method 402432-													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7440-36-0	Antimony	< 0.005		mg/L	0.005	0.005	1	SW6010C	21-Sep-17	24-Sep-17 05:53	M-CT007	402432A	
7440-38-2	Arsenic	**0.090**		mg/L	0.004	0.004	1	"	"	"	"	"	
7440-41-7	Beryllium	< 0.001		mg/L	0.001	0.001	1	"	"	"	"	"	
7440-43-9	Cadmium	**0.001**		mg/L	0.001	0.001	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.001		mg/L	0.001	0.001	1	"	"	"	"	"	
7440-50-8	Copper	< 0.005		mg/L	0.005	0.005	1	"	"	"	"	"	
7439-89-6	Iron	**45.2**		mg/L	0.010	0.010	1	"	"	"	"	"	
7439-92-1	Lead	< 0.002		mg/L	0.002	0.002	1	"	"	"	"	"	
7782-49-2	Selenium	**0.011**		mg/L	0.010	0.010	1	"	"	"	"	"	
7440-22-4	Silver	< 0.001		mg/L	0.001	0.001	1	"	"	"	"	"	
7440-66-6	Zinc	**0.003**		mg/L	0.002	0.002	1	"	"	"	"	"	
7440-02-0	Nickel	**0.006**		mg/L	0.001	0.001	1	"	"	26-Sep-17 10:40	"	"	
Prepared by method 402491-													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7439-97-6	Mercury	< 0.0002		mg/L	0.0002	0.0002	1	SW7470A	22-Sep-17	22-Sep-17 14:19	M-CT007	402491A	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
River-1 SC39416-02	03-224773.05	Surface Water	18-Sep-17 14:40	19-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	pH	**7.22**	pH	pH Units			1	ASTM D 1293-99B	20-Sep-17 13:20	21-Sep-17 14:39	TN	1716162	X
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
	Hardness (CaCO3)	**25.2**		mg/L	0.1	0.1	1	E200.7	18-Sep-17 14:40	26-Sep-17 11:28	M-CT007	'[none]'	
Prepared by method 402779													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7664-41-7	Ammonia as Nitrogen	**0.24**		mg/L	0.05	0.05	1	E350.1	"	26-Sep-17 12:44	M-CT007	402779A	
Prepared by method 402630-SM3113B/S													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7440-28-0	Thallium	< 0.001		mg/L	0.001	0.001	1	SM3113B/SW7010-0	22-Sep-17	25-Sep-17 17:51	M-CT007	402630A	
Subcontracted Analyses Prepared by method 402432-													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7440-36-0	Antimony	< 0.005		mg/L	0.005	0.005	1	SW6010C	21-Sep-17	24-Sep-17 05:56	M-CT007	402432A	
7440-38-2	Arsenic	< 0.004		mg/L	0.004	0.004	1	"	"	"	"	"	
7440-41-7	Beryllium	< 0.001		mg/L	0.001	0.001	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.001		mg/L	0.001	0.001	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.001		mg/L	0.001	0.001	1	"	"	"	"	"	
7440-50-8	Copper	< 0.005		mg/L	0.005	0.005	1	"	"	"	"	"	
7439-92-1	Lead	< 0.002		mg/L	0.002	0.002	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.010		mg/L	0.010	0.010	1	"	"	"	"	"	
7440-22-4	Silver	< 0.001		mg/L	0.001	0.001	1	"	"	"	"	"	
7440-66-6	Zinc	**0.005**		mg/L	0.002	0.002	1	"	"	"	"	"	
7440-02-0	Nickel	**0.002**		mg/L	0.001	0.001	1	"	"	26-Sep-17 10:43	"	"	
Prepared by method 402491-													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
7439-97-6	Mercury	< 0.0002		mg/L	0.0002	0.0002	1	SW7470A	22-Sep-17	22-Sep-17 14:21	M-CT007	402491A	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch 1716332 - SW846 5030 Water MS										
Blank (1716332-BLK1)					Prepared & Analyzed: 23-Sep-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.50		µg/l	0.50						
Acetone	< 10.0		µg/l	10.0						
Acrylonitrile	< 0.50		µg/l	0.50						
Benzene	< 0.50		µg/l	0.50						
Bromobenzene	< 0.50		µg/l	0.50						
Bromochloromethane	< 0.50		µg/l	0.50						
Bromodichloromethane	< 0.50		µg/l	0.50						
Bromoform	< 0.50		µg/l	0.50						
Bromomethane	< 0.50		µg/l	0.50						
2-Butanone (MEK)	< 2.00		µg/l	2.00						
n-Butylbenzene	< 0.50		µg/l	0.50						
sec-Butylbenzene	< 0.50		µg/l	0.50						
tert-Butylbenzene	< 0.50		µg/l	0.50						
Carbon disulfide	< 0.50		µg/l	0.50						
Carbon tetrachloride	< 0.50		µg/l	0.50						
Chlorobenzene	< 0.50		µg/l	0.50						
Chloroethane	< 0.50		µg/l	0.50						
Chloroform	< 0.50		µg/l	0.50						
Chloromethane	< 0.50		µg/l	0.50						
2-Chlorotoluene	< 0.50		µg/l	0.50						
4-Chlorotoluene	< 0.50		µg/l	0.50						
1,2-Dibromo-3-chloropropane	< 0.50		µg/l	0.50						
Dibromochloromethane	< 0.50		µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50		µg/l	0.50						
Dibromomethane	< 0.50		µg/l	0.50						
1,2-Dichlorobenzene	< 0.50		µg/l	0.50						
1,3-Dichlorobenzene	< 0.50		µg/l	0.50						
1,4-Dichlorobenzene	< 0.50		µg/l	0.50						
Dichlorodifluoromethane (Freon12)	< 0.50		µg/l	0.50						
1,1-Dichloroethane	< 0.50		µg/l	0.50						
1,2-Dichloroethane	< 0.50		µg/l	0.50						
1,1-Dichloroethene	< 0.50		µg/l	0.50						
cis-1,2-Dichloroethene	< 0.50		µg/l	0.50						
trans-1,2-Dichloroethene	< 0.50		µg/l	0.50						
1,2-Dichloropropane	< 0.50		µg/l	0.50						
1,3-Dichloropropane	< 0.50		µg/l	0.50						
2,2-Dichloropropane	< 0.50		µg/l	0.50						
1,1-Dichloropropene	< 0.50		µg/l	0.50						
cis-1,3-Dichloropropene	< 0.50		µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50		µg/l	0.50						
Ethylbenzene	< 0.50		µg/l	0.50						
Hexachlorobutadiene	< 0.50		µg/l	0.50						
2-Hexanone (MBK)	< 2.00		µg/l	2.00						
Isopropylbenzene	< 0.50		µg/l	0.50						
4-Isopropyltoluene	< 0.50		µg/l	0.50						
Methyl tert-butyl ether	< 0.50		µg/l	0.50						
4-Methyl-2-pentanone (MIBK)	< 2.00		µg/l	2.00						
Methylene chloride	< 0.50		µg/l	0.50						
Naphthalene	< 0.50		µg/l	0.50						
n-Propylbenzene	< 0.50		µg/l	0.50						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch 1716332 - SW846 5030 Water MS										
Blank (1716332-BLK1)					Prepared & Analyzed: 23-Sep-17					
Styrene	< 0.50		µg/l	0.50						
1,1,1,2-Tetrachloroethane	< 0.50		µg/l	0.50						
1,1,2,2-Tetrachloroethane	< 0.50		µg/l	0.50						
Tetrachloroethene	< 0.50		µg/l	0.50						
Toluene	< 0.50		µg/l	0.50						
1,2,3-Trichlorobenzene	< 0.50		µg/l	0.50						
1,2,4-Trichlorobenzene	< 0.50		µg/l	0.50						
1,1,1-Trichloroethane	< 0.50		µg/l	0.50						
1,1,2-Trichloroethane	< 0.50		µg/l	0.50						
Trichloroethene	< 0.50		µg/l	0.50						
Trichlorofluoromethane (Freon 11)	< 0.50		µg/l	0.50						
1,2,3-Trichloropropane	< 0.50		µg/l	0.50						
1,2,4-Trimethylbenzene	< 0.50		µg/l	0.50						
1,3,5-Trimethylbenzene	< 0.50		µg/l	0.50						
Vinyl chloride	< 0.50		µg/l	0.50						
m,p-Xylene	< 0.50		µg/l	0.50						
o-Xylene	< 0.50		µg/l	0.50						
Tetrahydrofuran	< 2.00		µg/l	2.00						
Tert-amyl methyl ether	< 0.50		µg/l	0.50						
Ethyl tert-butyl ether	< 0.50		µg/l	0.50						
Di-isopropyl ether	< 0.50		µg/l	0.50						
Tert-Butanol / butyl alcohol	< 10.0		µg/l	10.0						
Surrogate: 4-Bromofluorobenzene	*45.6*		µg/l		*50.0*		*91*	*80-120*		
Surrogate: Toluene-d8	*48.7*		µg/l		*50.0*		*97*	*80-120*		
Surrogate: 1,2-Dichloroethane-d4	*52.7*		µg/l		*50.0*		*105*	*80-120*		
Surrogate: Dibromofluoromethane	*50.5*		µg/l		*50.0*		*101*	*80-120*		
LCS (1716332-BS1)					Prepared & Analyzed: 23-Sep-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	**17.8**		µg/l		20.0		89	80-120		
Acetone	**18.7**		µg/l		20.0		93	70-130		
Acrylonitrile	**19.2**		µg/l		20.0		96	70-130		
Benzene	**20.2**		µg/l		20.0		101	80-120		
Bromobenzene	**21.7**		µg/l		20.0		109	80-120		
Bromochloromethane	**17.8**		µg/l		20.0		89	80-120		
Bromodichloromethane	**21.5**		µg/l		20.0		107	80-120		
Bromoform	**20.6**		µg/l		20.0		103	80-120		
Bromomethane	**17.0**		µg/l		20.0		85	80-120		
2-Butanone (MEK)	**21.5**		µg/l		20.0		108	70-130		
n-Butylbenzene	**19.8**		µg/l		20.0		99	80-120		
sec-Butylbenzene	**19.0**		µg/l		20.0		95	80-120		
tert-Butylbenzene	**19.9**		µg/l		20.0		100	80-120		
Carbon disulfide	**15.9**		µg/l		20.0		80	70-130		
Carbon tetrachloride	**20.7**		µg/l		20.0		104	80-120		
Chlorobenzene	**20.4**		µg/l		20.0		102	80-120		
Chloroethane	**17.5**		µg/l		20.0		88	80-120		
Chloroform	**18.9**		µg/l		20.0		94	80-120		
Chloromethane	**17.8**		µg/l		20.0		89	80-120		
2-Chlorotoluene	**19.6**		µg/l		20.0		98	80-120		
4-Chlorotoluene	**19.9**		µg/l		20.0		100	80-120		
1,2-Dibromo-3-chloropropane	**20.7**		µg/l		20.0		103	80-120		
Dibromochloromethane	**20.4**		µg/l		20.0		102	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch 1716332 - SW846 5030 Water MS										
LCS (1716332-BS1)					Prepared & Analyzed: 23-Sep-17					
1,2-Dibromoethane (EDB)	**21.5**		µg/l		20.0		107	80-120		
Dibromomethane	**20.4**		µg/l		20.0		102	80-120		
1,2-Dichlorobenzene	**21.3**		µg/l		20.0		107	80-120		
1,3-Dichlorobenzene	**19.6**		µg/l		20.0		98	80-120		
1,4-Dichlorobenzene	**19.7**		µg/l		20.0		98	80-120		
Dichlorodifluoromethane (Freon12)	**15.4**	QC2	µg/l		20.0		77	80-120		
1,1-Dichloroethane	**17.9**		µg/l		20.0		90	80-120		
1,2-Dichloroethane	**20.5**		µg/l		20.0		103	80-120		
1,1-Dichloroethene	**17.4**		µg/l		20.0		87	80-120		
cis-1,2-Dichloroethene	**17.9**		µg/l		20.0		90	80-120		
trans-1,2-Dichloroethene	**17.7**		µg/l		20.0		88	80-120		
1,2-Dichloropropane	**19.6**		µg/l		20.0		98	80-120		
1,3-Dichloropropane	**19.9**		µg/l		20.0		100	80-120		
2,2-Dichloropropane	**19.3**		µg/l		20.0		97	80-120		
1,1-Dichloropropene	**18.5**		µg/l		20.0		93	80-120		
cis-1,3-Dichloropropene	**20.4**		µg/l		20.0		102	80-120		
trans-1,3-Dichloropropene	**21.0**		µg/l		20.0		105	80-120		
Ethylbenzene	**19.5**		µg/l		20.0		97	80-120		
Hexachlorobutadiene	**21.0**		µg/l		20.0		105	80-120		
2-Hexanone (MBK)	**20.2**		µg/l		20.0		101	70-130		
Isopropylbenzene	**20.3**		µg/l		20.0		102	80-120		
4-Isopropyltoluene	**19.6**		µg/l		20.0		98	80-120		
Methyl tert-butyl ether	**20.4**		µg/l		20.0		102	80-120		
4-Methyl-2-pentanone (MIBK)	**20.4**		µg/l		20.0		102	70-130		
Methylene chloride	**17.4**		µg/l		20.0		87	80-120		
Naphthalene	**20.0**		µg/l		20.0		100	80-120		
n-Propylbenzene	**19.1**		µg/l		20.0		95	80-120		
Styrene	**20.0**		µg/l		20.0		100	80-120		
1,1,1,2-Tetrachloroethane	**22.2**		µg/l		20.0		111	80-120		
1,1,2,2-Tetrachloroethane	**21.3**		µg/l		20.0		106	80-120		
Tetrachloroethene	**20.4**		µg/l		20.0		102	80-120		
Toluene	**19.7**		µg/l		20.0		98	80-120		
1,2,3-Trichlorobenzene	**20.9**		µg/l		20.0		104	80-120		
1,2,4-Trichlorobenzene	**20.4**		µg/l		20.0		102	80-120		
1,1,1-Trichloroethane	**20.9**		µg/l		20.0		104	80-120		
1,1,2-Trichloroethane	**20.5**		µg/l		20.0		102	80-120		
Trichloroethene	**20.1**		µg/l		20.0		100	80-120		
Trichlorofluoromethane (Freon 11)	**18.1**		µg/l		20.0		90	80-120		
1,2,3-Trichloropropane	**21.4**		µg/l		20.0		107	80-120		
1,2,4-Trimethylbenzene	**20.4**		µg/l		20.0		102	80-120		
1,3,5-Trimethylbenzene	**19.8**		µg/l		20.0		99	80-120		
Vinyl chloride	**17.8**		µg/l		20.0		89	80-120		
m,p-Xylene	**18.9**		µg/l		20.0		95	80-120		
o-Xylene	**19.6**		µg/l		20.0		98	80-120		
Tetrahydrofuran	**19.3**		µg/l		20.0		97	70-130		
Tert-amyl methyl ether	**18.4**		µg/l		20.0		92	70-130		
Ethyl tert-butyl ether	**20.4**		µg/l		20.0		102	70-130		
Di-isopropyl ether	**18.5**		µg/l		20.0		93	70-130		
Tert-Butanol / butyl alcohol	**206**		µg/l		200		103	70-130		
Surrogate: 4-Bromofluorobenzene	*52.1*		µg/l		*50.0*		*104*	*80-120*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 524.2										
Batch 1716332 - SW846 5030 Water MS										
LCS (1716332-BS1)					Prepared & Analyzed: 23-Sep-17					
Surrogate: Toluene-d8	*49.1*		µg/l		*50.0*		*98*	*80-120*		
Surrogate: 1,2-Dichloroethane-d4	*49.9*		µg/l		*50.0*		*100*	*80-120*		
Surrogate: Dibromofluoromethane	*47.9*		µg/l		*50.0*		*96*	*80-120*		
EPA 624										
Batch 1716230 - SW846 5030 Water MS										
Blank (1716230-BLK1)					Prepared & Analyzed: 22-Sep-17					
Acetone	< 10.0		µg/l	10.0						
Benzene	< 1.0		µg/l	1.0						
Bromodichloromethane	< 1.0		µg/l	1.0						
Bromoform	< 1.0		µg/l	1.0						
Bromomethane	< 2.0		µg/l	2.0						
2-Butanone (MEK)	< 10.0		µg/l	10.0						
Carbon disulfide	< 5.0		µg/l	5.0						
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						
Dibromochloromethane	< 1.0		µg/l	1.0						
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						
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						
cis-1,3-Dichloropropene	< 1.0		µg/l	1.0						
trans-1,3-Dichloropropene	< 1.0		µg/l	1.0						
Ethylbenzene	< 1.0		µg/l	1.0						
2-Hexanone (MBK)	< 10.0		µg/l	10.0						
Methyl tert-butyl ether	< 1.0		µg/l	1.0						
4-Methyl-2-pentanone (MIBK)	< 10.0		µg/l	10.0						
Methylene chloride	< 10.0		µg/l	10.0						
Styrene	< 1.0		µg/l	1.0						
1,1,2,2-Tetrachloroethane	< 1.0		µg/l	1.0						
Tetrachloroethene	< 1.0		µg/l	1.0						
Toluene	< 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						
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						
1,4-Dioxane	< 20.0		µg/l	20.0						
Surrogate: 4-Bromofluorobenzene	*40.0*		µg/l		*50.0*		*80*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 624										
Batch 1716230 - SW846 5030 Water MS										
Blank (1716230-BLK1)					Prepared & Analyzed: 22-Sep-17					
Surrogate: Toluene-d8	*50.8*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*54.1*		µg/l		*50.0*		*108*	*70-130*		
Surrogate: Dibromofluoromethane	*54.7*		µg/l		*50.0*		*109*	*70-130*		
LCS (1716230-BS1)					Prepared & Analyzed: 22-Sep-17					
Acetone	**23.3**		µg/l		20.0		116	70-130		
Benzene	**22.0**		µg/l		20.0		110	70-130		
Bromodichloromethane	**20.1**		µg/l		20.0		100	35-155		
Bromoform	**18.9**		µg/l		20.0		94	45-169		
Bromomethane	**22.6**		µg/l		20.0		113	1-242		
2-Butanone (MEK)	**17.0**		µg/l		20.0		85	70-130		
Carbon disulfide	**20.9**		µg/l		20.0		104	70-130		
Carbon tetrachloride	**21.1**		µg/l		20.0		105	70-140		
Chlorobenzene	**21.1**		µg/l		20.0		105	70-130		
Chloroethane	**20.0**		µg/l		20.0		100	14-230		
Chloroform	**19.8**		µg/l		20.0		99	51-138		
Chloromethane	**19.5**		µg/l		20.0		97	1-273		
Dibromochloromethane	**19.8**		µg/l		20.0		99	53-149		
Dibromomethane	**19.7**		µg/l		20.0		98	70-130		
1,2-Dichlorobenzene	**19.8**		µg/l		20.0		99	18-190		
1,3-Dichlorobenzene	**20.6**		µg/l		20.0		103	59-156		
1,4-Dichlorobenzene	**20.0**		µg/l		20.0		100	18-190		
1,1-Dichloroethane	**20.1**		µg/l		20.0		100	59-155		
1,2-Dichloroethane	**19.6**		µg/l		20.0		98	49-155		
1,1-Dichloroethene	**20.2**		µg/l		20.0		101	70-130		
cis-1,2-Dichloroethene	**21.6**		µg/l		20.0		108	70-130		
trans-1,2-Dichloroethene	**20.5**		µg/l		20.0		102	54-156		
1,2-Dichloropropane	**19.9**		µg/l		20.0		99	1-210		
cis-1,3-Dichloropropene	**19.0**		µg/l		20.0		95	1-227		
trans-1,3-Dichloropropene	**18.7**		µg/l		20.0		94	17-183		
Ethylbenzene	**21.1**		µg/l		20.0		106	37-162		
2-Hexanone (MBK)	**15.4**		µg/l		20.0		77	70-130		
Methyl tert-butyl ether	**19.6**		µg/l		20.0		98	70-130		
4-Methyl-2-pentanone (MIBK)	**17.9**		µg/l		20.0		89	70-130		
Methylene chloride	**18.2**		µg/l		20.0		91	1-221		
Styrene	**19.8**		µg/l		20.0		99	70-130		
1,1,2,2-Tetrachloroethane	**19.7**		µg/l		20.0		99	46-157		
Tetrachloroethene	**19.6**		µg/l		20.0		98	64-148		
Toluene	**20.1**		µg/l		20.0		101	70-130		
1,1,1-Trichloroethane	**20.6**		µg/l		20.0		103	52-162		
1,1,2-Trichloroethane	**19.6**		µg/l		20.0		98	52-150		
Trichloroethene	**19.9**		µg/l		20.0		100	71-157		
Trichlorofluoromethane (Freon 11)	**20.2**		µg/l		20.0		101	17-181		
Vinyl chloride	**20.3**		µg/l		20.0		101	1-251		
m,p-Xylene	**19.7**		µg/l		20.0		99	70-130		
o-Xylene	**19.1**		µg/l		20.0		95	70-130		
1,4-Dioxane	**177**		µg/l		200		89	70-130		
Surrogate: 4-Bromofluorobenzene	*54.2*		µg/l		*50.0*		*108*	*70-130*		
Surrogate: Toluene-d8	*48.5*		µg/l		*50.0*		*97*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*47.7*		µg/l		*50.0*		*95*	*70-130*		
Surrogate: Dibromofluoromethane	*47.7*		µg/l		*50.0*		*95*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 624										
Batch 1716230 - SW846 5030 Water MS										
LCS Dup (1716230-BSD1)					Prepared & Analyzed: 22-Sep-17					
Acetone	**24.5**		µg/l		20.0		122	70-130	5	30
Benzene	**21.6**		µg/l		20.0		108	70-130	2	30
Bromodichloromethane	**19.8**		µg/l		20.0		99	35-155	2	30
Bromoform	**19.2**		µg/l		20.0		96	45-169	1	30
Bromomethane	**22.2**		µg/l		20.0		111	1-242	2	30
2-Butanone (MEK)	**19.2**		µg/l		20.0		96	70-130	12	30
Carbon disulfide	**20.0**		µg/l		20.0		100	70-130	4	30
Carbon tetrachloride	**20.9**		µg/l		20.0		105	70-140	0.8	30
Chlorobenzene	**20.0**		µg/l		20.0		100	70-130	5	30
Chloroethane	**19.1**		µg/l		20.0		96	14-230	4	30
Chloroform	**19.2**		µg/l		20.0		96	51-138	3	30
Chloromethane	**18.6**		µg/l		20.0		93	1-273	5	30
Dibromochloromethane	**19.2**		µg/l		20.0		96	53-149	3	30
Dibromomethane	**19.6**		µg/l		20.0		98	70-130	0.2	25
1,2-Dichlorobenzene	**19.2**		µg/l		20.0		96	18-190	3	30
1,3-Dichlorobenzene	**19.6**		µg/l		20.0		98	59-156	5	30
1,4-Dichlorobenzene	**19.6**		µg/l		20.0		98	18-190	2	30
1,1-Dichloroethane	**19.8**		µg/l		20.0		99	59-155	1	30
1,2-Dichloroethane	**19.7**		µg/l		20.0		98	49-155	0.6	30
1,1-Dichloroethene	**19.4**		µg/l		20.0		97	70-130	4	30
cis-1,2-Dichloroethene	**20.9**		µg/l		20.0		104	70-130	3	30
trans-1,2-Dichloroethene	**19.6**		µg/l		20.0		98	54-156	5	30
1,2-Dichloropropane	**19.7**		µg/l		20.0		98	1-210	1	30
cis-1,3-Dichloropropene	**18.3**		µg/l		20.0		92	1-227	4	30
trans-1,3-Dichloropropene	**18.3**		µg/l		20.0		91	17-183	3	30
Ethylbenzene	**20.2**		µg/l		20.0		101	37-162	4	30
2-Hexanone (MBK)	**18.8**		µg/l		20.0		94	70-130	20	30
Methyl tert-butyl ether	**20.5**		µg/l		20.0		103	70-130	5	30
4-Methyl-2-pentanone (MIBK)	**18.4**		µg/l		20.0		92	70-130	3	30
Methylene chloride	**18.6**		µg/l		20.0		93	1-221	2	30
Styrene	**18.8**		µg/l		20.0		94	70-130	5	30
1,1,2,2-Tetrachloroethane	**20.0**		µg/l		20.0		100	46-157	1	30
Tetrachloroethene	**19.0**		µg/l		20.0		95	64-148	3	30
Toluene	**20.0**		µg/l		20.0		100	70-130	0.5	30
1,1,1-Trichloroethane	**20.0**		µg/l		20.0		100	52-162	3	30
1,1,2-Trichloroethane	**19.9**		µg/l		20.0		100	52-150	2	30
Trichloroethene	**19.2**		µg/l		20.0		96	71-157	4	30
Trichlorofluoromethane (Freon 11)	**19.6**		µg/l		20.0		98	17-181	3	30
Vinyl chloride	**19.4**		µg/l		20.0		97	1-251	5	30
m,p-Xylene	**18.3**		µg/l		20.0		92	70-130	8	30
o-Xylene	**18.2**		µg/l		20.0		91	70-130	5	30
1,4-Dioxane	**198**		µg/l		200		99	70-130	11	25
Surrogate: 4-Bromofluorobenzene	*53.2*		µg/l		*50.0*		*106*	*70-130*		
Surrogate: Toluene-d8	*49.5*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*47.9*		µg/l		*50.0*		*96*	*70-130*		
Surrogate: Dibromofluoromethane	*48.0*		µg/l		*50.0*		*96*	*70-130*		
SW846 8260C										
Batch 1716332 - SW846 5030 Water MS										
Blank (1716332-BLK1)					Prepared & Analyzed: 23-Sep-17					
Ethanol	< 200		µg/l	200						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716332 - SW846 5030 Water MS										
Blank (1716332-BLK1)						Prepared & Analyzed: 23-Sep-17				
Surrogate: 4-Bromofluorobenzene	*45.6*		µg/l		*50.0*		*91*	*70-130*		
Surrogate: Toluene-d8	*48.7*		µg/l		*50.0*		*97*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.7*		µg/l		*50.0*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*50.5*		µg/l		*50.0*		*101*	*70-130*		
LCS (1716332-BS1)						Prepared & Analyzed: 23-Sep-17				
Ethanol	**377**		µg/l		400		94	70-130		
Surrogate: 4-Bromofluorobenzene	*52.1*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*49.1*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.9*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: Dibromofluoromethane	*47.9*		µg/l		*50.0*		*96*	*70-130*		
LCS Dup (1716332-BSD1)						Prepared & Analyzed: 23-Sep-17				
Ethanol	**370**		µg/l		400		93	70-130	2	20
Surrogate: 4-Bromofluorobenzene	*52.9*		µg/l		*50.0*		*106*	*70-130*		
Surrogate: Toluene-d8	*49.5*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.9*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: Dibromofluoromethane	*47.2*		µg/l		*50.0*		*94*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 625										
Batch 1716152 - SW846 3510C										
Blank (1716152-BLK1)					Prepared: 21-Sep-17 Analyzed: 22-Sep-17					
Acenaphthene	< 5.05		µg/l	5.05						
Acenaphthylene	< 5.05		µg/l	5.05						
Anthracene	< 5.05		µg/l	5.05						
Benzidine	< 5.05		µg/l	5.05						
Benzo (a) anthracene	< 5.05		µg/l	5.05						
Benzo (a) pyrene	< 5.05		µg/l	5.05						
Benzo (b) fluoranthene	< 5.05		µg/l	5.05						
Benzo (g,h,i) perylene	< 5.05		µg/l	5.05						
Benzo (k) fluoranthene	< 5.05		µg/l	5.05						
Bis(2-chloroethoxy)methane	< 5.05		µg/l	5.05						
Bis(2-chloroethyl)ether	< 5.05		µg/l	5.05						
Bis(2-chloroisopropyl)ether	< 5.05		µg/l	5.05						
Bis(2-ethylhexyl)phthalate	< 5.05		µg/l	5.05						
4-Bromophenyl phenyl ether	< 5.05		µg/l	5.05						
Butyl benzyl phthalate	< 5.05		µg/l	5.05						
4-Chloro-3-methylphenol	< 5.05		µg/l	5.05						
2-Chloronaphthalene	< 5.05		µg/l	5.05						
2-Chlorophenol	< 5.05		µg/l	5.05						
4-Chlorophenyl phenyl ether	< 5.05		µg/l	5.05						
Chrysene	< 5.05		µg/l	5.05						
Dibenzo (a,h) anthracene	< 5.05		µg/l	5.05						
1,2-Dichlorobenzene	< 5.05		µg/l	5.05						
1,3-Dichlorobenzene	< 5.05		µg/l	5.05						
1,4-Dichlorobenzene	< 5.05		µg/l	5.05						
3,3´-Dichlorobenzidine	< 5.05		µg/l	5.05						
2,4-Dichlorophenol	< 5.05		µg/l	5.05						
Diethyl phthalate	< 5.05		µg/l	5.05						
Dimethyl phthalate	< 5.05		µg/l	5.05						
2,4-Dimethylphenol	< 5.05		µg/l	5.05						
Di-n-butyl phthalate	< 5.05		µg/l	5.05						
4,6-Dinitro-2-methylphenol	< 5.05		µg/l	5.05						
2,4-Dinitrophenol	< 5.05		µg/l	5.05						
2,4-Dinitrotoluene	< 5.05		µg/l	5.05						
2,6-Dinitrotoluene	< 5.05		µg/l	5.05						
Di-n-octyl phthalate	< 5.05		µg/l	5.05						
Fluoranthene	< 5.05		µg/l	5.05						
Fluorene	< 5.05		µg/l	5.05						
Hexachlorobenzene	< 5.05		µg/l	5.05						
Hexachlorobutadiene	< 5.05		µg/l	5.05						
Hexachlorocyclopentadiene	< 5.05		µg/l	5.05						
Hexachloroethane	< 5.05		µg/l	5.05						
Indeno (1,2,3-cd) pyrene	< 5.05		µg/l	5.05						
Isophorone	< 5.05		µg/l	5.05						
Naphthalene	< 5.05		µg/l	5.05						
Nitrobenzene	< 5.05		µg/l	5.05						
2-Nitrophenol	< 5.05		µg/l	5.05						
4-Nitrophenol	< 5.05		µg/l	5.05						
N-Nitrosodimethylamine	< 5.05		µg/l	5.05						
N-Nitrosodi-n-propylamine	< 5.05		µg/l	5.05						
N-Nitrosodiphenylamine	< 5.05		µg/l	5.05						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 625										
Batch 1716152 - SW846 3510C										
Blank (1716152-BLK1)						Prepared: 21-Sep-17 Analyzed: 22-Sep-17				
Pentachlorophenol	< 5.05		µg/l	5.05						
Phenanthrene	< 5.05		µg/l	5.05						
Phenol	< 5.05		µg/l	5.05						
Pyrene	< 5.05		µg/l	5.05						
1,2,4-Trichlorobenzene	< 5.05		µg/l	5.05						
2,4,6-Trichlorophenol	< 5.05		µg/l	5.05						
Surrogate: 2-Fluorobiphenyl	*26.8*		µg/l		*50.5*		*53*	*30-130*		
Surrogate: 2-Fluorophenol	*17.8*		µg/l		*50.5*		*35*	*15-110*		
Surrogate: Nitrobenzene-d5	*25.1*		µg/l		*50.5*		*50*	*30-130*		
Surrogate: Phenol-d5	*13.5*		µg/l		*50.5*		*27*	*15-110*		
Surrogate: Terphenyl-dl4	*33.9*		µg/l		*50.5*		*67*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*31.8*		µg/l		*50.5*		*63*	*15-110*		
Blank (1716152-BLK3)						Prepared: 21-Sep-17 Analyzed: 27-Sep-17				
Acenaphthene	< 5.05		µg/l	5.05						
Acenaphthylene	< 5.05		µg/l	5.05						
Anthracene	< 5.05		µg/l	5.05						
Benzidine	< 5.05		µg/l	5.05						
Benzo (a) anthracene	< 5.05		µg/l	5.05						
Benzo (a) pyrene	< 5.05		µg/l	5.05						
Benzo (b) fluoranthene	< 5.05		µg/l	5.05						
Benzo (g,h,i) perylene	< 5.05		µg/l	5.05						
Benzo (k) fluoranthene	< 5.05		µg/l	5.05						
Bis(2-chloroethoxy)methane	< 5.05		µg/l	5.05						
Bis(2-chloroethyl)ether	< 5.05		µg/l	5.05						
Bis(2-chloroisopropyl)ether	< 5.05		µg/l	5.05						
Bis(2-ethylhexyl)phthalate	< 5.05		µg/l	5.05						
4-Bromophenyl phenyl ether	< 5.05		µg/l	5.05						
Butyl benzyl phthalate	< 5.05		µg/l	5.05						
4-Chloro-3-methylphenol	< 5.05		µg/l	5.05						
2-Chloronaphthalene	< 5.05		µg/l	5.05						
2-Chlorophenol	< 5.05		µg/l	5.05						
4-Chlorophenyl phenyl ether	< 5.05		µg/l	5.05						
Chrysene	< 5.05		µg/l	5.05						
Dibenzo (a,h) anthracene	< 5.05		µg/l	5.05						
1,2-Dichlorobenzene	< 5.05		µg/l	5.05						
1,3-Dichlorobenzene	< 5.05		µg/l	5.05						
1,4-Dichlorobenzene	< 5.05		µg/l	5.05						
3,3´-Dichlorobenzidine	< 5.05		µg/l	5.05						
2,4-Dichlorophenol	< 5.05		µg/l	5.05						
Diethyl phthalate	< 5.05		µg/l	5.05						
Dimethyl phthalate	< 5.05		µg/l	5.05						
2,4-Dimethylphenol	< 5.05		µg/l	5.05						
Di-n-butyl phthalate	< 5.05		µg/l	5.05						
4,6-Dinitro-2-methylphenol	< 5.05		µg/l	5.05						
2,4-Dinitrophenol	< 5.05		µg/l	5.05						
2,4-Dinitrotoluene	< 5.05		µg/l	5.05						
2,6-Dinitrotoluene	< 5.05		µg/l	5.05						
Di-n-octyl phthalate	< 5.05		µg/l	5.05						
Fluoranthene	< 5.05		µg/l	5.05						
Fluorene	< 5.05		µg/l	5.05						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 625										
Batch 1716152 - SW846 3510C										
Blank (1716152-BLK3)					Prepared: 21-Sep-17 Analyzed: 27-Sep-17					
Hexachlorobenzene	< 5.05		µg/l	5.05						
Hexachlorobutadiene	< 5.05		µg/l	5.05						
Hexachlorocyclopentadiene	< 5.05		µg/l	5.05						
Hexachloroethane	< 5.05		µg/l	5.05						
Indeno (1,2,3-cd) pyrene	< 5.05		µg/l	5.05						
Isophorone	< 5.05		µg/l	5.05						
Naphthalene	< 5.05		µg/l	5.05						
Nitrobenzene	< 5.05		µg/l	5.05						
2-Nitrophenol	< 5.05		µg/l	5.05						
4-Nitrophenol	< 5.05		µg/l	5.05						
N-Nitrosodimethylamine	< 5.05		µg/l	5.05						
N-Nitrosodi-n-propylamine	< 5.05		µg/l	5.05						
N-Nitrosodiphenylamine	< 5.05		µg/l	5.05						
Pentachlorophenol	< 5.05		µg/l	5.05						
Phenanthrene	< 5.05		µg/l	5.05						
Phenol	< 5.05		µg/l	5.05						
Pyrene	< 5.05		µg/l	5.05						
1,2,4-Trichlorobenzene	< 5.05		µg/l	5.05						
2,4,6-Trichlorophenol	< 5.05		µg/l	5.05						
Surrogate: 2-Fluorobiphenyl	*33.2*		µg/l		*50.5*		*66*	*30-130*		
Surrogate: 2-Fluorophenol	*20.9*		µg/l		*50.5*		*41*	*15-110*		
Surrogate: Nitrobenzene-d5	*25.1*		µg/l		*50.5*		*50*	*30-130*		
Surrogate: Phenol-d5	*19.5*		µg/l		*50.5*		*39*	*15-110*		
Surrogate: Terphenyl-dl4	*33.1*		µg/l		*50.5*		*66*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*29.7*		µg/l		*50.5*		*59*	*15-110*		
LCS (1716152-BS1)					Prepared: 21-Sep-17 Analyzed: 22-Sep-17					
Acenaphthene	**25.7**		µg/l	5.15	51.5		50	47-145		
Acenaphthylene	**29.2**		µg/l	5.15	51.5		57	33-145		
Anthracene	**28.9**		µg/l	5.15	51.5		56	27-133		
Benzidine	**38.7**		µg/l	5.15	51.5		75	40-140		
Benzo (a) anthracene	**30.4**		µg/l	5.15	51.5		59	33-143		
Benzo (a) pyrene	**32.5**		µg/l	5.15	51.5		63	17-163		
Benzo (b) fluoranthene	**33.3**		µg/l	5.15	51.5		65	24-159		
Benzo (g,h,i) perylene	**29.1**		µg/l	5.15	51.5		56	1-219		
Benzo (k) fluoranthene	**31.0**		µg/l	5.15	51.5		60	11-162		
Bis(2-chloroethoxy)methane	**22.6**		µg/l	5.15	51.5		44	33-184		
Bis(2-chloroethyl)ether	**21.7**		µg/l	5.15	51.5		42	12-158		
Bis(2-chloroisopropyl)ether	**18.0**	QC2	µg/l	5.15	51.5		35	36-166		
Bis(2-ethylhexyl)phthalate	**32.6**		µg/l	5.15	51.5		63	8-158		
4-Bromophenyl phenyl ether	**27.6**		µg/l	5.15	51.5		53	53-127		
Butyl benzyl phthalate	**31.8**		µg/l	5.15	51.5		62	1-152		
4-Chloro-3-methylphenol	**28.2**		µg/l	5.15	51.5		55	22-147		
2-Chloronaphthalene	**34.6**		µg/l	5.15	51.5		67	60-118		
2-Chlorophenol	**23.8**		µg/l	5.15	51.5		46	23-134		
4-Chlorophenyl phenyl ether	**26.9**		µg/l	5.15	51.5		52	25-158		
Chrysene	**30.5**		µg/l	5.15	51.5		59	17-168		
Dibenzo (a,h) anthracene	**32.4**		µg/l	5.15	51.5		63	1-227		
1,2-Dichlorobenzene	**28.0**		µg/l	5.15	51.5		54	32-129		
1,3-Dichlorobenzene	**26.7**		µg/l	5.15	51.5		52	1-172		
1,4-Dichlorobenzene	**27.0**		µg/l	5.15	51.5		52	20-124		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 625										
Batch 1716152 - SW846 3510C										
LCS (1716152-BS1)					Prepared: 21-Sep-17 Analyzed: 22-Sep-17					
3,3´-Dichlorobenzidine	**41.6**		µg/l	5.15	51.5		81	1-262		
2,4-Dichlorophenol	**25.1**		µg/l	5.15	51.5		49	39-135		
Diethyl phthalate	**29.1**		µg/l	5.15	51.5		56	1-114		
Dimethyl phthalate	**31.7**		µg/l	5.15	51.5		61	1-112		
2,4-Dimethylphenol	**24.0**		µg/l	5.15	51.5		47	32-119		
Di-n-butyl phthalate	**32.2**		µg/l	5.15	51.5		62	1-118		
4,6-Dinitro-2-methylphenol	**27.8**		µg/l	5.15	51.5		54	1-181		
2,4-Dinitrophenol	**24.2**		µg/l	5.15	51.5		47	1-191		
2,4-Dinitrotoluene	**37.3**		µg/l	5.15	51.5		72	39-139		
2,6-Dinitrotoluene	**40.2**		µg/l	5.15	51.5		78	50-158		
Di-n-octyl phthalate	**33.2**		µg/l	5.15	51.5		64	4-146		
Fluoranthene	**31.3**		µg/l	5.15	51.5		61	26-137		
Fluorene	**26.2**	QC2	µg/l	5.15	51.5		51	59-121		
Hexachlorobenzene	**36.3**		µg/l	5.15	51.5		70	1-152		
Hexachlorobutadiene	**25.8**		µg/l	5.15	51.5		50	24-116		
Hexachlorocyclopentadiene	**32.9**		µg/l	5.15	51.5		64	40-140		
Hexachloroethane	**26.8**		µg/l	5.15	51.5		52	40-113		
Indeno (1,2,3-cd) pyrene	**31.6**		µg/l	5.15	51.5		61	1-171		
Isophorone	**24.9**		µg/l	5.15	51.5		48	21-196		
Naphthalene	**23.8**		µg/l	5.15	51.5		46	21-133		
Nitrobenzene	**29.9**		µg/l	5.15	51.5		58	35-180		
2-Nitrophenol	**25.0**		µg/l	5.15	51.5		49	29-182		
4-Nitrophenol	**16.6**		µg/l	5.15	51.5		32	1-132		
N-Nitrosodimethylamine	**16.6**	QC2	µg/l	5.15	51.5		32	40-140		
N-Nitrosodi-n-propylamine	**23.6**		µg/l	5.15	51.5		46	1-230		
N-Nitrosodiphenylamine	**30.2**		µg/l	5.15	51.5		59	40-140		
Pentachlorophenol	**23.9**		µg/l	5.15	51.5		46	14-176		
Phenanthrene	**27.3**	QC2	µg/l	5.15	51.5		53	54-120		
Phenol	**12.9**		µg/l	5.15	51.5		25	5-112		
Pyrene	**30.2**		µg/l	5.15	51.5		59	52-115		
1,2,4-Trichlorobenzene	**29.0**		µg/l	5.15	51.5		56	44-142		
2,4,6-Trichlorophenol	**27.3**		µg/l	5.15	51.5		53	37-144		
Surrogate: 2-Fluorobiphenyl	*32.7*		µg/l		*51.5*		*63*	*30-130*		
Surrogate: 2-Fluorophenol	*18.0*		µg/l		*51.5*		*35*	*15-110*		
Surrogate: Nitrobenzene-d5	*29.0*		µg/l		*51.5*		*56*	*30-130*		
Surrogate: Phenol-d5	*14.0*		µg/l		*51.5*		*27*	*15-110*		
Surrogate: Terphenyl-dl4	*39.8*		µg/l		*51.5*		*77*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*35.0*		µg/l		*51.5*		*68*	*15-110*		
LCS (1716152-BS3)					Prepared: 21-Sep-17 Analyzed: 27-Sep-17					
Acenaphthene	**34.7**		µg/l	5.15	51.5		67	47-145		
Acenaphthylene	**35.2**		µg/l	5.15	51.5		68	33-145		
Anthracene	**29.2**		µg/l	5.15	51.5		57	27-133		
Benzidine	**7.08**	QC2	µg/l	5.15	51.5		14	40-140		
Benzo (a) anthracene	**30.9**		µg/l	5.15	51.5		60	33-143		
Benzo (a) pyrene	**32.9**		µg/l	5.15	51.5		64	17-163		
Benzo (b) fluoranthene	**34.0**		µg/l	5.15	51.5		66	24-159		
Benzo (g,h,i) perylene	**32.7**		µg/l	5.15	51.5		64	1-219		
Benzo (k) fluoranthene	**31.3**		µg/l	5.15	51.5		61	11-162		
Bis(2-chloroethoxy)methane	**23.9**		µg/l	5.15	51.5		46	33-184		
Bis(2-chloroethyl)ether	**26.4**		µg/l	5.15	51.5		51	12-158		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 625										
Batch 1716152 - SW846 3510C										
LCS (1716152-BS3)						Prepared: 21-Sep-17 Analyzed: 27-Sep-17				
Bis(2-chloroisopropyl)ether	**20.8**		µg/l	5.15	51.5		40	36-166		
Bis(2-ethylhexyl)phthalate	**31.8**		µg/l	5.15	51.5		62	8-158		
4-Bromophenyl phenyl ether	**29.3**		µg/l	5.15	51.5		57	53-127		
Butyl benzyl phthalate	**32.0**		µg/l	5.15	51.5		62	1-152		
4-Chloro-3-methylphenol	**30.0**		µg/l	5.15	51.5		58	22-147		
2-Chloronaphthalene	**42.1**		µg/l	5.15	51.5		82	60-118		
2-Chlorophenol	**29.2**		µg/l	5.15	51.5		57	23-134		
4-Chlorophenyl phenyl ether	**38.0**		µg/l	5.15	51.5		74	25-158		
Chrysene	**30.9**		µg/l	5.15	51.5		60	17-168		
Dibenzo (a,h) anthracene	**35.7**		µg/l	5.15	51.5		69	1-227		
1,2-Dichlorobenzene	**30.1**		µg/l	5.15	51.5		58	32-129		
1,3-Dichlorobenzene	**29.5**		µg/l	5.15	51.5		57	1-172		
1,4-Dichlorobenzene	**29.6**		µg/l	5.15	51.5		57	20-124		
3,3´-Dichlorobenzidine	**36.1**		µg/l	5.15	51.5		70	1-262		
2,4-Dichlorophenol	**28.4**		µg/l	5.15	51.5		55	39-135		
Diethyl phthalate	**41.0**		µg/l	5.15	51.5		80	1-114		
Dimethyl phthalate	**38.6**		µg/l	5.15	51.5		75	1-112		
2,4-Dimethylphenol	**24.4**		µg/l	5.15	51.5		47	32-119		
Di-n-butyl phthalate	**31.9**		µg/l	5.15	51.5		62	1-118		
4,6-Dinitro-2-methylphenol	**31.5**		µg/l	5.15	51.5		61	1-181		
2,4-Dinitrophenol	**35.9**		µg/l	5.15	51.5		70	1-191		
2,4-Dinitrotoluene	**49.6**		µg/l	5.15	51.5		96	39-139		
2,6-Dinitrotoluene	**46.2**		µg/l	5.15	51.5		90	50-158		
Di-n-octyl phthalate	**32.5**		µg/l	5.15	51.5		63	4-146		
Fluoranthene	**30.6**		µg/l	5.15	51.5		59	26-137		
Fluorene	**36.2**		µg/l	5.15	51.5		70	59-121		
Hexachlorobenzene	**36.7**		µg/l	5.15	51.5		71	1-152		
Hexachlorobutadiene	**27.8**		µg/l	5.15	51.5		54	24-116		
Hexachlorocyclopentadiene	**38.5**		µg/l	5.15	51.5		75	40-140		
Hexachloroethane	**30.4**		µg/l	5.15	51.5		59	40-113		
Indeno (1,2,3-cd) pyrene	**35.2**		µg/l	5.15	51.5		68	1-171		
Isophorone	**26.2**		µg/l	5.15	51.5		51	21-196		
Naphthalene	**24.7**		µg/l	5.15	51.5		48	21-133		
Nitrobenzene	**29.3**		µg/l	5.15	51.5		57	35-180		
2-Nitrophenol	**29.0**		µg/l	5.15	51.5		56	29-182		
4-Nitrophenol	**29.8**		µg/l	5.15	51.5		58	1-132		
N-Nitrosodimethylamine	**22.0**		µg/l	5.15	51.5		43	40-140		
N-Nitrosodi-n-propylamine	**26.2**		µg/l	5.15	51.5		51	1-230		
N-Nitrosodiphenylamine	**29.1**		µg/l	5.15	51.5		56	40-140		
Pentachlorophenol	**19.0**		µg/l	5.15	51.5		37	14-176		
Phenanthrene	**27.4**	QC2	µg/l	5.15	51.5		53	54-120		
Phenol	**17.7**		µg/l	5.15	51.5		34	5-112		
Pyrene	**29.7**		µg/l	5.15	51.5		58	52-115		
1,2,4-Trichlorobenzene	**29.2**		µg/l	5.15	51.5		57	44-142		
2,4,6-Trichlorophenol	**39.4**		µg/l	5.15	51.5		77	37-144		
Surrogate: 2-Fluorobiphenyl	*40.1*		µg/l		*51.5*		*78*	*30-130*		
Surrogate: 2-Fluorophenol	*23.9*		µg/l		*51.5*		*46*	*15-110*		
Surrogate: Nitrobenzene-d5	*28.7*		µg/l		*51.5*		*56*	*30-130*		
Surrogate: Phenol-d5	*19.0*		µg/l		*51.5*		*37*	*15-110*		
Surrogate: Terphenyl-dl4	*37.4*		µg/l		*51.5*		*72*	*30-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 625										
Batch 1716152 - SW846 3510C										
LCS (1716152-BS3)					Prepared: 21-Sep-17 Analyzed: 27-Sep-17					
Surrogate: 2,4,6-Tribromophenol	*40.1*		µg/l		*51.5*		*78*	*15-110*		
LCS Dup (1716152-BSD1)					Prepared: 21-Sep-17 Analyzed: 22-Sep-17					
Acenaphthene	**27.3**		µg/l	5.15	51.5		53	47-145	6	20
Acenaphthylene	**27.2**		µg/l	5.15	51.5		53	33-145	7	20
Anthracene	**30.5**		µg/l	5.15	51.5		59	27-133	5	20
Benzidine	**25.6**	QR9	µg/l	5.15	51.5		50	40-140	41	20
Benzo (a) anthracene	**33.7**		µg/l	5.15	51.5		65	33-143	10	20
Benzo (a) pyrene	**34.4**		µg/l	5.15	51.5		67	17-163	5	20
Benzo (b) fluoranthene	**36.6**		µg/l	5.15	51.5		71	24-159	10	20
Benzo (g,h,i) perylene	**32.0**		µg/l	5.15	51.5		62	1-219	10	20
Benzo (k) fluoranthene	**29.4**		µg/l	5.15	51.5		57	11-162	5	20
Bis(2-chloroethoxy)methane	**25.0**		µg/l	5.15	51.5		49	33-184	10	20
Bis(2-chloroethyl)ether	**24.8**		µg/l	5.15	51.5		48	12-158	13	20
Bis(2-chloroisopropyl)ether	**20.0**		µg/l	5.15	51.5		39	36-166	10	20
Bis(2-ethylhexyl)phthalate	**32.6**		µg/l	5.15	51.5		63	8-158	0.09	20
4-Bromophenyl phenyl ether	**31.0**		µg/l	5.15	51.5		60	53-127	12	20
Butyl benzyl phthalate	**33.4**		µg/l	5.15	51.5		65	1-152	5	20
4-Chloro-3-methylphenol	**31.8**		µg/l	5.15	51.5		62	22-147	12	20
2-Chloronaphthalene	**33.0**		µg/l	5.15	51.5		64	60-118	5	20
2-Chlorophenol	**28.5**		µg/l	5.15	51.5		55	23-134	18	20
4-Chlorophenyl phenyl ether	**27.9**		µg/l	5.15	51.5		54	25-158	4	20
Chrysene	**31.4**		µg/l	5.15	51.5		61	17-168	3	20
Dibenzo (a,h) anthracene	**35.5**		µg/l	5.15	51.5		69	1-227	9	20
1,2-Dichlorobenzene	**31.6**		µg/l	5.15	51.5		61	32-129	12	20
1,3-Dichlorobenzene	**30.1**		µg/l	5.15	51.5		58	1-172	12	20
1,4-Dichlorobenzene	**30.5**		µg/l	5.15	51.5		59	20-124	12	20
3,3´-Dichlorobenzidine	**44.9**		µg/l	5.15	51.5		87	1-262	7	20
2,4-Dichlorophenol	**30.6**		µg/l	5.15	51.5		59	39-135	20	20
Diethyl phthalate	**29.2**		µg/l	5.15	51.5		57	1-114	0.4	20
Dimethyl phthalate	**29.3**		µg/l	5.15	51.5		57	1-112	8	20
2,4-Dimethylphenol	**28.6**		µg/l	5.15	51.5		56	32-119	18	20
Di-n-butyl phthalate	**33.4**		µg/l	5.15	51.5		65	1-118	4	20
4,6-Dinitro-2-methylphenol	**38.6**	QR9	µg/l	5.15	51.5		75	1-181	32	20
2,4-Dinitrophenol	**35.0**	QR9	µg/l	5.15	51.5		68	1-191	37	20
2,4-Dinitrotoluene	**40.6**		µg/l	5.15	51.5		79	39-139	9	20
2,6-Dinitrotoluene	**39.1**		µg/l	5.15	51.5		76	50-158	3	20
Di-n-octyl phthalate	**32.2**		µg/l	5.15	51.5		62	4-146	3	20
Fluoranthene	**33.3**		µg/l	5.15	51.5		65	26-137	6	20
Fluorene	**27.0**	QC2	µg/l	5.15	51.5		52	59-121	3	20
Hexachlorobenzene	**40.9**		µg/l	5.15	51.5		79	1-152	12	20
Hexachlorobutadiene	**29.0**		µg/l	5.15	51.5		56	24-116	11	20
Hexachlorocyclopentadiene	**35.1**		µg/l	5.15	51.5		68	40-140	6	20
Hexachloroethane	**30.2**		µg/l	5.15	51.5		59	40-113	12	20
Indeno (1,2,3-cd) pyrene	**35.3**		µg/l	5.15	51.5		68	1-171	11	20
Isophorone	**28.1**		µg/l	5.15	51.5		55	21-196	12	20
Naphthalene	**26.0**		µg/l	5.15	51.5		50	21-133	9	20
Nitrobenzene	**33.2**		µg/l	5.15	51.5		64	35-180	11	20
2-Nitrophenol	**31.1**	QR9	µg/l	5.15	51.5		60	29-182	22	20
4-Nitrophenol	**21.1**	QR9	µg/l	5.15	51.5		41	1-132	23	20
N-Nitrosodimethylamine	**18.6**	QC2	µg/l	5.15	51.5		36	40-140	11	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 625										
Batch 1716152 - SW846 3510C										
LCS Dup (1716152-BSD1)					Prepared: 21-Sep-17 Analyzed: 22-Sep-17					
N-Nitrosodi-n-propylamine	**26.5**		µg/l	5.15	51.5		51	1-230	12	20
N-Nitrosodiphenylamine	**33.2**		µg/l	5.15	51.5		64	40-140	10	20
Pentachlorophenol	**32.8**	QR9	µg/l	5.15	51.5		64	14-176	31	20
Phenanthrene	**30.7**		µg/l	5.15	51.5		59	54-120	12	20
Phenol	**14.3**		µg/l	5.15	51.5		28	5-112	10	20
Pyrene	**33.1**		µg/l	5.15	51.5		64	52-115	9	20
1,2,4-Trichlorobenzene	**32.8**		µg/l	5.15	51.5		64	44-142	12	20
2,4,6-Trichlorophenol	**30.7**		µg/l	5.15	51.5		60	37-144	12	20
Surrogate: 2-Fluorobiphenyl	*31.8*		µg/l		*51.5*		*62*	*30-130*		
Surrogate: 2-Fluorophenol	*21.3*		µg/l		*51.5*		*41*	*15-110*		
Surrogate: Nitrobenzene-d5	*32.2*		µg/l		*51.5*		*62*	*30-130*		
Surrogate: Phenol-d5	*15.7*		µg/l		*51.5*		*30*	*15-110*		
Surrogate: Terphenyl-dl4	*42.8*		µg/l		*51.5*		*83*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*44.9*		µg/l		*51.5*		*87*	*15-110*		
LCS Dup (1716152-BSD3)					Prepared: 21-Sep-17 Analyzed: 27-Sep-17					
Acenaphthene	**32.9**		µg/l	5.15	51.5		64	47-145	5	20
Acenaphthylene	**34.0**		µg/l	5.15	51.5		66	33-145	4	20
Anthracene	**28.0**		µg/l	5.15	51.5		54	27-133	4	20
Benzidine	**8.09**	QC2	µg/l	5.15	51.5		16	40-140	13	20
Benzo (a) anthracene	**29.6**		µg/l	5.15	51.5		58	33-143	4	20
Benzo (a) pyrene	**31.5**		µg/l	5.15	51.5		61	17-163	4	20
Benzo (b) fluoranthene	**31.2**		µg/l	5.15	51.5		60	24-159	9	20
Benzo (g,h,i) perylene	**28.3**		µg/l	5.15	51.5		55	1-219	14	20
Benzo (k) fluoranthene	**31.3**		µg/l	5.15	51.5		61	11-162	0.1	20
Bis(2-chloroethoxy)methane	**22.4**		µg/l	5.15	51.5		44	33-184	6	20
Bis(2-chloroethyl)ether	**24.9**		µg/l	5.15	51.5		48	12-158	6	20
Bis(2-chloroisopropyl)ether	**19.7**		µg/l	5.15	51.5		38	36-166	6	20
Bis(2-ethylhexyl)phthalate	**30.6**		µg/l	5.15	51.5		59	8-158	4	20
4-Bromophenyl phenyl ether	**27.2**		µg/l	5.15	51.5		53	53-127	7	20
Butyl benzyl phthalate	**30.4**		µg/l	5.15	51.5		59	1-152	5	20
4-Chloro-3-methylphenol	**28.3**		µg/l	5.15	51.5		55	22-147	6	20
2-Chloronaphthalene	**40.7**		µg/l	5.15	51.5		79	60-118	3	20
2-Chlorophenol	**27.8**		µg/l	5.15	51.5		54	23-134	5	20
4-Chlorophenyl phenyl ether	**36.5**		µg/l	5.15	51.5		71	25-158	4	20
Chrysene	**30.0**		µg/l	5.15	51.5		58	17-168	3	20
Dibenzo (a,h) anthracene	**31.7**		µg/l	5.15	51.5		62	1-227	12	20
1,2-Dichlorobenzene	**28.6**		µg/l	5.15	51.5		55	32-129	5	20
1,3-Dichlorobenzene	**27.8**		µg/l	5.15	51.5		54	1-172	6	20
1,4-Dichlorobenzene	**28.2**		µg/l	5.15	51.5		55	20-124	5	20
3,3´-Dichlorobenzidine	**35.9**		µg/l	5.15	51.5		70	1-262	0.7	20
2,4-Dichlorophenol	**27.0**		µg/l	5.15	51.5		52	39-135	5	20
Diethyl phthalate	**38.9**		µg/l	5.15	51.5		76	1-114	5	20
Dimethyl phthalate	**37.7**		µg/l	5.15	51.5		73	1-112	2	20
2,4-Dimethylphenol	**23.2**		µg/l	5.15	51.5		45	32-119	5	20
Di-n-butyl phthalate	**30.4**		µg/l	5.15	51.5		59	1-118	5	20
4,6-Dinitro-2-methylphenol	**29.9**		µg/l	5.15	51.5		58	1-181	5	20
2,4-Dinitrophenol	**32.5**		µg/l	5.15	51.5		63	1-191	10	20
2,4-Dinitrotoluene	**46.1**		µg/l	5.15	51.5		90	39-139	7	20
2,6-Dinitrotoluene	**44.7**		µg/l	5.15	51.5		87	50-158	3	20
Di-n-octyl phthalate	**32.0**		µg/l	5.15	51.5		62	4-146	2	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 625										
Batch 1716152 - SW846 3510C										
LCS Dup (1716152-BSD3)					Prepared: 21-Sep-17 Analyzed: 27-Sep-17					
Fluoranthene	**28.8**		µg/l	5.15	51.5		56	26-137	6	20
Fluorene	**34.4**		µg/l	5.15	51.5		67	59-121	5	20
Hexachlorobenzene	**35.0**		µg/l	5.15	51.5		68	1-152	5	20
Hexachlorobutadiene	**26.8**		µg/l	5.15	51.5		52	24-116	4	20
Hexachlorocyclopentadiene	**34.9**		µg/l	5.15	51.5		68	40-140	10	20
Hexachloroethane	**28.5**		µg/l	5.15	51.5		55	40-113	6	20
Indeno (1,2,3-cd) pyrene	**30.7**		µg/l	5.15	51.5		59	1-171	14	20
Isophorone	**25.3**		µg/l	5.15	51.5		49	21-196	4	20
Naphthalene	**23.8**		µg/l	5.15	51.5		46	21-133	4	20
Nitrobenzene	**28.1**		µg/l	5.15	51.5		54	35-180	4	20
2-Nitrophenol	**27.6**		µg/l	5.15	51.5		54	29-182	5	20
4-Nitrophenol	**27.6**		µg/l	5.15	51.5		54	1-132	8	20
N-Nitrosodimethylamine	**20.5**		µg/l	5.15	51.5		40	40-140	7	20
N-Nitrosodi-n-propylamine	**24.6**		µg/l	5.15	51.5		48	1-230	6	20
N-Nitrosodiphenylamine	**27.8**		µg/l	5.15	51.5		54	40-140	5	20
Pentachlorophenol	**18.4**		µg/l	5.15	51.5		36	14-176	3	20
Phenanthrene	**26.6**	QC2	µg/l	5.15	51.5		52	54-120	3	20
Phenol	**15.1**		µg/l	5.15	51.5		29	5-112	16	20
Pyrene	**28.1**		µg/l	5.15	51.5		54	52-115	6	20
1,2,4-Trichlorobenzene	**27.9**		µg/l	5.15	51.5		54	44-142	5	20
2,4,6-Trichlorophenol	**38.3**		µg/l	5.15	51.5		74	37-144	3	20
Surrogate: 2-Fluorobiphenyl	*38.9*		µg/l		*51.5*		*76*	*30-130*		
Surrogate: 2-Fluorophenol	*22.9*		µg/l		*51.5*		*44*	*15-110*		
Surrogate: Nitrobenzene-d5	*27.6*		µg/l		*51.5*		*54*	*30-130*		
Surrogate: Phenol-d5	*18.0*		µg/l		*51.5*		*35*	*15-110*		
Surrogate: Terphenyl-dl4	*35.6*		µg/l		*51.5*		*69*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*37.3*		µg/l		*51.5*		*72*	*15-110*		
Mod. EPA 625										
Batch 1716294 - SW846 3510C										
Blank (1716294-BLK2)					Prepared: 25-Sep-17 Analyzed: 26-Sep-17					
Acenaphthene	< 0.050		µg/l	0.050						
Acenaphthylene	< 0.050		µg/l	0.050						
1-Methylnaphthalene	< 0.050		µg/l	0.050						
Anthracene	< 0.050		µg/l	0.050						
Benzo (a) anthracene	< 0.050		µg/l	0.050						
Benzo (a) pyrene	< 0.050		µg/l	0.050						
Benzo (b) fluoranthene	< 0.050		µg/l	0.050						
Benzo (g,h,i) perylene	< 0.050		µg/l	0.050						
Benzo (k) fluoranthene	< 0.050		µg/l	0.050						
Chrysene	< 0.050		µg/l	0.050						
Dibenzo (a,h) anthracene	< 0.050		µg/l	0.050						
Fluoranthene	< 0.050		µg/l	0.050						
Fluorene	< 0.050		µg/l	0.050						
Indeno (1,2,3-cd) pyrene	< 0.050		µg/l	0.050						
2-Methylnaphthalene	< 0.050		µg/l	0.050						
Naphthalene	< 0.050		µg/l	0.050						
Phenanthrene	< 0.050		µg/l	0.050						
Pyrene	< 0.050		µg/l	0.050						
Surrogate: Benzo (e) pyrene-d12	*0.449*		µg/l		*1.02*		*44*	*30-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Mod. EPA 625										
Batch 1716294 - SW846 3510C										
LCS (1716294-BS2)					Prepared: 25-Sep-17 Analyzed: 26-Sep-17					
Acenaphthene	**0.405**		µg/l	0.050	1.01		40	40-140		
Acenaphthylene	**0.362**	QC1	µg/l	0.050	1.01		36	40-140		
1-Methylnaphthalene	**0.461**		µg/l	0.050	1.01		46	40-140		
Anthracene	**0.622**		µg/l	0.050	1.01		62	40-140		
Benzo (a) anthracene	**0.793**		µg/l	0.050	1.01		78	40-140		
Benzo (a) pyrene	**0.825**		µg/l	0.050	1.01		82	40-140		
Benzo (b) fluoranthene	**0.740**		µg/l	0.050	1.01		73	40-140		
Benzo (g,h,i) perylene	**0.591**		µg/l	0.050	1.01		59	40-140		
Benzo (k) fluoranthene	**0.631**		µg/l	0.050	1.01		62	40-140		
Chrysene	**0.716**		µg/l	0.050	1.01		71	40-140		
Dibenzo (a,h) anthracene	**0.703**		µg/l	0.050	1.01		70	40-140		
Fluoranthene	**0.673**		µg/l	0.050	1.01		67	40-140		
Fluorene	**0.397**	QC1	µg/l	0.050	1.01		39	40-140		
Indeno (1,2,3-cd) pyrene	**0.697**		µg/l	0.050	1.01		69	40-140		
2-Methylnaphthalene	**0.539**		µg/l	0.050	1.01		53	40-140		
Naphthalene	**0.429**		µg/l	0.050	1.01		42	40-140		
Phenanthrene	**0.506**		µg/l	0.050	1.01		50	40-140		
Pyrene	**0.690**		µg/l	0.050	1.01		68	40-140		
Surrogate: Benzo (e) pyrene-d12	*0.485*		µg/l		*1.01*		*48*	*30-130*		
LCS Dup (1716294-BSD2)					Prepared: 25-Sep-17 Analyzed: 26-Sep-17					
Acenaphthene	**0.391**		µg/l	0.050	0.917		43	40-140	4	20
Acenaphthylene	**0.340**	QC1	µg/l	0.050	0.917		37	40-140	6	20
1-Methylnaphthalene	**0.448**		µg/l	0.050	0.917		49	40-140	3	20
Anthracene	**0.534**		µg/l	0.050	0.917		58	40-140	15	20
Benzo (a) anthracene	**0.743**		µg/l	0.050	0.917		81	40-140	6	20
Benzo (a) pyrene	**0.815**		µg/l	0.050	0.917		89	40-140	1	20
Benzo (b) fluoranthene	**0.689**		µg/l	0.050	0.917		75	40-140	7	20
Benzo (g,h,i) perylene	**0.530**		µg/l	0.050	0.917		58	40-140	11	20
Benzo (k) fluoranthene	**0.655**		µg/l	0.050	0.917		71	40-140	4	20
Chrysene	**0.646**		µg/l	0.050	0.917		70	40-140	10	20
Dibenzo (a,h) anthracene	**0.596**		µg/l	0.050	0.917		65	40-140	16	20
Fluoranthene	**0.613**		µg/l	0.050	0.917		67	40-140	9	20
Fluorene	**0.433**		µg/l	0.050	0.917		47	40-140	9	20
Indeno (1,2,3-cd) pyrene	**0.672**		µg/l	0.050	0.917		73	40-140	4	20
2-Methylnaphthalene	**0.537**		µg/l	0.050	0.917		58	40-140	0.5	20
Naphthalene	**0.407**		µg/l	0.050	0.917		44	40-140	5	20
Phenanthrene	**0.497**		µg/l	0.050	0.917		54	40-140	2	20
Pyrene	**0.645**		µg/l	0.050	0.917		70	40-140	7	20
Surrogate: Benzo (e) pyrene-d12	*0.468*		µg/l		*0.917*		*51*	*30-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 608										
Batch 1716296 - SW846 3510C										
Blank (1716296-BLK1)					Prepared & Analyzed: 25-Sep-17					
Aroclor-1016	< 0.206		µg/l	0.206						
Aroclor-1016 [2C]	< 0.206		µg/l	0.206						
Aroclor-1221	< 0.206		µg/l	0.206						
Aroclor-1221 [2C]	< 0.206		µg/l	0.206						
Aroclor-1232	< 0.206		µg/l	0.206						
Aroclor-1232 [2C]	< 0.206		µg/l	0.206						
Aroclor-1242	< 0.206		µg/l	0.206						
Aroclor-1242 [2C]	< 0.206		µg/l	0.206						
Aroclor-1248	< 0.206		µg/l	0.206						
Aroclor-1248 [2C]	< 0.206		µg/l	0.206						
Aroclor-1254	< 0.206		µg/l	0.206						
Aroclor-1254 [2C]	< 0.206		µg/l	0.206						
Aroclor-1260	< 0.206		µg/l	0.206						
Aroclor-1260 [2C]	< 0.206		µg/l	0.206						
Aroclor-1262	< 0.206		µg/l	0.206						
Aroclor-1262 [2C]	< 0.206		µg/l	0.206						
Aroclor-1268	< 0.206		µg/l	0.206						
Aroclor-1268 [2C]	< 0.206		µg/l	0.206						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.196*		µg/l		*0.206*		*95*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.206*		µg/l		*0.206*		*100*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.237*		µg/l		*0.206*		*115*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.247*		µg/l		*0.206*		*120*	*30-150*		
LCS (1716296-BS1)					Prepared & Analyzed: 25-Sep-17					
Aroclor-1016	**2.61**		µg/l	0.204	2.55		102	50-114		
Aroclor-1016 [2C]	**2.65**		µg/l	0.204	2.55		104	50-114		
Aroclor-1260	**2.87**		µg/l	0.204	2.55		112	40-127		
Aroclor-1260 [2C]	**2.78**		µg/l	0.204	2.55		109	40-127		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.143*		µg/l		*0.204*		*70*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.133*		µg/l		*0.204*		*65*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.163*		µg/l		*0.204*		*80*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.163*		µg/l		*0.204*		*80*	*30-150*		
LCS Dup (1716296-BSD1)					Prepared & Analyzed: 25-Sep-17					
Aroclor-1016	**2.60**		µg/l	0.204	2.55		102	50-114	0.4	20
Aroclor-1016 [2C]	**2.72**		µg/l	0.204	2.55		107	50-114	3	20
Aroclor-1260	**2.77**		µg/l	0.204	2.55		108	40-127	4	20
Aroclor-1260 [2C]	**2.86**		µg/l	0.204	2.55		112	40-127	3	20
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*0.143*		µg/l		*0.204*		*70*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*0.143*		µg/l		*0.204*		*70*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*0.163*		µg/l		*0.204*		*80*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*0.173*		µg/l		*0.204*		*85*	*30-150*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
ASTM D 1293-99B										
Batch 1716162 - General Preparation										
Reference (1716162-SRM1)						Prepared: 20-Sep-17 Analyzed: 21-Sep-17				
pH	**6.00**		pH Units		6.00		100	97.5-102.5		
Reference (1716162-SRM2)						Prepared: 20-Sep-17 Analyzed: 21-Sep-17				
pH	**6.01**		pH Units		6.00		100	97.5-102.5		
EPA 300.0										
Batch 1716144 - General Preparation										
Blank (1716144-BLK1)						Prepared & Analyzed: 20-Sep-17				
Chloride	< 1.00		mg/l	1.00						
LCS (1716144-BS1)						Prepared & Analyzed: 20-Sep-17				
Chloride	**20.4**		mg/l	1.00	20.0		102	90-110		
Reference (1716144-SRM1)						Prepared & Analyzed: 20-Sep-17				
Chloride	**24.3**		mg/l	1.00	25.0		97	90-110		
EPA 335.4 / SW846 9012B										
Batch 1716181 - General Preparation										
Blank (1716181-BLK1)						Prepared & Analyzed: 21-Sep-17				
Cyanide (total)	< 0.00500		mg/l	0.00500						
Blank (1716181-BLK2)						Prepared & Analyzed: 21-Sep-17				
Cyanide (total)	< 0.00500		mg/l	0.00500						
LCS (1716181-BS1)						Prepared & Analyzed: 21-Sep-17				
Cyanide (total)	**0.277**		mg/l	0.00500	0.300		92	90-110		
LCS (1716181-BS2)						Prepared & Analyzed: 21-Sep-17				
Cyanide (total)	**0.287**		mg/l	0.00500	0.300		96	90-110		
Duplicate (1716181-DUP1)			**Source: SC39416-01**			Prepared & Analyzed: 21-Sep-17				
Cyanide (total)	**0.00504**		mg/l	0.00500		0.00493			2	20
Matrix Spike (1716181-MS1)			**Source: SC39416-01**			Prepared & Analyzed: 21-Sep-17				
Cyanide (total)	**0.297**		mg/l	0.00500	0.300	0.00493	97	90-110		
Matrix Spike Dup (1716181-MSD1)			**Source: SC39416-01**			Prepared & Analyzed: 21-Sep-17				
Cyanide (total)	**0.304**		mg/l	0.00500	0.300	0.00493	100	90-110	2	20
Reference (1716181-SRM1)						Prepared & Analyzed: 21-Sep-17				
Cyanide (total)	**0.431**		mg/l	0.00500	0.360		120	76-123		
SM2540D (11)										
Batch 1716177 - General Preparation										
Blank (1716177-BLK1)						Prepared: 21-Sep-17 Analyzed: 22-Sep-17				
Total Suspended Solids	< 0.5		mg/l	0.5						
LCS (1716177-BS1)						Prepared: 21-Sep-17 Analyzed: 22-Sep-17				
Total Suspended Solids	**94.0**		mg/l	10.0	100		94	90-110		
SM3500-Cr-B (11)/7196A										
Batch 1716158 - General Preparation										
Blank (1716158-BLK1)						Prepared & Analyzed: 20-Sep-17				
Hexavalent Chromium	< 0.005		mg/l	0.005						
LCS (1716158-BS1)						Prepared & Analyzed: 20-Sep-17				
Hexavalent Chromium	**0.054**		mg/l	0.005	0.0500		107	90-111		
Duplicate (1716158-DUP1)			**Source: SC39416-01**			Prepared & Analyzed: 20-Sep-17				
Hexavalent Chromium	< 0.005		mg/l	0.005		BRL				20
Matrix Spike (1716158-MS1)			**Source: SC39416-01**			Prepared & Analyzed: 20-Sep-17				
Hexavalent Chromium	**0.052**		mg/l	0.005	0.0500	BRL	103	85-115		
Matrix Spike Dup (1716158-MSD1)			**Source: SC39416-01**			Prepared & Analyzed: 20-Sep-17				

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SM3500-Cr-B (11)/7196A										
Batch 1716158 - General Preparation										
Matrix Spike Dup (1716158-MSD1)			**Source: SC39416-01**			Prepared & Analyzed: 20-Sep-17				
Hexavalent Chromium	**0.050**		mg/l	0.005	0.0500	BRL	100	85-115	3	20
Reference (1716158-SRM1)						Prepared & Analyzed: 20-Sep-17				
Hexavalent Chromium	**0.025**		mg/l	0.005	0.0250		99	85-115		
SW846 1010A										
Batch 1716461 - General Preparation										
Reference (1716461-SRM1)						Prepared & Analyzed: 26-Sep-17				
Flashpoint	**80**		°F		81.0		99	95-105		
SW846 Ch. 7.3										
Batch 1716211 - General Preparation										
Blank (1716211-BLK1)						Prepared: 21-Sep-17 Analyzed: 22-Sep-17				
Reactivity	**See Narrative**		mg/l							
Reactive Cyanide	< 25.0		mg/l	25.0						
Reactive Sulfide	< 50.0		mg/l	50.0						
Duplicate (1716211-DUP1)			**Source: SC39416-01**			Prepared: 21-Sep-17 Analyzed: 22-Sep-17				
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 (1716211-SRM1)						Prepared: 21-Sep-17 Analyzed: 22-Sep-17				
Reactive Cyanide	< 25.0		mg/l	25.0	200		0	0-200		
Reference (1716211-SRM2)						Prepared: 21-Sep-17 Analyzed: 22-Sep-17				
Reactive Sulfide	< 50.0		mg/l	50.0	13400		0	0-200		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
E1664A										
Batch 402922A - 402922										
BLK (BZ05972-BLK)						Prepared & Analyzed: 26-Sep-17				
O&G, Non-polar Material	< 1.4		mg/L	1.4	20			-		
DUP (BZ05972-DUP)			**Source: BZ05972**			Prepared: Analyzed: 26-Sep-17				
O&G, Non-polar Material	< 1.4		mg/L	1.4	20			-	NC	20
LCS (BZ05972-LCS)						Prepared: Analyzed: 26-Sep-17				
O&G, Non-polar Material	**18.80**		mg/L	1.4	20		94	85-115		20
MS (BZ05972-MS)			**Source: BZ05972**			Prepared: Analyzed: 26-Sep-17				
O&G, Non-polar Material	**17.80**		mg/L	1.4	20		89	75-125		20
E350.1										
Batch 402779A - 402779										
BLK (BZ03269-BLK)						Prepared: 25-Sep-17 Analyzed: 26-Sep-17				
Ammonia as Nitrogen	< 0.05		mg/L	0.05				-		
DUP (BZ03269-DUP)			**Source: BZ03269**			Prepared: 25-Sep-17 Analyzed: 26-Sep-17				
Ammonia as Nitrogen	**0.14**		mg/L	0.05				-	NC	20
LCS (BZ03269-LCS)						Prepared: 25-Sep-17 Analyzed: 26-Sep-17				
Ammonia as Nitrogen	**3.640**		mg/L	0.05	3.74		97.3	90-110		20
MS (BZ03269-MS)			**Source: BZ03269**			Prepared: 25-Sep-17 Analyzed: 26-Sep-17				
Ammonia as Nitrogen	**1.890**	m	mg/L	0.05	2		87.0	90-110		20
SM3113B/SW7010-0										
Batch 402630A - 402630-SM3113B/S										
BLK (BZ06265-BLK)						Prepared: 22-Sep-17 Analyzed: 25-Sep-17				
Thallium	< 0.001		mg/L	0.001				-		
DUP (BZ06265-DUP)			**Source: BZ06265**			Prepared: 22-Sep-17 Analyzed: 25-Sep-17				
Thallium	< 0.001		mg/L	0.001				-	NC	30
LCS (BZ06265-LCS)						Prepared: 22-Sep-17 Analyzed: 25-Sep-17				
Thallium	**54.60**		mg/L	0.001	50		109	75-125		30
MS (BZ06265-MS)			**Source: BZ06265**			Prepared: 22-Sep-17 Analyzed: 25-Sep-17				
Thallium	**53.36**		mg/L	0.001	50		107	75-125		30
SW6010C										
Batch 402432A - 402432-										
BLK (BZ06265-BLK)						Prepared: 21-Sep-17 Analyzed: 24-Sep-17				
Zinc	< 0.0010		mg/L	0.0010				-		
Silver	< 0.0005		mg/L	0.0005				-		
Selenium	< 0.0050		mg/L	0.0050				-		
Nickel	< 0.0005		mg/L	0.0005				-		
Lead	< 0.0010		mg/L	0.0010				-		
Iron	< 0.0050		mg/L	0.0050				-		
Copper	< 0.0025		mg/L	0.0025				-		
Chromium	< 0.0005		mg/L	0.0005				-		
Cadmium	< 0.0005		mg/L	0.0005				-		
Beryllium	< 0.0005		mg/L	0.0005				-		
Arsenic	< 0.0020		mg/L	0.0020				-		
Antimony	< 0.0025		mg/L	0.0025				-		
DUP (BZ06265-DUP)			**Source: BZ06265**			Prepared: 21-Sep-17 Analyzed: 24-Sep-17				
Chromium	< 0.0005		mg/L	0.0005				-	NC	20
Selenium	< 0.0050		mg/L	0.0050				-	NC	20
Iron	**0.0228**		mg/L	0.0050				-	NC	20
Silver	< 0.0005		mg/L	0.0005				-	NC	20
Nickel	**0.0078**		mg/L	0.0005				-	74.2	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW6010C										
Batch 402432A - 402432-										
DUP (BZ06265-DUP)			**Source: BZ06265**			Prepared: 21-Sep-17 Analyzed: 24-Sep-17				
Lead	< 0.0010		mg/L	0.0010				-	NC	20
Copper	< 0.0025		mg/L	0.0025				-	NC	20
Cadmium	**0.0006**		mg/L	0.0005				-	NC	20
Beryllium	< 0.0005		mg/L	0.0005				-	NC	20
Arsenic	< 0.0020		mg/L	0.0020				-	NC	20
Antimony	< 0.0025		mg/L	0.0025				-	NC	20
Zinc	**0.0035**		mg/L	0.0010				-	NC	20
LCS (BZ06265-LCS)						Prepared: 21-Sep-17 Analyzed: 24-Sep-17				
Nickel	**0.4884**		mg/L	0.0005	0.5		97.7	75-125		20
Lead	**0.9799**		mg/L	0.0010	1		98.0	75-125		20
Antimony	**0.9943**		mg/L	0.0025	1		99.4	75-125		20
Arsenic	**0.9807**		mg/L	0.0020	1		98.1	75-125		20
Beryllium	**0.5034**		mg/L	0.0005	0.5		101	75-125		20
Cadmium	**0.4836**		mg/L	0.0005	0.5		96.7	75-125		20
Chromium	**0.4937**		mg/L	0.0005	0.5		98.7	75-125		20
Copper	**0.5093**		mg/L	0.0025	0.5		102	75-125		20
Selenium	**0.4823**		mg/L	0.0050	0.5		96.5	75-125		20
Silver	**0.1215**		mg/L	0.0005	0.125		97.2	75-125		20
Zinc	**0.4776**		mg/L	0.0010	0.5		95.5	75-125		20
Iron	**0.5099**		mg/L	0.0050	0.5		102	75-125		20
MS (BZ06265-MS)			**Source: BZ06265**			Prepared: 21-Sep-17 Analyzed: 24-Sep-17				
Copper	**0.5090**		mg/L	0.0025	0.5		101	75-125		20
Zinc	**0.4842**		mg/L	0.0010	0.5		95.2	75-125		20
Silver	**0.1234**		mg/L	0.0005	0.125		99.0	75-125		20
Selenium	**0.4927**		mg/L	0.0050	0.5		98.4	75-125		20
Nickel	**0.4619**		mg/L	0.0005	0.5		89.0	75-125		20
Iron	**0.4962**		mg/L	0.0050	0.5		87.4	75-125		20
Chromium	**0.4672**		mg/L	0.0005	0.5		93.2	75-125		20
Cadmium	**0.4654**		mg/L	0.0005	0.5		92.8	75-125		20
Beryllium	**0.4907**		mg/L	0.0005	0.5		98.0	75-125		20
Arsenic	**0.9962**		mg/L	0.0020	1		99.7	75-125		20
Antimony	**1.018**		mg/L	0.0025	1		102	75-125		20
Lead	**0.9277**		mg/L	0.0010	1		92.8	75-125		20
SW7470A										
Batch 402491A - 402491-										
BLK (BZ06265-BLK)						Prepared & Analyzed: 22-Sep-17				
Mercury	< 0.0002		mg/L	0.0002				-		
DUP (BZ06265-DUP)			**Source: BZ06265**			Prepared & Analyzed: 22-Sep-17				
Mercury	< 0.0002		mg/L	0.0002				-	NC	30
LCS (BZ06265-LCS)						Prepared & Analyzed: 22-Sep-17				
Mercury	**0.0022**		mg/L	0.0002	0.0025		89.3	75-125		30
MS (BZ06265-MS)			**Source: BZ06265**			Prepared & Analyzed: 22-Sep-17				
Mercury	**0.0023**		mg/L	0.0002	0.0025		90.0	75-125		30

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.
HT2	This sample was received outside the EPA recommended holding time for the analysis specified.
m	This parameter is outside laboratory ms/msd specified recovery limits.
QC1	Analyte out of acceptance range.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QR9	RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
[2C]	Indicates concentration was reported from the secondary, confirmation column.
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.

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.

SC39416 BM

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
- ☑ Rush TAT - Date Needed: 5 day

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

Report To: ATC Worcester
Telephone #: 508 756 0151
Project Mgr: Matt Lyne

Invoice To: CFI
P.O No.: Pending 298091 Quote #:

Project No: 03-224773.05
Site Name: Kimball St - CFI #MA832
Location: 559 Kimball St, Fitchburg State: MA
Sampler(s): Andrew Clark

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

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

G= Grab **C**=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Flashpoint	Analysis: VOC-624	SVOC - SIM 625	PPL3 Total metals	Iron - 200.7	Hex Chrome 7196	Cyanide - 4500	Chlorophenols 604	Pentachlorophenol - 625	TSS 160.2	pH 150.1	Ammonia 350.1	Hardness 130.2	Check if chlorinated
SC39416-01	MW-5	9/18/17	1:20	G	GW	3	6		5	X	X	X	X	X	X	X	X	X	X	X	X	X	☐
-02	River-1	9/18/17	2:40	G	SW				3				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:

-02: pH, Ammonia, Hardness needed too

Need to meet EPA reporting limits, see attachment

Relinquished by:	Received by:	Date:	Time:	Temp °C
[signature] DSR	[signature] DSR	9/19-17	935	Observed 6.4
	[signature]	9/19/17	650	Correction Factor 0
				Corrected 0.4
				IR ID # 9

☐ EDD format:
☑ E-mail to: Matthew.Lyne@atcassociates.com

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

1. Chemical-Specific Effluent Limitations in Massachusetts and New Hampshire

During the period beginning on the effective date and lasting through the expiration date, EPA will authorize the discharges under Part 1.1 of this general permit to receiving waters in Massachusetts and New Hampshire. The effective date of authorization for each discharge covered under this general permit is the date indicated in EPA's written authorization to discharge, lasting through the expiration date of this general permit or written termination of coverage, whichever occurs first. Each discharge shall be limited and monitored as specified in Table 2, below. The applicability of effluent limitations for each Activity Category listed in Table 1 is included in footnote 2, below. Additional limitations and monitoring requirements are specified in Parts 2.2 through 2.5 and Part 4, below.

Table 2: Chemical-Specific Effluent Limitations and Monitor-Only Requirements[1]

Parameter[2] /Method / RL	Effluent Limitation[3,4]	
	TBEL[5]	WQBEL[6]
A. Inorganics		
Ammonia[7] 350.1 / 0.1 ug/L or 0.0001 mg/L	Report mg/L	
Chloride[8] 300.0 / 1000 ug/L or 1.0 mg/L	Report µg/L	
Total Residual Chlorine[9] SM4500-Cl-G (11) / 0.02 mg/L	0.2 mg/L	FW= 11 µg/L SW= 7.5 µg/L
Total Suspended Solids SM2540 D / 5 mg/L	30 mg/L	
Antimony[10] 200.8 / 0.5 ug/L	206 µg/L	640 µg/L in MA 4.3 mg/L in NH
Arsenic[10] 200.8 / 0.5 ug/L	104 µg/L	FW= 10 µg/L SW= 36 µg/L
Cadmium[11,12] 200.8 / 0.5 ug/L	10.2 µg/L	FW= 0.25 µg/L SW= 8.8 µg/L in MA SW= 9.3 µg/L in NH
Chromium III[11,12] Calculation / 10 ug/L	323 µg/L	FW= 74 µg/L SW= 100 µg/L
Chromium VI[11,13] 7196 / 5 ug/L	323 µg/L	FW= 11 µg/L SW= 50 µg/L
Copper[11,12] 200.8 / 0.5 ug/L	242 µg/L	FW= 9 µg/L SW= 3.1 µg/L
Iron[10] 200.7 / 30 ug/L	5,000 µg/L	FW = 1,000 µg/L
Lead[11,12] 200.8 / 0.5 ug/L	160 µg/L	FW= 2.5 µg/L SW= 8.1 µg/L
Mercury[11] 245.1 / 0.2 ug/L	0.739 µg/L	FW= 0.77 µg/L SW= 0.94 µg/L
Nickel[11,12] 200.8 / 0.5 ug/L	1,450 µg/L	FW= 52 µg/L SW= 8.2 µg/L
Selenium 200.8 / 0.5 ug/L	235.8 µg/L	FW= 5.0 µg/L[10] SW= 71 µg/L[11]
Silver[11,12] 200.8 / 0.5ug/L	35.1 µg/L	FW= 3.2 µg/L SW= 1.9 µg/L
Zinc[11,12] 200.8 / 0.5 ug/L	420 µg/L	FW= 120 µg/L SW= 81 µg/L

Parameter[2]	Effluent Limitation[3,4]	
	TBEL[5]	WQBEL[6]
Cyanide[14] 335.4 / 5.0 ug/L	178 mg/L	FW = 5.2 µg/L SW = 1.0 µg/L
B. Non-Halogenated Volatile Organic Compounds		
Total BTEX[15] 624 / BTEX reported as ind. cmpds.	100 µg/L	
Benzene[15] 624 / 1 ug/L	5.0 µg/L	
1,4 Dioxane[16] 624 / 20 ug/L or 8260 SIM / 0.5 ug/L	200 µg/L	
Acetone 624 / 10 ug/L	7.97 mg/L	
Phenol 625 / 5 ug/L	1,080 µg/L	300 µg/L
C. Halogenated Volatile Organic Compounds		
Carbon Tetrachloride 624 / 1 ug/L	4.4 µg/L	1.6 µg/L in MA
1,2 Dichlorobenzene 624 / 1 ug/L	600 µg/L	
1,3 Dichlorobenzene 624 / 1 ug/L	320 µg/L	
1,4 Dichlorobenzene 624 / 1 ug/L	5.0 µg/L	
Total dichlorobenzene reported as individ. cmpds	763 µg/L in NH	
1,1 Dichloroethane 624 / 1 ug/L	70 µg/L	
1,2 Dichloroethane 624 / 1 ug/L	5.0 µg/L	
1,1 Dichloroethylene 624 / 1 ug/L	3.2 µg/L	
Ethylene Dibromide[17] 8260 / 0.5 ug/L *need 8011 or 504.1 to achieve RL	0.05 µg/L	
Methylene Chloride 624 / 10 ug/L *2ug/L when requested	4.6 µg/L	
1,1,1 Trichloroethane 624 / 1 ug/L	200 µg/L	
1,1,2 Trichloroethane 624 / 1 ug/L	5.0 µg/L	
Trichloroethylene 624 / 1 ug/L	5.0 µg/L	
Tetrachloroethylene 624 / 1 ug/L	5.0 µg/L	3.3 µg/L in MA
cis-1,2 Dichloroethylene 624 / 1 ug/L	70 µg/L	
Vinyl Chloride 624 / 1 ug/L	2.0 µg/L	
D. Non-Halogenated Semi-Volatile Organic Compounds		
Total Phthalates[18] 625 / Phthalates reported indivic.	190 µg/L	FW = 3.0 µg/L in NH SW = 3.4 µg/L in NH
Diethylhexyl phthalate[18] 625 / 5 ug/L	101 µg/L	2.2 µg/L in MA 5.9 µg/L in NH
Total Group I Polycyclic Aromatic Hydrocarbons[19] 625 SIM	1.0 µg/L	As Individual PAHs
Benzo(a)anthracene[19] 625 / 0.05 ug/L	As Total Group I PAHs	0.0038 µg/L
Benzo(a)pyrene[19] 625 / 0.05 ug/L		0.0038 µg/L
Benzo(b)fluoranthene[19] 625 / 0.05 ug/L		0.0038 µg/L
Benzo(k)fluoranthene[19] 625 / 0.05 ug/L		0.0038 µg/L
Chrysene[19] 625 / 0.05 ug/L		0.0038 µg/L
Dibenzo(a,h)anthracene[19] 625 / 0.05 ug/L		0.0038 µg/L
Indeno(1,2,3-cd)pyrene[19] 625 / 0.05 ug/L		0.0038 µg/L
Total Group II Polycyclic Aromatic Hydrocarbons[20]	100 µg/L	
Naphthalene[20] 625 / 0.05 ug/L	20 µg/L	
E. Halogenated Semi-Volatile Organic Compounds		
Total Polychlorinated Biphenyls[21] 608 / 0.2 ug/L reported individ.	0.000064 µg/L	
Pentachlorophenol 625 / 1.0 ug/L	1.0 µg/L	

Parameter[2]	Effluent Limitation[3,4]	
	TBEL[5]	WQBEL[6]
F. Fuels Parameters		
Total Petroleum Hydrocarbons[22] 1664 / 1.0 mg/L	5.0 mg/L	
Ethanol[23] 8015 / 1 mg/L or 524 / 200 ug/L	Report mg/L	
Methyl-tert-Butyl Ether[24] 624 / 1.0 ug/L	70 µg/L	20 µg/L in MA
tert-Butyl Alcohol 524 / 10 ug/L	120 µg/L in MA 40 µg/L in NH	
tert-Amyl Methyl Ether[24] 524 / 0.5 ug/L	90 µg/L in MA 140 µg/L in NH	

Table 2 Footnotes:

[1] The following abbreviations are used in Table 2, above:
- [a] TBEL = technology-based effluent limitation
- [b] WQBEL = water quality-based effluent limitation
- [c] mg/L = milligrams per liter
- [d] avg = average
- [e] µg/L = micrograms per liter
- [f] FW = freshwater
- [g] SW = saltwater

[2] The sample type required for all parameters is grab. Grab samples must be analyzed individually and cannot be composited. See Appendix IX for additional definitions.

[3] The effluent limitation and/or monitor-only requirement for any parameter listed applies to any site if the given parameter is present at that site. The effluent limitations and monitor-only requirements also apply to Activity Categories as follows:

[a] Activity Category I:
all parameters in contamination type A. Inorganics;
any present in contamination type B. non-halogenated VOCs;
if present in contamination type C. halogenated VOCs;
any present in contamination type D. non-halogenated SVOCs;
if present in contamination type E. halogenated SVOCs; and
any present in contamination type F. fuels parameters.

[b] Activity Category II:
all parameters in contamination type A. Inorganics;
any present in contamination type B. non-halogenated VOCs;
any present in contamination type C. halogenated VOCs;
any present in contamination type D. non-halogenated SVOCs;
if present in contamination type E. halogenated SVOCs; and
if present in contamination type F. fuels parameters.

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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*
SC39416-01	MW-5	Ethanol by SW846 8260	9/22/2017
SC39416-01	MW-5	Purgeable Organic Compounds	9/22/2017

Batch Summary

'[none]'

Subcontracted Analyses

SC39416-01 (MW-5)
SC39416-02 (River-1)

1716144

General Chemistry Parameters

1716144-BLK1
1716144-BS1
1716144-SRM1
SC39416-01 (MW-5)

1716152

Semivolatile Organic Compounds by GCMS

1716152-BLK1
1716152-BLK3
1716152-BS1
1716152-BS3
1716152-BSD1
1716152-BSD3
SC39416-01 (MW-5)

1716158

General Chemistry Parameters

1716158-BLK1
1716158-BS1
1716158-DUP1
1716158-MS1
1716158-MSD1
1716158-SRM1
SC39416-01 (MW-5)

1716162

General Chemistry Parameters

1716162-SRM1
1716162-SRM2
SC39416-01 (MW-5)
SC39416-02 (River-1)

1716177

General Chemistry Parameters

1716177-BLK1
1716177-BS1
SC39416-01 (MW-5)

1716181

General Chemistry Parameters

1716181-BLK1
1716181-BLK2
1716181-BS1
1716181-BS2
1716181-DUP1
1716181-MS1
1716181-MSD1
1716181-SRM1
SC39416-01 (MW-5)

1716211

General Chemistry Parameters

1716211-BLK1
1716211-DUP1
1716211-SRM1
1716211-SRM2
SC39416-01 (MW-5)

1716230

Volatile Organic Compounds

1716230-BLK1
1716230-BS1
1716230-BSD1
SC39416-01 (MW-5)

1716294

Semivolatile Organic Compounds by GCMS

1716294-BLK2
1716294-BS2
1716294-BSD2
SC39416-01 (MW-5)

1716296

Semivolatile Organic Compounds by GC

1716296-BLK1
1716296-BS1
1716296-BSD1
SC39416-01 (MW-5)

1716332

Volatile Organic Compounds

1716332-BLK1
1716332-BS1
1716332-BSD1
SC39416-01 (MW-5)

1716461

General Chemistry Parameters

1716461-SRM1
SC39416-01 (MW-5)

402432A

Subcontracted Analyses

BZ06265-BLK
BZ06265-DUP
BZ06265-LCS
BZ06265-MS
SC39416-01 (MW-5)
SC39416-02 (River-1)

402491A

Subcontracted Analyses

BZ06265-BLK
BZ06265-DUP
BZ06265-LCS
BZ06265-MS
SC39416-01 (MW-5)
SC39416-02 (River-1)

402630A

Subcontracted Analyses

BZ06265-BLK
BZ06265-DUP
BZ06265-LCS
BZ06265-MS
SC39416-01 (MW-5)
SC39416-02 (River-1)

402779A

Subcontracted Analyses

BZ03269-BLK
BZ03269-DUP
BZ03269-LCS
BZ03269-MS
SC39416-01 (MW-5)
SC39416-02 (River-1)

402922A

Subcontracted Analyses

BZ05972-BLK
BZ05972-DUP
BZ05972-LCS
BZ05972-MS
SC39416-01 (MW-5)

S705626

Semivolatile Organic Compounds by GC

S705626-CAL1
S705626-CAL2
S705626-CAL3
S705626-CAL4
S705626-CAL5
S705626-CAL6
S705626-CAL7
S705626-CAL8
S705626-CAL9
S705626-CALA
S705626-CALB
S705626-CALC
S705626-CALD
S705626-CALE
S705626-CALF
S705626-CALG
S705626-CALH
S705626-CALI
S705626-CALJ
S705626-CALK
S705626-CALL
S705626-CALM
S705626-CALN
S705626-CALO
S705626-CALP
S705626-CALQ
S705626-CALR
S705626-CALS
S705626-CALT
S705626-CALU
S705626-ICV1
S705626-ICV2
S705626-ICV3
S705626-ICV4
S705626-ICV5
S705626-ICV6
S705626-LCV1
S705626-LCV2
S705626-LCV3
S705626-LCV4
S705626-LCV5
S705626-LCV6

S708282

Semivolatile Organic Compounds by GCMS

S708282-CAL1
S708282-CAL2
S708282-CAL3
S708282-CAL4
S708282-CAL5
S708282-CAL6
S708282-CAL7
S708282-CAL8
S708282-CAL9
S708282-CALA
S708282-ICV1
S708282-LCV1
S708282-LCV2
S708282-TUN1

S708328

Semivolatile Organic Compounds by GCMS

S708328-CAL1
S708328-CAL2
S708328-CAL3
S708328-CAL4
S708328-CAL5
S708328-CAL6
S708328-CAL7
S708328-CAL8
S708328-CAL9
S708328-ICV1
S708328-LCV1
S708328-LCV2
S708328-TUN1

S708366

Volatile Organic Compounds

S708366-CAL1
S708366-CAL2
S708366-CAL3
S708366-CAL4
S708366-CAL5
S708366-CAL6
S708366-CAL7
S708366-CAL8
S708366-CAL9
S708366-CALA
S708366-CALB
S708366-ICV1
S708366-LCV1
S708366-LCV2
S708366-TUN1

S708418

Volatile Organic Compounds

S708418-CCV1
S708418-TUN1

S708448

Semivolatile Organic Compounds by GCMS

S708448-CCV1
S708448-TUN1

S708473

Volatile Organic Compounds

S708473-CCV1
S708473-CCV2
S708473-TUN1

S708503

Volatile Organic Compounds

S708503-CAL1
S708503-CAL2
S708503-CAL3
S708503-CAL4
S708503-CAL5
S708503-CAL6
S708503-CAL7
S708503-CAL8
S708503-CAL9
S708503-ICV1
S708503-LCV1
S708503-LCV2
S708503-TUN1

S708529

Semivolatile Organic Compounds by GC

S708529-CCV1
S708529-CCV2
S708529-IBL1
S708529-IBL2

S708558

Semivolatile Organic Compounds by GCMS

S708558-CCV1
S708558-TUN1

S708595

Semivolatile Organic Compounds by GCMS

S708595-CCV1
S708595-TUN1